

INTERNATIONAL FORMULA ONE PROCEDURE RULES

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In Accordance With The Sporting Code Of The Federation Aeronautique Internationale (FAI)

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Proposed rule changes and corrections should be communicated to the Procedure Rules Committee Chairperson for consideration. Additional copies can be obtained for \$20 including postage from the Secretary/Treasurer.

Rev. 2007

International Formula One Pylon Air Racing Inc.
www.if1airracing.com

Rev. 2007

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1. **RACE OFFICIALS**

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1.1 **Operations Director** - Elected by the general membership and is responsible for organizing, overseeing, and designating operations personnel. He is responsible for all IF1 ground movements and air operations at race sites. He cannot be a competing formula one owner or pilot. (See Bylaw 11) Rev. 2007

1.1.1 Duties of the Operations Director

1.1.1.1 He shall be the IF1 representative at races including FAA, promoter, and Contest Committee liaison.

1.1.1.2 He shall be responsible for providing and installing, if required, pylons, flags and radios for communication between the Start line, Chief Judge, Home pylon and other key areas.

1.1.1.3 He shall ensure that all aircraft and pilots are properly inspected and certified prior to aircraft qualification. Rev. 2007

1.1.1.4 He is responsible for race makeup (pairings) and grid arrangement. He may change grid assignments in the event of pilot or aircraft safety issues.

1.1.1.5 He is responsible for pilot certification at races in conjunction with the Pilot Committee Chairperson or his designee(s). He has the power to withdraw a racing pilot license for unsafe activities. (See Procedure Rule 3.8.3) Rev. 2007

1.1.1.6 He has the power to withdraw IF1 from races if unsafe conditions exist.

1.2 **Technical Director** - Elected by the general membership and is responsible for organizing, overseeing, and designating technical inspectors and inspections. He cannot be a competing formula one owner or pilot. (See Bylaw 12) Rev. 2007

1.2.1 Duties of the Technical Director

1.2.1.1 The Technical Director shall procure, store and provide Technical inspection equipment as required to properly inspect aircraft.

1.2.1.2 The Technical Director's staff shall inspect all aircraft on arrival at the

race. The Technical Director's staff will carry out all inspections in accordance with the International Formula One Technical Inspection Handbook.

1.2.1.3 On the basis of this inspection the Technical Director is empowered to require the competing aircraft to be returned to conformity with the International Formula One Technical Rules prior to official practice and qualification. If the discrepancies cannot be corrected, the Technical Director is empowered to refer them to the Contest Committee where they will be dealt with as a Protest.

1.2.1.4 At the conclusion of the racing, the Technical Director's staff will carry out such checks as they see fit in accordance with the International Formula One Technical Inspection Handbook. Any discrepancies found will be automatically referred to the Contest Committee where they will be dealt with as a Protest.

1.3 **Chief Judge** - Presides over Contest Committee and has primary responsibility for all officiating functions and officiating personnel that are required.

1.4 **Contest Committee** - Chief Judge and 2 or more contest judges appointed by promoter or Executive Committee. Judges must have no business or personal relationships with competing owners or pilots. Has ultimate authority over all racing events. Not responsible for organization or execution of race, but acts in judicial capacity to settle protests, determine penalties, authorize deviations from rules, amend competition, and enforce rules of FAA waivers.

1.4.1 Meetings of the Contest Committee

1.4.1.1 The Chief Judge shall call a meeting of the Contest Committee no later than one (1) hour after termination of the day's racing.

1.4.1.2 The Contest Committee shall hear both sides of the matter of any formal protest, apply correctly the relevant regulations and the rules for the event and decide by vote.

1.4.1.3 Protests against a decision of the Chief Judge require a 2/3 majority to succeed.

1.4.1.4 If a Contest Committee meeting has to be held in the unavoidable absence of any of its members, the necessary quorum will be 2/3 of its total members.

1.5 **Chief Starter** - Appointed by promoter or Chief Judge and is responsible for supervising his assistants and initiating a safe start in accordance with the rules.

1.6 **Chief Pylon Judge** - Appointed by promoter or Chief Judge and is responsible for supervising all pylon judges in the performance of their assigned duties.

1.7 **Chief Timer** - Appointed by promoter or Chief Judge and is responsible for supervising timers and scorers in the performance of their assigned duties. He shall procure, store and provide timing equipment as required to properly time qualification and races.

1.8 **Chief Finish Line Judge** - Appointed by promoter or Chief Judge and is responsible for supervising all finish flaggers in the performance of their assigned duties.

1.9 **Chief Finish Flagger** - Appointed by promoter or Chief Judge and is responsible for supervising other finish flaggers in the performance of their assigned duties.

1.10 **Pilot Committee Chairperson** - Elected by the general membership and is responsible

for supervising pilot certifications and procedures. The Chairperson shall assist the Operations Director and also be responsible for briefing the Operations Director prior to aircraft qualification as to the status of competing pilots in regards to pilot certification completeness. The Chairperson shall be empowered to appoint pilot evaluator designees for an individual event. (See Bylaw 15) Rev. 2007

2. **PROGRAM AND CHARTS**

This chapter is a checklist to be filled in by the promoter of each race for the benefit of contestants. Program updates will be issued daily at the race office or briefing.

- | | <u>DATE</u> | <u>TIME</u> |
|---|-------------|-------------|
| 2.1 Closing Date for Entries | | |
| 2.2 Registration of Competitors | | |
| 2.3 Registration of Aircraft | | |
| 2.3.1 Technical Inspection of Aircraft (See Procedure Rule 3.6) | | Rev. 2007 |
| 2.4 Official Practice | | |
| 2.4.1 Pilot Certification (See Procedure Rule 3.3) | | Rev. 2007 |
| 2.4.2 Aircraft Qualification | | |
| 2.5 Official Qualification for Grid Position | | |
| 2.6 Racing: Round 1 | | |
| Racing: Round 2 | | |
| Racing: Round 3 | | |
| 2.7 Prize Giving | | |
| 2.8 Charts | | |
| Charts provided to the participants should include the following information: | | |
| 2.8.1 AIRFIELD AND RUNWAY LAYOUT | | |
| 2.8.2 POSITION OF COURSE PYLONS | | |
| 2.8.3 POSITION OF SCATTER PYLONS | | |
| 2.8.4 POSITION OF SCATTER PYLONS FOR ALTERNATE WIND DIRECTION | | |
| 2.8.5 START/FINISH LINE AND TIMING PLOT | | |
| 2.8.6 LANDMARKS AND ADJACENT OBSTRUCTIONS | | |
| 2.8.7 PIT AREA | | |
| 2.8.8 FUELING POINT | | |
| 2.8.9 RACE OFFICE | | |
| 2.8.10 EMERGENCY SERVICES | | |
| 2.8.11 SPECTATOR LINES | | |
| 2.8.12 PARKING FOR RACE CREW VEHICLES | | |
| 2.8.13 HANGAR FOR RACE AIRCRAFT | | |

3. **GENERAL RULES AND REGULATIONS**

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3.1 Entry and Eligibility

3.1.1 Entry, which is open to all FAI Active and Associate Members will be accepted only if made out on the official entry form, accompanied by the entry fee in full, and received by the closing date, except that late entries may be accepted at the discretion of the promoter, if there are vacancies. Anyone who wants to race in an IF1 sanctioned event must be a member of IF1 Inc.

3.1.2 An entry by telegram, fax, e-mail or telex will be confirmed only if the official entry fee and form have been mailed the same day as the telegram, fax, e-mail or telex.

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3.1.3 Uncompleted entry forms or those containing inaccurate information will not be accepted.

3.1.5 The entry fee covers all administration and insurance. Accommodations and subsistence must be individually arranged.

3.1.6 The entrant or competitor is expected to know, understand, and abide by the IF1 Sanction Agreement issued for the event.

3.1.7 If the event does not take place, entry fees shall be returned in full. If, for reasons of force majeure, it is canceled or stopped, unused fees shall be paid back.

3.2 Contest Numbers

3.2.1 Each aircraft shall clearly display its current IF1 assigned contest (race) number on both sides of the fuselage or tail. (See Bylaw 4.1.1 and Technical Rule 11.4) Rev. 2007

3.3 Pilot Certification

3.3.1 A competing pilot must be a National of the entering country or have been a resident for not less than 3 consecutive years. (See Procedure Rule 3.5.1.2) Rev. 2007

3.3.2 A competing pilot must have and be able to substantiate the following qualifications:

Rev. 2007

3.3.2.1 Current Pilots License - private or better

3.3.2.2 Current Medical Certificate - Class III or better.
(Class II may be required at some races)

3.3.2.3 Current IF1 Racing Pilot License. (See Procedure Rule 3.3.4) Rev. 2007

3.3.3 A competing pilot must have and be able to substantiate the following flying experience:

3.3.3.1 An absolute minimum of 100 hours pilot in command in fixed wing aircraft.

3.3.3.2 A minimum of 10 hours in a formula one aircraft type for every 100 hours short of 500 hours pilot in command in fixed wing aircraft.

3.3.3.3 A minimum of 10 hours in the same formula one aircraft type to be flown or 5 hours if already qualified in a different formula one aircraft type.

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3.3.4 A competing pilot must hold a valid IF1 Racing Pilot License. This license shall be issued to all pilots upon their successful completion of the IF1 Racing Pilot License demonstration. This license must be renewed as follows:

Rev. 2007

A. Every twenty-four months, except that an IF1 racing pilot's license will not expire until the calendar year end of the second year of the license. Rev. 2007

B. Upon agreement of the Pilot Committee Chairperson and the Operations Director or their appointees.

C. Upon changing aircraft, if different in type to that in which an IF1 Racing Pilot License was issued. Rev. 2007

Issuance and renewal shall consist of demonstrating the following knowledge and skills to an official IF1 pilot evaluator:

3.3.4.1 IF1 Racing Pilot License Demonstration: (See Appendix C) Rev. 2007

A. Paperwork review and Oral Examination

1. Review pilot's logbook to determine total flying time and total time in the aircraft to be used for the demonstration.

2. Check for valid pilot's certificate, medical certificate, flight review and aircraft paperwork (current airworthiness, registration, operating limitations, weight and balance and "annual" condition inspection).

3. Review and discuss weight and balance information, engine and propeller limitations, G-load restrictions, operating limitations and the technical inspection requirements for the aircraft used in the flight demonstration.

4. Discuss personal motivation, philosophy and reason for becoming a race pilot.

5. Discuss past history of racing accidents and common causes.

6. Density altitude considerations.

7. Aircraft qualification procedures.

8. Race start procedures.

9. Pylon and scatter pylon procedures.

10. Passing procedures.

11. Methods of communicating emergency-in-progress information to participants and response required.

12. Methods of declaring any emergency and actions for various types of emergencies.

13. Methods of communicating termination of race to participants and response required.

14. Normal race termination procedures.
15. "Deadline" procedures.
16. Race briefing attendance requirements and outline of briefing contents:
 - a. FAA regulations and waivers applicable to air racing.
 - b. Crowd and race deadlines. ("showlines")
 - c. Schedules and relation to staging.
 - d. Aircraft ground safety precautions.
 - e. Race and scatter pylon locations.
 - f. Course obstructions.
 - g. Emergency landing facilities.
 - h. Coordination with fire/rescue.

Rev. 2007

B. General Preflight

1. Sufficient fuel (5 gallons minimum) and oil for proposed flight.
2. Seatbelts and shoulder harness.
3. Loose objects in aircraft. (Encourage the use of a checklist in cockpit)
4. Canopy and access latches.
5. Controls and aircraft structure.

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C. Flight Observations

1. Aborted Start: Simulate an unassisted race start (no tail holder) and accelerate for approximately 300 feet before simulating an engine failure by closing the throttle. Bring the aircraft to a full stop without veering more than 20 feet either side of a straight line.
2. Race Start: Takeoff from a full stop at full throttle without veering more than 10 feet either side of a straight line.
3. Make three 180 degree turns of at least 60 degree bank at an altitude of 500 feet or higher at racing speeds without appreciable loss of altitude.
4. Demonstrate an aileron roll in each direction, followed by a half-roll to the left with a half-roll to the right recovery. All without loss of altitude exceeding 50 feet.
5. Demonstrate three laps on the race course at racing speeds without climbing in turns.
6. Demonstrate formation flying ability and passing techniques on the race course.
7. Demonstrate a normal landing.
8. Demonstrate a simulated power-off landing from racing altitude and speed.

Rev. 2007

3.4 Aircraft Eligibility

3.4.1 A competing aircraft must possess a valid certification of airworthiness or equivalent of the country of origin or of entry and must comply with the International Formula One Technical Rules.

3.4.2 Substitution of aircraft after aircraft qualification will not be allowed. Rev. 2007

3.4.3 During an IF1 sanctioned event, no competing aircraft shall change ownership or operational responsibility until the end of the total event. Rev. 2007

3.5 Registration of Pilots and Officials on Arrival

3.5.1 All competing pilots, officials, and team leaders (if applicable) must register at the specified time with the Operations Director and the organizer with the following documents:

3.5.1.1 Passport or evidence of nationality or residence.

3.5.1.2 Nationals - A National of a country can represent only that country in international sporting events provided that if he has already represented a country, he may not represent another country unless:

A. His former country has been incorporated into another state.

B. He has become a naturalized citizen of another country and at least three years have elapsed from the date of his application for such naturalization.

C. Through marriage, a person changes his/her nationality and acquires the nationality of his/her spouse.

3.5.1.3 Persons without Nationality - Refer to FAI Sporting Code General Section.

3.5.1.4 Licenses and proof of pilot certification as in 3.3 above.

3.5.2 After the time specified no unregistered pilots will be allowed to compete.

3.6 Registration and Inspection of Aircraft on Arrival

3.6.1 All competing aircraft must be available for registration and inspection at the race site by the specified time together with the following documents:

3.6.1.1 Current Certificate of Airworthiness or national equivalent.

3.6.1.2 Permit to race or national equivalent if appropriate.

3.6.1.3 Engine(s) logbook(s) or equivalent document(s).

3.6.1.4 Airframe logbook or equivalent document.

3.6.1.5 Propeller logbook or equivalent document, if required by country of origin.

3.6.1.6 Valid liability insurance if, and as, required by host country.

3.6.2 All competing aircraft shall be inspected and approved by the Technical Director before official aircraft qualification in accordance with agreed procedures. Rev. 2007

Details of procedures and special equipment to be used by the Technical Director when carrying out Technical Inspections are contained in the International Formula One Technical Inspection Handbook.

3.7 Briefings

3.7.1 All competitors and officials must attend subsequent briefings as notified at Registration and daily at the Race Office. Any absentee risks exclusion from the race. If the reason for absence is regarded as adequate by the Operations Director, and there is time for a personal briefing, the competitor will be charged \$10, and he will be permitted to race, if acceptable to the promoter.

3.8 Safety

3.8.1 All competitors must use seat belts and shoulder harnesses in all events as defined in technical rules.

3.8.2 All competitors must wear protective helmets, fire retardant flight clothing and gloves.

3.8.3 The Operations Director reserves the right to stop any pilot or aircraft from flying should he consider the situation unsafe.

3.8.4 Competitors will not ingest alcoholic beverages within the 8 hour period prior to a flight. No alcoholic beverages will be allowed in the pit area.

3.8.5 Pilots must be familiar, and abide by, the rules and regulations governing closed-course pylon air racing. IF1 will recommend the disqualification of any pilot who, through drunkenness, hangover, recklessness or otherwise, is deemed a hazard to the other pilots and the public. Such pilots will be suspended from racing for a period of time and may be barred for all time from all races sanctioned by IF1.

3.8.6 Aircraft will start all flights at a race site with a minimum of five (5) gallons (19 liters) of fuel on board. Rev. 2007

3.8.7 Operational two-way radios are required for all participating formula one aircraft. All participating pilots and crews will use radios only in compliance with the following IF1 radio use rules: Rev. 2006

3.8.7.1 Radio use during formula one flights within waived airspace will be limited to Race Control frequency and to calls made in the interest of safety, communications with the Operations Director and his/her designee, IF1 officials, Timing officials and Race Control or their equivalent, landing position reports, and emergency use only. Rev. 2006

3.8.7.2 Under no circumstances will radios be used by ground crews for communication with pilots during any flights within waived airspace (practice, qualifications and races). Rev.2006

3.9 Flags and Signals

- | | |
|--|---------------------------------------|
| 3.9.1 GREEN | : Start of Race or Qualifying Run |
| 3.9.2 WHITE | : Start of Last Lap |
| 3.9.3 BLACK/WHITE CHECKERED | : Finish |
| 3.9.4 YELLOW | : Emergency in Process (caution) |
| 3.9.5 BLACK | : Direction to Pilot to Vacate Course |
| 3.9.6 RED | : Abandonment of Race |
| 3.9.7 Yellow, Black and Red flags shall be displayed only on order of the Chief Judge. | |

3.10 Violation Procedures/Protest

3.10.1 Rules Violations

3.10.1.1 Technical Violations at Races - The Technical Director shall inform, in writing, the owner of any aircraft or engine found to have a noncompliance item.

- A. If found prior to aircraft qualification, the owner will be required to bring the aircraft into compliance prior to qualification.
- B. If found after aircraft qualification but prior to racing, the owner will be required to bring the aircraft into compliance and requalify.
- C. If found after racing, a written report shall be submitted to the Contest Committee for their action.
- D. The maximum penalty for racing with a technical noncompliance item shall not exceed a fine or disqualification from the race or races flown.

3.10.1.2 Other Violations - All other violations of competition rules shall be the sole responsibility of the Contest Committee.

3.10.2 Protests

3.10.2.1 Right of Protest - The right of protest is vested in competitors, pilots and principal owners only, except that the Contest Committee may always institute a protest by virtue of its judging authority even when no protest has been filed.

3.10.2.2 Protest Process - A protest must be in writing, accompanied by the prescribed protest fee, and delivered within one hour of posting the unofficial race results. The protest fee will be returned if deemed well founded by the Contest Committee. Otherwise, it will be given to the pilot protested against.

- A. The protest fee will be \$250.00.
- B. Protestors against the legality of an engine or airframe will also be subject to expenses incurred by the protestees and/or class as a result of the protest if the engine or airframe is found to be legal.
- C. Protests relating to an air racing event must be presented to the Contest Committee.
- D. Technical protests of racing equipment will be submitted to the Technical Director. If the Technical Director considers it a valid protest, it will be sent to the Contest Committee for disposition.
- E. The Technical Director may require additional inspections and teardowns.

3.10.2.3 Time Limits

- A. Protests against the validity of an entry or qualification of participants must be lodged at least 24 hours before the first race. Such protests will be filed at Race Headquarters.
- B. Protests against the decisions or actions of the judges, timer, scorer, other officials, or other participants must be lodged within one hour of posting of decisions or results. Such protests will be filed at Race Headquarters.
- C. Protest may be made only after a race has started except where it concerns entry.

3.10.3 Hearing of Protests - Upon receipt of a protest, the Contest Committee will notify all parties concerned of the hearing of the protest. They shall be entitled to call witnesses, and they and the witnesses shall be given an opportunity of being heard.

Persons knowledgeable in specialized areas pertinent to the contest may be called for testimony to the Contest Committee to assist them in reaching a fair and equitable judgment. All contestants will remain in the pits for a period of one hour after the posting of unofficial results of an event for the purpose of participating in a protest. Failure to remain in the area to receive notice of a protest will not stop the hearing of a protest.

3.10.4. Finality of Decision - Any protest against any error or irregularity committed during a competition shall be decided upon by the Contest Committee, and their decision shall be final, provided that any penalty imposed by the Contest Committee is not revised as provided below in 3.10.5.

3.10.5. Review - All Contest Committee penalties shall be reviewed by the Board of Directors at a later date. They may reduce penalties imposed by the Contest Committee for technical noncompliance items, but not increase them. They may add penalties to those imposed by the Contest Committee only for cases of unsafe flying or unsportsmanlike conduct.

3.10.6 Prize Withholding - Any prizes won by a competitor who has been protested against will be withheld until a final decision has been pronounced on the protest.

3.11 Penalties

3.11.1 The Contest Committee may penalize a competitor by alteration of placing order, or disqualification and in some cases fine the competitor for infringement of the regulations, or for unsporting behavior. Fines may not exceed the sum of entry fees and prize money won. The severity of the penalty shall range from minimal to disqualification from the event and shall be appropriate to the infringement or misbehavior, i.e.:

3.11.1.1 Dangerous or hazardous flying

3.11.1.2 Cheating, falsification of documents, and deliberate breaches of aircraft specifications

3.11.2 Penalties shall be listed on the score sheet of the day on which they took place.

3.11.3 A competitor who has been disqualified shall not be able to claim back any part of his entry fee and will not be eligible for any prizes during the event.

NOTE: IF1 Bylaw 19.4, Temporary Rule Changes, States: Rules may be temporarily changed at a race site for the duration of that event only by a unanimous vote of all IF1 members entered as pilots (or after aircraft qualification, a unanimous vote of all IF1 members certified as pilots of the aircraft that have qualified to race in that event). Rev. 2007

NOTE: IF1 Bylaw 24.5, Conflict with Race Rules, States: Where IF1 Bylaws or Rules conflict with the race rules of a particular event, the race rules, then the Bylaws, and then the Technical and Procedure Rules shall be binding. Rev. 2007

4. CONTEST, COURSE AND FLYING REGULATIONS

4.1 RECOMMENDED WORLD COURSE LAYOUT

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	FIGURE 4-1: 3.0 MILE (5 Km.) FORMULA ONE AIR RACE COURSE	P14
	FIGURE 4-2: 3.0 MILE FORMULA ONE AIR RACE COURSE (Narrow, 3.5g)	P15

4.1 Recommended World Course Layout

4.1.1 The course should be of "stretched" hexagonal shape of total length 5km (3-1/8sm) +50m (65 ft.). It should have straights of no less than 1.5km (.94sm) long, radius no less than 378m (1246 ft.), and should be flown left handed. Resultant maximum "G" loading is 3.5 at 400 kph (250 mph). See attached charts on Pages P14 & P15.

4.1.2 The corners of the course should be marked by pylons at least 9m (30 ft.) high of conspicuous color which shall be positioned so as to be easily visible one from the other.

4.1.3 No direction change should exceed 60 degrees +2 degrees.

4.1.4 The first pylon after take-off shall not require a change of course of more than 10 degrees from take-off to reach it.

4.1.5 If the first pylon after take-off is a scatter pylon, it should be at least 1.6km (1sm) from the start line and shall not require a change of course of more than 10 degrees to reach it and no more than 120 degrees to reach the next scatter or course pylon.

4.1.6 The minimum distance from the start line of the grid to the first pylon shall be 1200m (.75sm) - plus 200m (660 ft.) for every 300m (990 ft.) aerodrome altitude above a base altitude of 300m (990 ft.).

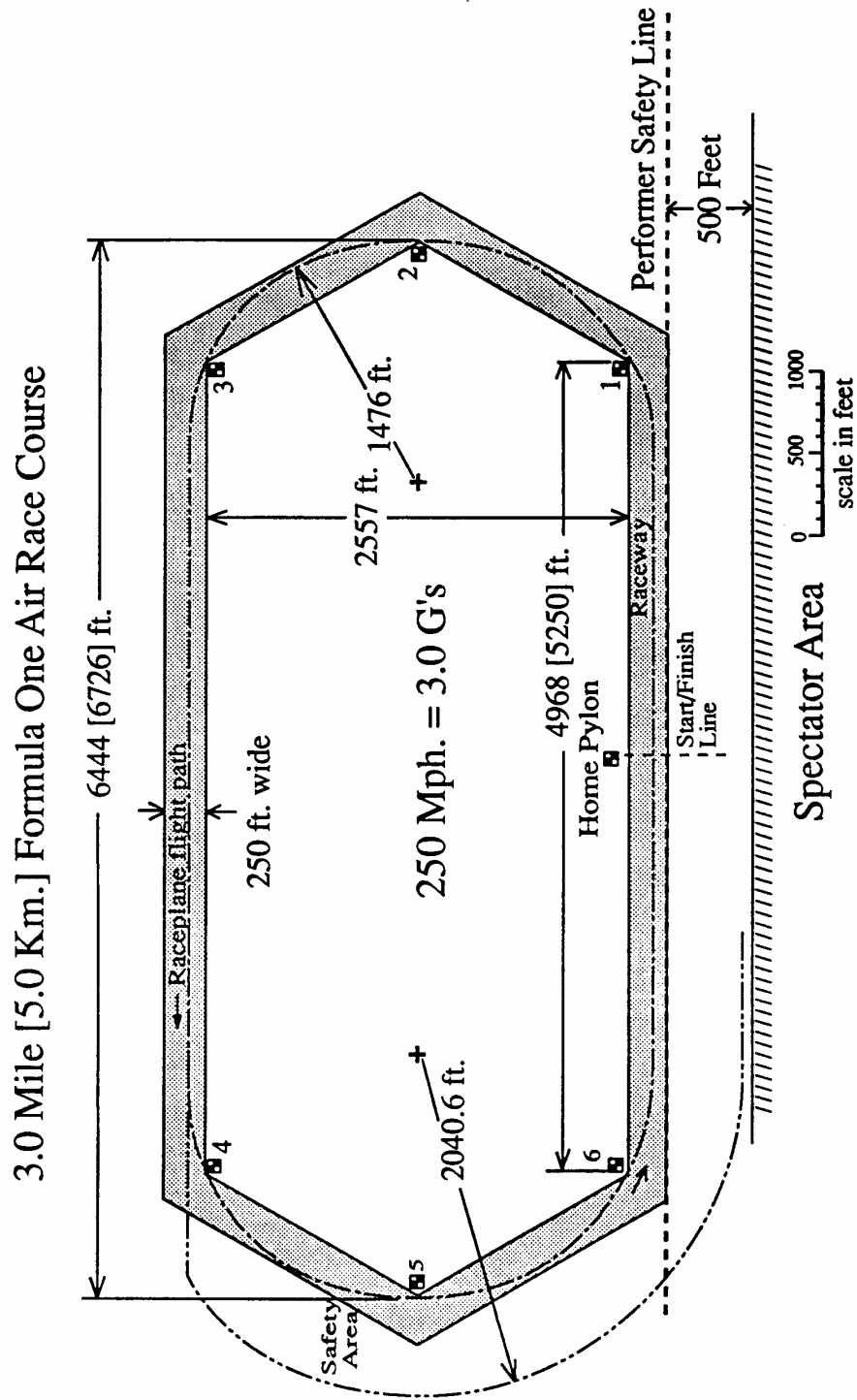
4.1.7 Scatter pylons should be of different and distinctive color to course pylons, but will be treated as part of the course under these rules.

4.1.8 The finishing line shall be a conspicuous white line not less than 50m (165 ft.) long, which may be reinforced by a white or checkered pylon.

4.1.9 The course should be laid out in accordance with the attached charts for alternate wind direction.

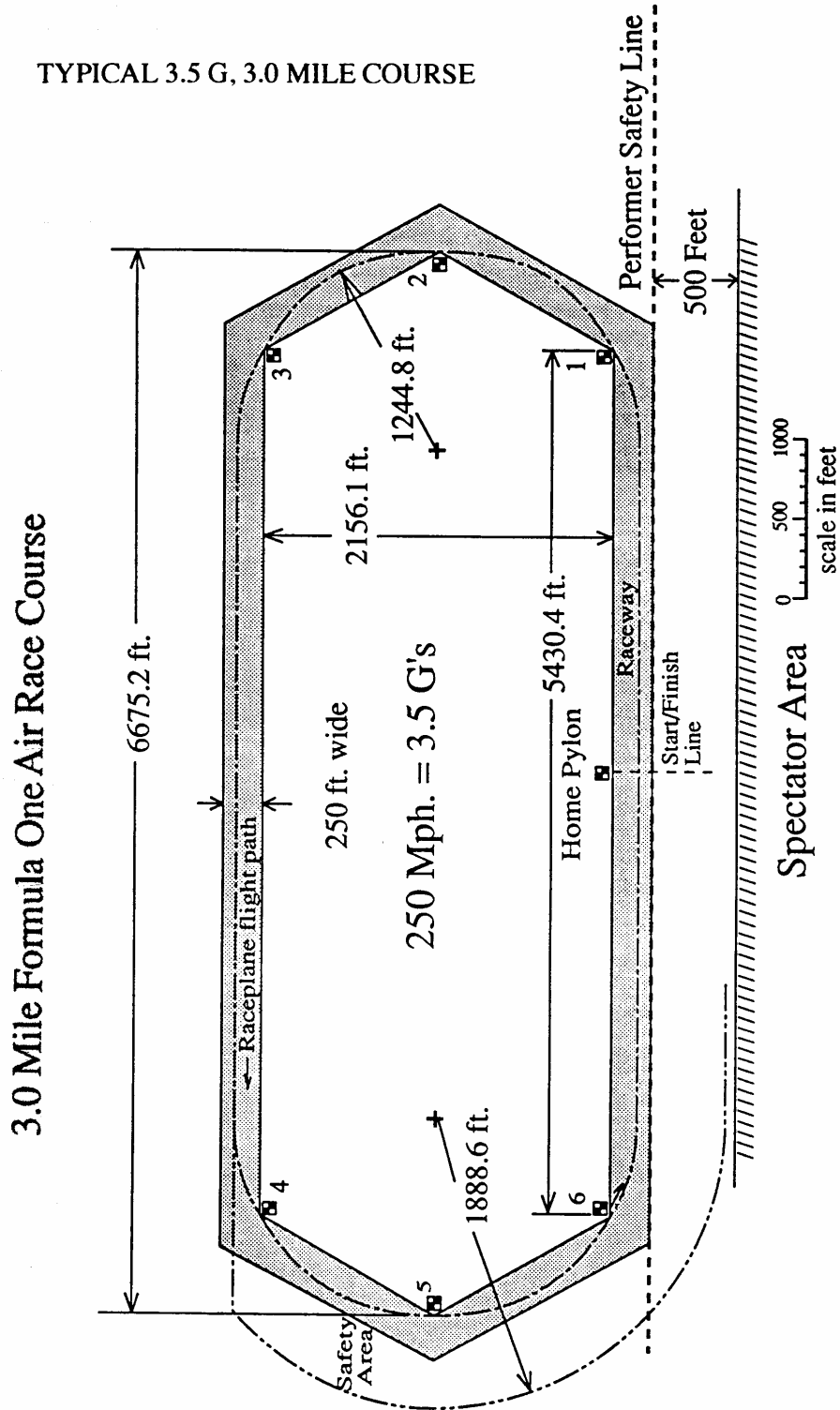
Refer to Chapter 49 of FAA Order 8700.1 Waivers for Airshows.

TYPICAL 3.0 G, 3.0 MILE COURSE



JAV 12/90 per FAA 8700.1 Handbook

Figure 4-1
P14



J. Vliet 11/88 per FAA 8440.5A diagram

Figure 4-2
P15

4.2 Aircraft Qualification Flights and Procedures

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4.2.1 Aircraft Qualification Flights

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4.2.1.1 Comprises two timed laps of the course with the official qualification time taken from the fastest lap. Rev. 2007

4.2.1.2 Each pilot is permitted one qualification flight in each aircraft he wishes to fly.

4.2.1.3 The maximum number of aircraft on qualification at one time is three.

4.2.1.4 In the event of pilot substitution, the qualification time stays with the aircraft.

4.2.2 Aircraft Qualification Flight Procedures

4.2.2.1 The pilot will signal his readiness for timing on a qualification lap by a wing-waggle approaching Home pylon.

4.2.2.2 Altitude will remain constant from pylon 4 to Home pylon prior to starting a qualification lap.

4.2.2.3 A qualification lap may be aborted any time prior to pylon 6 by pulling off the course.

4.2.2.4 A pylon cut automatically voids that lap time. If a pylon cut occurs on both laps the aircraft will be placed in last place. In the event of two voided lap times a second qualification attempt may be allowed, schedule permitting. Rev. 2007

4.2.2.5 In the event of identical qualification times, the aircraft which first posts the speed will take precedence.

4.2.2.6 Aircraft unable to qualify due to weather or other conditions beyond their control will be placed behind qualified aircraft in order relative to entry date.

Rev.2007

4.3 The Grid

4.3.1 The pilot of the aircraft with the fastest qualification time is offered choice of grid position, second fastest, second choice and so on down the list.

4.3.2 Grid patterns will be set depending on available runways.

4.3.3 The grid position for Round 1 is based on qualification times, for Round 2 on Round 1 overall race times, and for Round 3, if held, on Round 2 overall race times.

4.3.4 There will be no air starts.

4.3.5 A maximum of 8 aircraft may fly in one race.

4.3.6 Aircraft must be in position near the starting grid, available to come under starters orders not later than 10 minutes before flag. Aircraft which are not available 10 minutes before flag will be excluded. The Operations Director will ensure at least 10 minutes are available on the grid.

4.3.7 Alternate Aircraft: Aircraft unable to start a race will not be replaced by an alternate unless approved prior to the event by all competing pilots. If alternates are approved both the pilot and aircraft must be properly certified and qualified, respectively, and Procedure Rule 4.3.8 applies.

Rev. 2007

4.3.8 Alternate Aircraft: The alternate for any race will be the next fastest qualifier or the aircraft with the next fastest race speed if performed later. (See Procedure Rule 4.3.7)

Rev. 2007

4.3.8.1 In single row starts, the alternate will replace any aircraft not ready at T-10 seconds.

4.3.8.2 In multiple row starts the alternate will replace any aircraft not ready at T-1 minute. Front row aircraft must be removed at least 1 minute before start.

4.3.8.3 The alternate will start from the alternate position at the rear of the grid.

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4.3.9 Aircraft spacing between rows and between aircraft will be established by the Operations Director.

4.3.10 Tail holders will not be allowed after T-1 minute.

4.4 Start Procedures

4.4.1 The red flag will come up at T-5 minutes. It will be replaced by the green flag at T-10 seconds. Drop of the green flag signals the start of the race.

4.4.2 The race starts when the starter's flag drops. The starting time for all aircraft will be taken from the time the first aircraft crosses the start line, in flight, after the scatter lap.

4.4.3 Premature starts within 5 seconds will be penalized 30 seconds but the race will not be stopped. Starts earlier than 5 seconds will result in disqualification.

4.4.4 All rows will launch simultaneously. Anyone aborting take-off will abort straight ahead and attempt to clear to the end of the runway expeditiously.

4.5 Weather Minimums

4.5.1 Visibility greater than 3 sm (4.8km).

4.5.2 Cloud base higher than 1500 ft (450m) AGL.

4.5.3 Surface wind less than 35 mph (56.7 kph) peak.

4.5.4 Cross wind component less than 20 mph (32 kph) peak.

4.5.5 Operations during questionable weather shall be at the discretion of the Operations Director.

4.6 Flying the Course

4.6.1 Circuit direction should be left handed unless local conditions prohibit it.

4.6.2 Minimum altitude during the race should be 30 ft (9m.) from the ground measured from the top of the canopy. Maximum altitude should be 200 ft (75m.). Greater altitude may be used when advisable for safety.

4.6.3 A minimum number of 6 laps and a maximum of 10 laps will be required for all

racers (excluding scatter lap).

4.6.4 Pylon Turns

4.6.4.1 All turns will be made outside the pylons. A pylon cut is defined as any portion of the aircraft being inside the inner edge of the pylon. Pylon cuts are not protestable.

4.6.4.2 A pilot cutting or missing a pylon may not turn back to retry.

4.6.4.3 A pilot who has cut a pylon will be penalized 4 seconds per race lap for each cut but may continue to race.

4.6.4.4 The rules for course pylons apply to scatter pylons.

4.6.4.5 Pilots must not change altitude in turns except when safety dictates.

4.6.5 Passing/Overtaking

4.6.5.1 The pilot overtaking shall be responsible for the safety of the maneuver.

4.6.5.2 An overtaken aircraft must hold its true course in order that it may not impede or interfere with a faster overtaking aircraft.

4.6.5.3 An aircraft overtaking a slower aircraft may not attempt to pass between the aircraft and a pylon unless the overtaken aircraft is flying wide so that a safe pass can be made.

4.6.5.4 A safe distance between aircraft must be maintained at all times.

4.6.6 Emergencies

4.6.6.1 Pylon judges or other officials will communicate with the Chief Judge regarding emergencies. The Chief Judge will declare emergencies and call for the yellow, black, or red flag as he considers appropriate.

4.6.6.2 On receipt of yellow flag, all aircraft should fly with caution, hold position and continue racing.

4.6.6.3 Any aircraft receiving the black flag will vacate the course immediately.

4.6.6.4 On receipt of the red flag, all aircraft will pull off the course in trail as each passes Home pylon and land as at the end of the race.

4.7 Finish of a Race

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4.7.1 The finish of a race will be made by the nose of the aircraft passing the Home pylon, in flight, after completion of the race. This applies to the lead and all other aircraft.

4.7.2 If the flag signal indicating the end of the race is at variance with the number of laps previously agreed for that race, the flag signal should be taken as indicating the end of the race. At the end of the race all aircraft will pull up whether or not they have completed the same number laps as the winner.

4.7.3 The finish time will be taken as each aircraft passes the Home pylon in flight.

4.7.4 After finishing the race, all aircraft will pull up gently to attain prebriefed landing pattern.

4.7.5 The winner of first place in any race shall be the first pilot to pass the Home pylon with the least adjusted race time (to include penalties for pylon cuts.).

4.7.6 In the case of a dead heat, the competitors tying for a place shall have equal rights for that place and the purse will be the average of two places.

4.7.7 Positions will be determined first on the number of laps completed then in order of least adjusted race time (including penalties). For the purposes of determining pairings for subsequent races for aircraft which do not complete the required amount of laps, the average speeds will be used.

4.7.8 Any uncompleted race should be run again if possible. Completing more than half the scheduled laps on a given race by any aircraft constitutes completion. Rev. 2007

4.8 **Allowable Substitutions** (See Procedure Rule 4.3.7 and 4.3.8 for Alternate Aircraft)
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4.8.1 Fill-In Aircraft - Fill-ins are aircraft which volunteer to make-up numbers in a race. No contestant flying a fill-in position can displace another airplane that has previously qualified for the next higher event unless that airplane had an equal opportunity for an additional race to upgrade its speed. Fill-ins will be selected by lot.

Fill-in aircraft will only be awarded finish positions behind other scheduled event aircraft regardless of their finish position.

4.8.2 Makeup Aircraft - Makeup aircraft are faster aircraft that makeup numbers in a slower race when insufficient aircraft are available to fill the field. These airplanes will be used in order of the next fastest race speed or qualifying time ahead of the eligible aircraft. Makeup aircraft owners have the right of refusal to race.

The decision to use makeup aircraft shall be the responsibility of the Operations Director or his deputy and shall be made after consultation with the affected pilots and the race organizers.

4.8.3 Inverted Start Procedure (Showday) - Used when takeoff area precludes the use of a race horse start. Showday will be used at events with 16 airplanes or less. It shall also apply for finals if 100% of competing pilots approve.

4.8.3.1 All inverted starts shall be from a standing position (inverted air starts are prohibited) with slower airplanes starting first.

- A. From start line abreast at equal time intervals, or
- B. From longitudinally spaced and staggered positions with simultaneous release, or
- C. From longitudinally spaced in pairs with release at intervals.

4.8.3.2 When longitudinal spacing is employed, the starts shall be unassisted. All crews shall clear the runway at the one minute warning.

4.8.3.3 The last aircraft must be released in time to assure that it can get "on course" before the first aircraft completes its first lap.

4.8.3.4 Release intervals should be such that the last aircraft released has a reasonable expectation of catching the first aircraft released, by half the number of laps in the race. The effects of traffic and takeoff performance shall be ignored in the determination. Basis shall be the most recent qualifying speed of

the airplane.

4.8.3.5 Determination of inverted start release intervals shall be the responsibility of the Operations Director or his deputy.

4.8.3.6 Showday - Additional Rules for "show" heats where fast airplanes start in the back to provide more exciting races.

A. Actual times of all airplanes over the race distance will be used to determine the gold and silver races.

B. The finishing positions in the heat shall be irrelevant, but aircraft which do not complete the heat will go to the back of the field.

C. Pairings for the gold and silver will be in order of heat speeds. A penalty of 10 seconds will be added to the race time for each pylon cut.

D. In the absence of Qualifying, the heat races will pay qualifying points, unless the aircraft does not finish.

5. **SCORING FOR INTERNATIONAL FORMULA ONE CHAMPIONSHIPS**

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5.1 **Basis of Championship Competition**

5.1.1 Eligibility - Active aircraft pilots and crew chiefs registered as members with International Formula One are eligible.

5.1.2 Awards - The pilot and crew chief with the highest number of points accumulated during the year will receive an award.

5.2 **Points Scoring**

5.2.1 Points - Points will be awarded to the pilot and crew chief as follows:

5.2.1.1 10 points for officially qualifying as part of the field.

5.2.1.2	1st	-	12 points	7th	-	6 points
	2nd	-	11 points	8th	-	5 points
	3rd	-	10 points	9th	-	4 points
	4th	-	9 points	10th	-	3 points
	5th	-	8 points	11th	-	2 points
	6th	-	7 points	12th	-	1 point

5.2.2 Races Eligible for Points - All races sanctioned by the IF1 Board of Directors will be eligible. Rev. 2007

5.2.2.1 Points will be awarded at each eligible event for the final series of races in which all aircraft compete (not for heats).

5.2.2.2 If a particular points race is not run for any reason, points will be awarded based on race makeup order.

5.2.2.3 If less than half of the final series of races are held, then points will be awarded on the last series of heats run.

5.2.3 Pilots Not Eligible for Points - In certain instances points will not be awarded.

5.2.3.1 Pilots who obtain qualifying times but do not make the field will not receive points for qualifying. (See Procedure Rule 4.3.7 and 4.3.8 for alternates)

5.2.3.2 Pilots who make the field without qualifying will not earn points for qualifying.

5.2.3.3 Pilots who are disqualified from a points race will not receive race points, however, other competitors will get credit for beating them.

5.2.3.4 Pilots of fill-in and make-up aircraft will not earn points. (See Procedure Rule 4.8)

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5.2.4 Alternates - Alternates that run will keep any points earned, but will have to drop points in lower races.

5.2.5 Non-starters - Pilots who fail to gain an official start for any reason will gain points behind other runners in the race for which they qualified.

5.2.5.1 In the case of more than one non-starter, points will be earned on the basis of first, how far they proceeded, then their grid position.

5.2.6 Ties - Ties in the final points totals will be decided as follows: First on the number of race meets contested; then on the pilots record of first place finishes; then if necessary, second place finishes, etc.

5.2.7 For pilots/crew chiefs operating more than one aircraft at any meet, the highest number of points gained in any one aircraft will be counted. Points scored in other aircraft will be discounted but other contestants will not move up as a result.

APPENDIX C: IF1 RACING PILOT LICENSE DEMONSTRATION

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A. PAPERWORK REVIEW AND ORAL EXAMINATION

1. Review pilot's logbook to determine total flying time, and total time in the aircraft to be used for the demonstration.
2. Check for valid pilot's certificate, medical certificate, flight review, and aircraft paperwork (current airworthiness, registration, operating limitations, weight and balance, and "annual" condition inspection).
3. Review and discuss weight and balance information, engine and propeller limitations, G-load restrictions, operating limitations, and the technical inspection requirements for the aircraft used in the flight demonstration.
4. Discuss personal motivation, philosophy, and reason for becoming a race pilot.
5. Discuss past history of racing accidents and common causes.
6. Density altitude considerations.
7. Aircraft qualification procedures.
8. Race start procedures.
9. Pylon and scatter pylon procedures.
10. Passing procedures.
11. Methods of communicating emergency-in-progress information to participants and response required.
12. Methods of declaring any emergency and actions for various types of emergencies.
13. Methods of communicating termination of race to participants and response required.
14. Normal race termination procedures.
15. "Deadline" procedures.
16. Race briefing attendance requirements and outline of briefing contents:
 - a. FAA regulations and waivers applicable to air racing.
 - b. Crowd and race deadlines. ("showlines")
 - c. Schedules and relation to staging.
 - d. Aircraft ground safety precautions.
 - e. Race and scatter pylon locations.
 - f. Course obstructions.
 - g. Emergency landing facilities.
 - h. Coordination with fire/rescue.

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B. GENERAL PREFLIGHT

1. Sufficient fuel (5 gallons minimum) and oil for proposed flight.
2. Seatbelts and shoulder harness.
3. Loose objects in aircraft. (Encourage the use of a checklist in cockpit)
4. Canopy and access latches.
5. Controls and aircraft structure.

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C. FLIGHT OBSERVATIONS

1. Aborted Start: Simulate an unassisted race start (no tail holder) and accelerate for approximately 300 feet before simulating an engine failure by closing the throttle. Bring the aircraft to a full stop without veering more than 20 feet either side of a straight line.
2. Race Start: Takeoff from a full stop at full throttle without veering more than 10 feet either side of a straight line.
3. Make three 180 degree turns of at least 60 degree bank at an altitude of 500 feet or higher at racing speeds without appreciable loss of altitude.
4. Demonstrate an aileron roll in each direction, followed by a half-roll to the left with a half-roll to the right recovery. All without loss of altitude exceeding 50 feet.
5. Demonstrate three laps on the race course at racing speeds without climbing in turns.
6. Demonstrate formation flying ability and passing techniques on the race course.
7. Demonstrate a normal landing.
8. Demonstrate a simulated power-off landing from racing altitude and speed.

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Aircraft Race #:

Pilot:

Renewal at:

Date:

Pilot Evaluator:

Signature:

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