

# Soaring Society of America

## U.S. Regional Sport-Class Competition Rules

### Contest Year 2009

*March 3, 2009*

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Rule numbers as links point to "Guide Comments"

† -> marks rule changed for 2009

‡ -> rule differs from the corresponding National Sport Class Rule

## **1.0 GENERAL**

**1.1 ‡** The purpose of a Regional Sport Class Soaring Championship is to determine a Regional Sport Class Champion, to measure the performance of all entrants, and to provide an entry level for pilots new to competitive sailplane racing to learn the skills and procedures used in competition. Performance in Regionals will be used to provide a basis for pilots to qualify for entry into future soaring Championships. Handicapping will be applied to minimize score differences due to performance differences between sailplanes.

**1.2** Soaring Championships are organized in accordance with the Sporting Code of the FAI (Federation Aeronautique Internationale) under the authority of the NAA (National Aeronautic Association), and are sanctioned by the SSA (Soaring Society of America).

**1.3** These rules are the agreement between Contest Officials, entrants, and the SSA by which fair and consistent competition is maintained. Failure to hold the contest in conformance with these rules may result in

disallowance of the contest or competition days by the SSA.

**1.4** Copies of these rules are available from the SSA. Comments should be addressed to the Chairman of the SSA Contest Committee and/or current members of the Rules Committee in care of the SSA.

**1.5** Within these rules, unless otherwise noted:

- Distances are in statute miles
- Speeds are in statute miles per hour
- Weights are in pounds
- Altitudes are in feet
- Times-of-day are based on a local 24-hour clock

**1.6** National competitions held at the same place and time as other competitions are to be given preference for entry positions, and in gridding and launching.

## **2.0 † SANCTIONING**

**2.1 †** Sanctioning is the process by which the SSA ensures that a soaring contest is conducted according to rules and procedures that have been shown to lead to safe and fair competition.

**2.2 † †** To obtain a contest sanction, contest organizers must complete an Application for Sanction of Regional Soaring Competition form and submit it to the SSA Contest Committee.

**2.3 † †** The Application for Sanction (AFS) form may be submitted between 90 days and two years prior to the scheduled start of a competition; a submission at least 6 months in advance is recommended.

**2.4 † †** A completed AFS form includes the dates selected for the competition. Contest organizers are expected to check the dates of competitions already approved for Sanction, in order to minimize conflicts.

**2.5 †** The AFS form includes a requirement for specific insurance coverage. A continuing condition for a Sanctioned competition is that the specified coverage remain in effect through the final scheduled day of the competition.

**2.6 †** Included with the AFS form shall be a detailed description of any requested waiver from the provisions of these Rules. With the exception of any granted waiver, Sanctioned competitions must be conducted in strict accordance with these Rules.

**2.7 † †** The SSA Contest Committee Chairman and the SSA Regional Director for the proposed contest's SSA Region review the AFS form and announce a decision to grant or deny an SSA Sanction. This decision normally is announced within 3 weeks of receipt of the AFS form.

**2.8 †** Once a Sanction has been granted, any change to the information provided on the original AFS form requires further review and approval of the SSA Contest Committee.

## **3.0 CONTEST PERSONNEL**

### **3.1 Key Personnel**

#### **3.1.1 Contest Manager**

Responsible for the overall management of the contest. Is subject to approval by the SSA Contest Committee at least 60 days before the contest.

#### **3.1.2 Operations Director**

Appointed by and is accountable to the Contest Manager. Is responsible for all field operations such as towplane operations, sailplane and vehicle movement on the ground, sailplane launches, and landing procedures.

#### **3.1.3 Competition Director**

**3.1.3.1** The Competition Director (hereinafter referred to as the CD) shall be an experienced competition official nominated by the sponsor at least 60 days before the contest and approved by the SSA Contest Committee. The CD works for the Contest Manager, but is responsible to the SSA for insuring compliance with these rules and fair competition.

**3.1.3.2** The CD supervises the Contest Competition Committee, task selection, flight documentation procedures and analysis, start and finish procedures and scoring.

**3.1.3.3** The CD must not be an entrant in any competition over which that CD has authority.

#### **3.1.4 Contest Competition Committee**

Chaired by the CD, it consists of up to three other members appointed by the CD. These members should be experienced competition pilots, officials of the contest or pilots with a good understanding of sailplane

competition. (Entrants are not eligible.) The Contest Competition Committee is responsible for rules interpretation, assessment of penalties, and protest resolution.

### **3.1.5** Task Advisory Committee

**3.1.5.1** This committee assists the CD in the selection of tasks, though the ultimate responsibility for task selection lies with the CD alone.

**3.1.5.2** This committee will be composed of two pilots entered in the contest, selected by the CD.

**3.1.5.3** Minimum qualification for the first position shall be a finish in the top 20% of a previous contest at the same level as this contest.

**3.1.5.4** Minimum qualification for the second position shall be a good knowledge of soaring conditions in the contest area.

### **3.1.6** Other key personnel:

- Scorer
- Chief Tow Pilot
- Meteorologist

### **3.2** Extension of Entry Priority

A non-entrant who acts as a contest official named in [Rule 3.1](#) and who is listed in the SSA Pilot Ranking List is eligible for a one-year extension on that list. Such an extension must be requested of the SSA in writing and may not occur more often than once in three years.

## **4.0 PERIOD OF THE CONTEST**

**4.1 †** The period of the contest shall include the period of competition only.

**4.2 †** The period of competition may be five, six, or seven days, in not more than three periods, as selected by the sponsor on the sanction application. No rain dates will be approved.

**4.3 †** An unofficial practice period may be scheduled prior to the first competition day.

**4.4 †** For an official Regional Championship, there must be a minimum of two valid competition days as defined in [Rule 11.1.3](#).

## **5.0 † ENTRIES**

### **5.1 †** Competition Type

Contest organizers will declare (on the Application for Sanction form) the competition type, which shall be one of the following:

#### **5.1.1 †** Regional competition

A contest in which pilots who reside within the contest's SSA Region receive priority for all entry positions. Contest organizers may limit (on the Application for Sanction form) the entry slots to which inverted preference ([Rule 5.3.2](#)) applies to a number not less than five.

#### **5.1.2 †** Super-Regional competition

A contest in which pilots who reside within the contest's SSA Region receive priority for zero to 50% of available entry positions, as selected by contest organizers on the Application for Sanction form. Contest organizers may limit the entry slots to which inverted preference ([Rule 5.3.2](#)) applies to any number, including zero.

### **5.2** Entrants

#### **5.2.1** Number

**5.2.1.1 †** Minimum - For an Official competition, a class must have at least five entrants whose final score is greater than zero.

#### **5.2.1.2** Maximum

**5.2.1.2.1** The total number of sailplanes is limited to 65, unless a smaller maximum number is designated by contest organizers on the Application for Sanction form and approved by the SSA Contest Committee Chairman. This is a maximum for all classes in all contests being held at one site simultaneously.

**5.2.1.2.2 †** Applicants to an oversubscribed contest shall be accepted without regard for the competition class to which they have applied.

#### **5.2.2** Types

**5.2.2.1** All entrants are either regular entrants or guests.

**5.2.2.2** A single-pilot entry includes only one pilot-in-command.

**5.2.2.3** A team entry is one for which two to four pilots plan to act as pilot-in-command (either in a single-place or a multiplace sailplane). Each team pilot must meet all eligibility requirements. Team entries shall be indicated on scoresheets using the last name of each pilot, joined with an ampersand.

**5.2.2.4** The type of entry must be declared at registration and may not change after the first contest launch.

**5.2.3** Not Applicable

**5.2.4** Passengers - An entrant may carry passengers in a multi-place sailplane.

**5.2.5** Nationality

**5.2.5.1** A US pilot is one who is a US citizen or a Resident Alien as defined by the US Immigration and Naturalization Service; others are considered foreign pilots.

**5.2.5.2** † Foreign pilots fly as regular entrants and are fully eligible to receive awards.

**5.3** † Entry Procedures

**5.3.1** Pilot Ranking Score

**5.3.1.1** A prospective entrant's Pilot Ranking Score is the greater of:

- A ranking score from the current SSA Pilot Ranking List
- The best pilot ranking score obtained in an SSA-sanctioned contest during the current calendar year and prior to the Preferential Entry Deadline.

**5.3.1.2** If an applicant has earned a greater ranking score in a SSA-sanctioned contest subsequent to the publication of the Pilot Ranking List, it is the applicant's responsibility to submit this to contest organizers.

**5.3.1.3** Pilots with no ranking score are considered unranked; their Pilot Ranking Score is zero.

**5.3.2** † Preference Number

**5.3.2.1** † Inverted preference applies: an applicant's Preference Number is 100 minus the Pilot Ranking Score of [Rule 5.3.1](#). In the case of a team entry, the least favorable (i.e. largest) Pilot Ranking Score of any team member is used.

**5.3.2.2** † But contest organizers may limit the entry slots to which inverted preference applies ([Rule 5.1](#)); for other entry slots, the Preference Number is the Pilot Ranking Score.

**5.3.3** The Preferential Entry Deadline is 60 days prior to the first scheduled competition day.

**5.3.4** † Procedures for applications received no later than the Preferential Entry Deadline

**5.3.4.1** † Applicants who finished first in any class of the most recent SSA-sanctioned Regional contest at this site within the previous 2 calendar years have 100 added to their Preference Number.

**5.3.4.2** † Applicants who reside within the contest's SSA Region

**5.3.4.2.1** † For a Super-Regional competition ([Rule 5.1.2](#)) such applicants are ranked by Preference Number (and in case of ties, by date of application). The top-ranking N applicants have 100 added to their Preference Number, where N is the number of entry positions selected by the organizers for priority under [Rule 5.1.2](#).

**5.3.4.2.2** † For a Regional competition ([Rule 5.1.1](#)) all such applicants have 100 added to their Preference Number.

**5.3.4.3** † Applications are then ranked by Preference Number (and in case of ties, by date of application).

**5.3.5** At the Preferential Entry Deadline, applicants are assigned to available entry slots in order by rank. Any surplus of applications forms a ranked standby list.

**5.3.6** Prior to the Preferential Entry Deadline, Contest organizers may designate up to 2 qualified pilots to be granted preferential entry regardless of their ranking score. This provision is intended for use on behalf of those who have contributed significantly to contest organization and operation.

**5.3.7** Applications received later than the Preferential Entry Deadline are ranked by date of application (and in case of ties, by preference number) and added to the standby list.

**5.3.8** After the Preferential Entry Deadline, applicants are admitted to open entry slots in order from the standby list.

**5.3.9** The position of a prospective entrant who has not appeared and paid the full entry fee by 9:00 of a

class's first scheduled competition day is considered to be open and available to a pilot on the standby list.

### **5.3.10** Foreign Pilots

**5.3.10.1** Foreign pilots ([Rule 5.2.5.1](#)) with a Pilot Ranking Score ([Rule 5.3.1](#)) greater than zero are eligible for entry in the same way as US pilots.

**5.3.10.2** Unranked foreign pilots are eligible for entry under the following rules:

**5.3.10.2.1** Two preferential entry positions are available. Priority for these goes to one pilot per foreign country, by date of application.

**5.3.10.2.2** If one of these positions remains open at the Preferential Entry Deadline, it can be taken by an additional foreign pilot from the country already represented, with priority by date of application.

**5.3.10.2.3** Unranked foreign applicants are included among those eligible for entry from the standby list ([Rule 5.3.5](#) - [Rule 5.3.8](#)).

**5.3.11** † Successful applicants shall be notified as soon as possible, and always within a week of acceptance

**5.3.12** † Entrants accepted into an oversubscribed contest may not change classes.

## **5.4** † Fees

**5.4.1** The entry fee will be as announced. A deposit is required when an entry application is submitted. The sponsor may impose a surcharge for entries received after the Preferential Entry Deadline.

### **5.4.2** Fee Amounts

#### **5.4.2.1** Entry fees

**5.4.2.1.1** † The maximum fixed entry fee shall be:

- † For a scheduled 5-day contest, \$390 per entry.
- † For a scheduled 6-day contest, \$430 per entry.
- † For a scheduled 7-day contest, \$470 per entry.

**5.4.2.1.2** † The maximum variable entry fee shall be \$200 per entry plus \$48 per aerotow.

**5.4.2.1.3** These amounts may be increased to cover pre-existing local per-pilot fees that apply to all pilots (not solely pilots entered in a competition) who fly at the contest site, up to a maximum of \$25. Organizers must fully explain such local fees on the Application for Sanction form.

**5.4.2.3** † The entry deposit is \$150.

**5.4.2.4** † The maximum late-entry surcharge is \$50.

#### **5.4.2.5** Sanction fees

**5.4.2.5.1** † Of the entry fee, \$45 represents the sanction fee.

**5.4.2.5.2** Sanction fees are to be paid by contest sponsors to the SSA at the conclusion of the contest. If the competition is not Official ([Rule 4.4](#), [Rule 5.2.1.1](#)), half the fee is paid to the SSA and the remainder is refunded to entrants.

**5.4.2.6** Rules governing fee amounts shall be those in effect at the start of competition. If these have been altered between the time the contest was granted its sanction and the start of competition, the new fees and fee limits shall apply.

**5.4.3** When a fixed entry fee has been announced, it includes a number of aerotows equal to the number of scheduled competition days, for use during the period of the contest. But aerotows taken after the start of competition for practice purposes are not covered under this rule.

**5.4.4** † The deadline for canceling an entry with full refund of fees paid is 30 days prior to the first scheduled competition day; after this time, money will be refunded at the discretion of the Contest Manager. But an applicant on the Standby list who cancels immediately upon notification that an entry position has become open receives a full refund.

## **5.5** † Pilot Qualifications and Entry Requirements

### **5.5.1** Experience requirements

**5.5.1.1** Each entrant shall meet one or more of the following experience requirements:

**5.5.1.1.1** Have a Pilot Ranking Score ([Rule 5.3.1](#)) greater than zero.

**5.5.1.1.2** Present evidence both of having completed a previous National soaring contest and of recent cross-country soaring experience.

**5.5.1.1.3 †** Present proof of having earned the FAI Silver Badge.

**5.5.2 †** Entry application requirements

**5.5.2.1 †** To be considered for entry, an applicant must submit the following to the contest organizers:

**5.5.2.1.1 †** An SSA number indicating current voting or student SSA membership

**5.5.2.1.2** Evidence of meeting the experience requirements of [Rule 5.5.1](#)

**5.5.2.1.3** The entry deposit ([Rule 5.4.2.3](#))

**5.5.2.1.4 †** A Pilot Ranking score and source, if earned in the current year ([Rule 5.3.1.1](#))

**5.5.2.1.5 †** Declaration of the competition class to which entry is sought

**5.5.2.1.6** If the applicant is a Foreign pilot, declaration of country of citizenship

**5.5.2.1.7 †** Whether entering as regular entrant or guest

**5.5.2.1.8 †** SSA Region of residence

**5.5.2.2** The date of application is the date on which these submissions are completed.

**5.5.3** Contest registration requirements

**5.5.3.1 †** In addition to the requirements of [Rule 5.5.2](#), at contest registration each entrant must:

**5.5.3.1.1 †** Present proof of holding a valid FAA Private or Commercial Glider Pilot Certificate. Foreign pilots ([Rule 5.2.5](#)) may present an equivalent certificate from their country. Instructors and students at US Service Academies may present the appropriate endorsement making them eligible as pilot-in-command.

**5.5.3.1.2 †** Present proof of voting or student SSA membership valid through the final scheduled contest day.

**5.5.3.1.3 †** Declare the sailplane to be flown and its official configuration. A sailplane will be accepted provided it meets all applicable provisions of these rules.

**5.5.3.1.4 †** Declare ownership of the registered sailplane, or show permission of the owner to fly the sailplane in the competition.

**5.5.3.1.5 †** Present proof of insurance applicable to the registered sailplane and pilot(s), effective through the final scheduled competition day, showing coverage of at least \$1,000,000 per occurrence for bodily injury and property damage liability.

**5.5.3.1.6** Complete the contest registration form and the waiver/signature form.

**5.5.3.1.7** Pay the balance of fees owed.

**5.5.3.2** Entry Deadline

Registration must be complete by 09:00 of the first scheduled competition day; no entries will be accepted later than this.

**5.5.4** Tow pilot requirements

Prior to conducting any tow operations, pilots of aircraft that provide launches for contest sailplanes must:

- Present proof of holding a valid FAA Pilot Certificate.
- Present proof of ownership of the tow aircraft, or permission of the owner for its use in contest towing operations.
- Present proof of insurance for the tow aircraft with a minimum coverage of \$1,000,000 per occurrence for bodily injury and property damage liability.
- Receive a briefing from the Chief Tow Pilot.

**5.6 †** Contest Information

**5.6.1 †** Control Points

**5.6.1.1 †** Control points include turnpoints, start points and finish points.

**5.6.1.2 †** Each control point shall be assigned a unique numeric ID and alphanumeric name.

**5.6.1.3 †** The latitude and longitude of each control point shall be specified. Coordinates of points that coincide with a ground feature shall be accurate to 200 feet or better based on the WGS-84 datum.

**5.6.1.4 †** The elevation of each control point shall be specified, with an accuracy of 50 ft or better.

**5.6.1.5 †** At least one control point shall be located on the home airfield. This shall be designated the home point, and its altitude shall be used as the official altitude of the home field.

**5.6.1.6 †** Not Applicable

**5.6.1.7** The standard format for control point data shall be the Cambridge .DAT format.

**5.6.2 †** Airspace

**5.6.2.1 †** Closed airspace includes Class A, Class B, Class C, Restricted and Prohibited areas, airspace outside US territory, and other airspace in which VFR flight by non-transponder-equipped aircraft is not allowed or would require a specific clearance.

**5.6.2.2** Any airspace that lies directly above closed airspace is itself considered closed.

**5.6.2.3 †** The CD may declare additional airspace to be closed.

**5.6.2.4** Closed airspace is considered closed at all times, except as specifically announced by the CD.

**5.6.2.5** Because airspace changes (including but not limited to Temporary Flight Restrictions) can be implemented at any time, all pilots should be aware that perfect accuracy of airspace data cannot be guaranteed. If discrepancies arise, they will be resolved by reference to the official definition of airspace in effect at the time of flight, subject to modifications previously announced by the CD.

**5.6.2.6** The standard format for closed airspace data shall be the .SUA format.

**5.6.3 †** Contest Databases

**5.6.3.1 †** Official databases in computerized form of control points ([Rule 5.6.1](#)) and of closed airspace ([Rule 5.6.2](#)) shall be made available no later than 30 days prior to the first scheduled competition day.

**5.6.3.2 †** Each database shall include a unique version number or date/time, which shall be changed each time any change is made to the data.

**5.6.3.3 †** Copies of the current databases shall be readily available to entrants at the contest site.

**5.6.3.4 †** If after distribution of any pilot kit ([Rule 5.6.4](#)), any change to an official database is necessary, the CD will ensure that each entrant is notified of the new version and acknowledges this notification by signature.

**5.6.3.5 †** Scoring shall be based on the current version of contest databases.

**5.6.4 †** Pilot's Kit

At registration, each entrant will receive a package of contest-related information and documents, as follows:

**5.6.4.1 †** Required

- † A list of all key contest personnel ([Rule 3.1](#)).
- † A diagram of the contest site showing runways, taxiways, trailer tie-down areas, vehicle routes, and start, finish, relight and gridding areas.
- † Gridding, launch and relaunch procedures
- † Communication procedures for off-site landings.
- † List of designated airfields ([Rule 10.10.3.2](#))
- † A map or diagram showing the location of all control points
- † Designation of the current database versions for control points ([Rule 5.6.1](#)) and closed airspace ([Rule 5.6.2](#))

**5.6.4.2** Suggested

- A map or diagram showing local names for geographic features.
- A roadmap covering the contest area.
- † The list of entrants and crews
- † The schedule of social events

**5.7** Eligible Sailplanes - See [Rule 6.12](#).

**5.8** Guests

**5.8.1 †** Organizers may, at their discretion, accommodate pilots who wish to fly as guests.

**5.8.2** Guest pilots must meet all the provisions of [Rule 5.0](#), including the specific requirements of [Rule 5.5](#).

**5.8.3** Organizers may set a partial or pro-rated fee for a guest pilot who wishes to fly only part of a contest. Such a partial fee should cover daily costs and a reasonable share of fixed costs.

**5.8.4** Guests are expected to comply with all rules, and are specifically enjoined from providing aid to



other pilots during flight. Any exemption from the provisions of these Rules requires a waiver from the SSA Contest Committee.

**5.8.5** The performance of guest pilots shall not influence the scoring or ranking of regular entrants.

**5.8.6** Guest entrants are ineligible for the tangible awards of [Rule 7.0](#).

## **6.0 † SAILPLANES AND EQUIPMENT**

### **6.1 General**

**6.1.1** A sailplane must have a valid airworthiness certificate issued by the civil aviation authority of the country in which it is registered. It must comply with applicable US Federal Aviation Regulations and meet all the requirements of the class in which it is entered.

**6.1.2** The CD has the right to inspect equipment at any time during the contest.

#### **6.1.3 Exchange of components**

**6.1.3.1** A sailplane's major components include the fuselage, wings (including separable wingtips), empennage, and power unit (in the case of a motorized sailplane).

**6.1.3.2** Except as provided in these Rules, the exchange of a sailplane or major component is not allowed.

**6.1.3.3** If the CD determines that a sailplane was damaged through no fault of the pilot or crew, exchange is permitted provided the replacement exactly matches the damaged component.

**6.1.3.4** In the case of damage to separable wingtips whose span is less than 40 inches, exchange is permitted without considering fault and without the requirement that the replacement be an exact match. The CD must be informed and such an exchange may not be done more than once during a contest.

#### **6.1.4 Official Configuration**

**6.1.4.1** A sailplane's official configuration is the one used during the first competition takeoff.

**6.1.4.2** Except as provided in these Rules, the official configuration may not be altered unless such alteration may be performed in flight.

### **6.2 Contest ID**

**6.2.1** Each entrant must have a unique Contest ID, consisting of up to three characters (letters or digits). If more than one entrant wishes to use a certain ID, preference will be given first to the entrant using an ID officially assigned by the SSA and second to the entrant who first registered for the competition.

**6.2.2** The Contest ID shall be displayed in a contrasting color on both sides of the vertical tail (minimum height 12 inches) and under the right wing (bottom of ID toward the trailing edge of the wing; minimum height is the smaller of 24 inches or 90% of the wing chord excluding a control surface).

### **6.3 † Motorized Sailplanes**

**6.3.1** A motorized sailplane is one that incorporates a power unit available for use in flight that adds energy to the air through which the sailplane flies.

**6.3.2 †** Unless otherwise specified in [Rule 6.12](#), motorized sailplanes are permitted.

**6.3.3** If motorized sailplanes are permitted, the following rules apply:

**6.3.3.1** Each motorized sailplane must carry a flight recorder capable of showing when the power unit is used. Each flight is scored up to the latest fix prior to use of the power unit.

**6.3.3.2** If a flight log shows no valid fixes for a period of longer than one minute, the flight will be scored as if the power unit had been used.

**6.3.3.3** The pilot of a motorized sailplane may elect to use the power unit after an outlanding.

**6.3.3.4** It shall be the responsibility of the pilot to supply the equipment necessary to meet and ensure compliance with the provisions of this rule, and to demonstrate its satisfactory operation to the CD and the Scorer prior to the start of competition.

**6.3.3.5** Self-launching may be done, in accordance with [Rule 10.6.3](#).

**6.3.3.6** Except as provided for by [Rule 10.6.3](#), any use of the power unit ends competition flying for the day. The pilot shall return to the home airfield without attempting to proceed further on task; failure to comply can be considered unsportsmanlike conduct. (Penalty described in [Rule 12.2.5.3](#).)

### **6.4 Multi-place Sailplanes**

**6.4.1** Multi-place sailplanes may be entered in any class whose rules they meet.

**6.4.2** Except as provided in [Rule 6.12](#), multi-place sailplanes may be flown solo or with passenger(s); in all cases weight restrictions must be met.

**6.4.3** Two pilots in a multi-place sailplane are not a team entry unless team entries are allowed and the specific provisions of [Rule 5.2.2.3](#) are met.

## **6.5** Required Equipment

### **6.5.1** Parachutes

Each occupant of a sailplane must be protected by a parachute. This can be accomplished by either of the following:

**6.5.1.1** Each occupant wears a parachute.

**6.5.1.2** The sailplane is fitted with a ballistic parachute system approved by the sailplane manufacturer and designed to safely lower the plane and all occupants to the ground.

### **6.5.2** Emergency Locator Transmitters

When announced by contest organizers prior to the Preferential Entry Deadline, an impact-activated Emergency Locator Transmitter (ELT) is required in every sailplane. The ELT must be a standard production model produced in quantity by a reputable manufacturer.

## **6.6** Restricted Equipment

**6.6.1** Each sailplane is prohibited from carrying any instrument which:

- Permits flight without reference to the ground.
- Is capable of measuring air motion or temperature at a distance greater than one wingspan.

**6.6.2** An external cleaning device is any device with moving parts designed to clean the exterior of the sailplane during flight. In certain classes ([Rule 6.12](#)), the use of such devices is prohibited.

**6.6.3** Carrying any two-way communication device other than a standard aircraft-band VHF radio and a wireless telephone is prohibited.

**6.6.4** Other than an aircraft-band VHF radio, any device that allows in-flight access to weather data is prohibited.

**6.6.5** Violations of any provisions of this Rule are considered Unsportsmanlike Conduct. (Penalty described in [Rule 12.2.5.3](#).)

## **6.7** † Flight Documentation Equipment

**6.7.1** All Flight Documentation is accomplished by means of a Flight Recorder.

### **6.7.2** Definitions

**6.7.2.1** Flight Recorder - A device that makes a continuous computerized log of a sailplane's position.

**6.7.2.2** Flight Log - The record of a flight made by a Flight Recorder and transferred to a file on a scoring computer.

**6.7.2.3** Fix - the record of a single position point, including time, latitude, longitude and altitude. A valid fix is one that lies along the flight track of the sailplane, and is not displaced from that flight track by an implausible distance or time. Throughout these Rules, only valid fixes are considered; invalid fixes are ignored.

**6.7.2.4** Security check - a software or hardware check supplied by the Flight Recorder manufacturer that verifies that the flight recorder and/or the flight logs it produces are secure.

### **6.7.3** Altitude recording

**6.7.3.1** A Flight Recorder may record altitude derived from a calculated position.

**6.7.3.2** A Flight Recorder may record a calibratable pressure altitude. Altitudes may be adjusted according to the best available calibration data.

**6.7.3.3** If a Flight Recorder records both calculated and pressure altitude, pressure altitude will be the primary data source and calculated altitude will be the backup data source for flight evaluation.

### **6.7.4** † Flight Recorder requirements

**6.7.4.1** All Flight Recorders used for Flight Documentation must:

- Provide horizontal position referenced to the WGS-84 geographic datum.
- Be capable of an interval between fixes of 15 seconds or less.

**6.7.4.2** Flight Recorders used in a motorized sailplane shall include a means of determining when the power unit was used.

**6.7.4.3** † Acceptable flight recorders are listed in Appendix B.

### **6.7.5 †** Flight Log data format

**6.7.5.1** The Flight Log from a Flight Recorder must be in (or readily convertible to) a file that fully conforms to the IGC standard format. A valid log file must include:

- A unique Flight Recorder ID.
- The date of the flight.
- The entrant's competition ID and name.
- A record of fixes, each containing time, latitude, longitude and altitude.

**6.7.5.2 †** To be valid, flight logs must pass the applicable file-integrity security check.

### **6.7.6** Data Transfer to Scorer

**6.7.6.1** A Flight Log may be submitted to the Scorer via any data medium or transmission scheme suitable to the Scorer.

**6.7.6.2** An alternate submission scheme is to transfer the Flight Log from the Flight Recorder directly to the scoring computer.

**6.7.6.3** The Scorer has the right to request a re-transfer of a Flight Log directly from a Flight Recorder to check security or to replace missing or damaged data. Such request must be made no later than 9:00 on the day following the flight. A pilot who fails to comply with such a request receives no credit for the flight in question.

### **6.7.7** Accessories

It is the responsibility of each entrant, prior to the start of competition, to ensure that Scorer is provided with all software and hardware (cables, etc.) needed to transfer, convert and check Flight Logs, and to demonstrate their satisfactory operation.

## **6.8 †** Weight

### **6.8.1 †** Limitations

**6.8.1.1 †** No sailplane shall fly at a weight greater than the maximum certificated gross weight in the country of origin, nor greater than 1873 pounds (850 kilograms).

**6.8.1.2** Aero tow launches are limited to a weight of 1653 pounds (750 kilograms), with the exception that multi-place gliders may launch by aero tow at a greater weight provided they carry no disposable or fixed ballast other than for center-of-gravity adjustment.

**6.8.1.3** Additional limitations of [Rule 6.12.3](#) may apply.

### **6.8.2 †** Weighing

**6.8.2.1 †** The CD shall declare whether a weighing done as sailplanes are moved to the launch grid is Official or not; any weighing done after gridding shall be considered Official.

**6.8.2.2** If at an Official weighing a sailplane is found to be out of compliance with limitations, the weight of that sailplane must immediately be altered to a legal value. If the amount out of limitation was more than 25 pounds, a penalty will be applied ([Rule 12.2.5.4](#)).

**6.8.2.3** After official weighing or gridding, weight may not be altered so as to be out of limitations, and may not be increased more than 5 pounds above the weight at weighing or gridding.

### **6.8.3** No-ballast rules

No-ballast rules shall apply.

**6.8.3.1** Disposable ballast is prohibited with the exception of disposable tail ballast.

**6.8.3.2** Fixed ballast is permitted, but not more than an amount that brings the sailplane to its maximum handicap weight, as defined in the SSA Sailplane Handicap List.

## **6.9** Wingspan

**6.9.1** The Wingspan is defined as the length of the horizontal projection of the wings, from one extreme tip point to the other, with the wings in their completely unloaded "zero-G" shape. Wingspan may be measured by any suitable means, provided the wings are supported to reasonably approximate the unloaded shape.

**6.9.2** If a nominal wingspan is specified in [Rule 6.12](#), the maximum span shall be the nominal wingspan plus 2.5 centimeters. No sailplane whose wingspan exceeds the maximum span shall be allowed to compete.

## **6.10** Towropes

**6.10.1** Contest organizers shall provide towropes of a strength suitable for typical maximum glider

weights. Entrants with unusually lightweight gliders may provide their own weak links.

**6.10.2** Contest towropes shall employ standard Tost rings. Entrants with gliders needing different rings must supply them.

### **6.11** Electronic Communication Equipment

**6.11.1** Each entrant is expected to have a properly-functioning aircraft-band VHF radio capable of transmitting and receiving on 123.3 MHz and 123.5 MHz.

**6.11.2** Electronic navigation receivers must conform to the restrictions of [Rule 6.6](#).

**6.11.3** Wireless telephony is restricted to emergency and ground use only.

### **6.12** Sailplanes

Participation of all types and sizes of sailplanes is encouraged in the Sport Class.

**6.12.1** Handicapping based on relative performance will be used to minimize the differences in sailplanes ([Rule 11.6.1](#)).

**6.12.2** The use of external cleaning devices ([Rule 6.6.2](#)) is prohibited.

#### **6.12.3** Competition Weight

**6.12.3.1** A sailplane may compete at any weight that conforms to [Rule 6.8.1](#) and the manufacturer's limitations.

**6.12.3.2** For team and multiplace entries, Competition Weight is the largest weight at which the sailplane is expected to launch for any contest flight, as declared by the entrant(s) prior to the start of competition. The sailplane shall not fly at a weight greater than this Competition Weight.

**6.12.3.3** For other entries, Competition Weight is the weight at the first contest launch. The sailplane shall be within 10 pounds of this weight for every contest launch.

**6.12.3.4** The Competition Weight is used in the determination of a sailplane's handicap ([Rule 11.6.1.2.2](#)).

## **7.0 AWARDS**

**7.1** † Not Applicable

**7.2** † In each class, regular entrants will be ranked and SSA Awards provided, as follows:

Silver Award - Highest Final Score

Bronze Awards - Second Through Xth Highest Score

X = 2 for 10-19 entrants

X = 3 for 20-29 entrants

X = 4 for 30-39 entrants, etc.

Guest entrants whose scores would qualify for a medallion will be awarded a Certificate of Achievement.

**7.3** An award may be presented to the pilot having the highest final class score in a U.S. designed and built sailplane provided this score is at least 60% of the highest final class score.

**7.4** † An award may be presented to the best-scoring regular entrant who has never appeared on an annual SSA Pilot Ranking List.

**7.5** In the case of ties, duplicate awards will be presented.

**7.6** Awards may be made for the highest scores on each contest day.

**7.7** Commemorative awards are encouraged for all entrants.

**7.8** Awards for Best Team, Multi-place or Homebuilt Sailplanes, Feminine or Junior Pilot, etc. are encouraged. For a Team award, no team member shall fly more than 70% of the tasks.

## **8.0 † PROTEST**

**8.1** Each entrant is expected to follow these rules and the rulings of the Competition Director, who is the enforcer and arbiter of these rules. For a protest against a ruling of the CD to be sustained there must be clear evidence that a provision of these Rules was not followed.

**8.2** An entrant may request an explanation of an action or decision made by any contest official. This request shall be made of the CD, either orally or in writing. The CD shall respond in kind, as promptly as possible and always within 24 hours.

**8.3** † If an entrant feels that these Rules have been incorrectly applied, a written protest must be delivered

to the CD as soon as is practical. A protest relating to scores shall be delivered prior to the day in question becoming Official ([Rule 11.9.3](#)); others shall be delivered within 24 hours of the protested incident or ruling.

**8.4 †** The CD shall issue a prompt written ruling on the protest, giving the reason for the ruling. In arriving at a decision, the CD shall seek advice from the Contest Competition Committee and may ask for statements from witnesses, etc. The ruling shall be issued within 24 hours of receipt of the written protest.

**8.5 †** Appeal of a decision of the CD shall be directed to the SSA Contest Committee Chairman and must include all relevant documents such as the written protest, the CD's written decision, statements of witnesses, etc. Written notification of intent to appeal must be given to the CD within 24 hours of the CD's decision and the appeal must be delivered to the SSA within ten days of the decision. The Chairman of the SSA Contest Committee shall seek advice from members of the SSA Rules Committee, and shall make a prompt response, in writing, giving a decision and the reason for it.

**8.6** Further appeal may be directed to the SSA Board of Directors which may revise or let stand the decision of the Contest Committee. If the SSA Board of Directors elects to revise the decision, it shall make a prompt response in writing.

## **9.0 † SAFETY**

A contest should be run with the greatest emphasis on safety. No phase of the operation of the contest or interest in competition can be allowed to compromise safety. Each pilot, crew member, and Contest Official must carry out his responsibility to prevent unsafe practice. The Contest Manager has the primary responsibility for the preparation of a safe plan of operation to be carried out by the Operations Director, CD, other contest staff, pilots and crews.

**9.1** A Safety Briefing will be made at each daily pilots' meeting. Suggested briefing subjects are start procedures, gaggle flying, maximum speeds, finish techniques, landing and rollout cautions, off-airport landings, and local concerns.

**9.2** Circling within 5 miles of the contest site or within an active start cylinder will be to the left.

**9.3** Judgments affecting flight safety are the sole responsibility of the pilot in command. This includes (though is not limited to) any decision to fly into weather, over rough terrain or hazardous areas, and the evaluation of the safety of any potential landing site.

**9.4** Sailplanes and trailers will be tied down when unattended.

**9.5** The following are prohibited:

- Aerobatics
- Flying within clouds
- Flight after Contest Sunset ([Rule 12.2.5.2](#)).

**9.6** Test flights may be made before the launch line opens if authorized by the CD.

**9.7** The CD may declare a rest day if previous contest flying has created a potential fatigue problem for pilots.

**9.8** The Contest Manager shall make available a Safety Box for pilots (and officials) to anonymously submit written comments on any incident or action they feel should be brought to the attention of the CD. The CD shall review the contents of the Safety Box daily and take action as deemed appropriate.

**9.9** During take-off and landing operations, all pilots and towpilots should monitor the contest frequency for information pertaining to flight safety.

**9.10** Competitors are expected to comply with Federal Aviation Regulations applicable to non-transponder-equipped aircraft operating under Visual Flight Rules.

**9.11** If an aircraft may have suffered damage, the CD has the right to ask that it be examined by a qualified inspector prior to further flight.

**9.12 †** Entrants who are involved in or witness any accident or incident shall cooperate with the CD in completion of the associated Accident/Incident Report ([Rule 13.2](#)).

**9.13** Disqualification of an Unsafe Pilot

**9.12.1** A pilot who, in the opinion of a Competition Director or Contest Manager, has demonstrated a problem or a history of safety related problems during participation in one or more contests is subject to review and action by the SSA. Such review will take place upon the submission by a CD or Contest Manager to the SSA Contest Committee Chairman of a written complaint stating the history of the alleged problem(s). This history should be as complete as possible and include statements by witnesses whenever applicable.

**9.12.2** The complaint shall be reviewed by an Investigating Committee consisting of the Chairman of the Contest Committee and the SSA Rules Subcommittee. Witnesses may be interviewed for additional information. If the complaint appears credible, it will be discussed in detail with the pilot, if he or she is willing to discuss the complaint. The Investigating Committee will present its findings in writing to the SSA Board of Directors, along with a recommendation for action. Such recommendation may be for no action, counseling, probation, restriction to certain types and/or levels of competition, a ban from competition for a specified period, or a permanent ban. The final action taken shall be determined by the Board of Directors.

**9.12.3** The Investigating Committee shall when feasible make its recommendation within 30 days of the submission of a request for review.

## **10.0 † CONTEST FLYING**

### **10.1 Daily Times**

**10.1.1** Time of earliest soarable weather - estimated by the CD based on the daily weather forecast.

**10.1.2** Grid Time - the time at which all sailplanes shall be on the launch grid, as specified by the CD each day. This time will not be less than one hour after the close of the daily pilots' meeting, but should be at least 25 minutes before the expected time of the first launch.

**10.1.3** Launch Begins - as announced by the CD, but not sooner than 25 minutes after grid time or the end of a pilots' meeting held prior to the first launch.

**10.1.4** Start Opens - at the time of the first launch.

**10.1.5** Task Opens - at a time designated by the CD, about 15 minutes after the last competitor who accepts his designated launch starts his takeoff roll.

**10.1.6** Finish Opens - at the time of first launch.

**10.1.7** Launch Line Closes - three hours before Contest Sunset, unless extended by the CD.

**10.1.8** Contest Sunset - the CD shall designate a Contest Sunset time, which shall be approximately 10 minutes prior to the earliest time of sunset at the contest site during the period of competition.

**10.1.9** Start Closes - 30 minutes prior to Contest Sunset time.

**10.1.10** Finish Closes - at Contest Sunset time.

### **10.2 Meetings and Task Notification**

**10.2.1** A mandatory pilots' contest briefing will be held prior to the first competition launch. A pilot not in attendance must be briefed by the CD prior to that pilot's first competition flight. The purpose of this briefing is to discuss competition rules, Start/Finish procedures, airport operations and contest safety. At this meeting pilots will indicate partners for their Critical Assembly Check.

**10.2.2** A daily pilots' meeting will be held prior to launch with the following suggested format:

- Contest Manager - Administrative announcements, results of previous task.
- Operations Director - Operational comments, gridding and launch.
- Meteorologist - Weather briefing, current NOTAM information as supplied by the Federal Aviation Administration
- Competition Director - Safety briefing, proposed and alternate tasks.

**10.2.3** After Grid Time, the CD may call a pilots' meeting near the launch line to confirm or change the task to be flown. The CD shall ensure that each pilot is aware of the task.

**10.2.4** The CD may change the task after the launch has begun but before the task opens, using these procedures:

**10.2.4.1** Pilots that have not yet launched can be notified in person of a task change.

**10.2.4.2** For pilots that have launched, a task change will be announced on the contest frequency and a roll call (in alphanumeric order by contest ID when practical) taken to verify that each pilot is aware of the announcement. If a pilot fails to respond, the CD will re-transmit the information to that pilot, and will then assume that the pilot has the new information.

**10.2.4.3** Neither a change of task opening time nor an increase in the Maximum Start Height requires a roll call - an announcement on the contest frequency is sufficient.

**10.2.4.4 †** When practical, task changes within 10 minutes of task opening time should be avoided.

### **10.3 † Tasks**

**10.3.1 † General****10.3.1.1 † Task Parameters**

- † Standard Minimum Task Distance: 40 miles
- † Standard Minimum Task Time: 1.5 hours
- † Standard Task Time: 2.0 hours
- Minimum length of first leg: 5 miles
- Minimum length of subsequent task legs: 2 miles
- † Maximum number of task turnpoints: 11

**10.3.1.2 Task Selection** - Tasks should be selected so as to provide variety and challenge. The CD should consult all available meteorological resources and seek the advice of the Task Advisory Committee ([Rule 3.1.5](#)). CDs are expected to use a mix of task types, lengths and directions, as conditions dictate. Specific task-setting guidelines are found in the Guide to the Rules; CDs should be familiar with these guidelines.

**10.3.1.3 Normal Task** - Tasks should make as full use of the available soaring weather as is practical. When feasible, tasks should be set so that the expected minimum completion time is not less than the Standard Task Time. Yet a task should be short enough that a pilot who starts as soon as the task opens and who achieves 75% of the expected winning speed is able to finish. A time-limited task should normally allow a maximum possible distance at least 130% of that achievable in the designated minimum time at the expected winning speed.

**10.3.1.4 Minimum Task** - The minimum Handicapped Distance of a task for which a finish will be awarded is the Standard Minimum Task Distance.

**10.3.1.5 Maximum Task** - Tasks should be set such that the total time on course of the highest-scoring flights on any two consecutive days is less than 10 hours. But, consistent with this and as conditions allow, it is appropriate for the CD to set occasional tasks that are substantially longer than the Standard Task Time.

**10.3.2 Task Types**

**10.3.2.1 Assigned Task** - not used.

**10.3.2.2 Modified Assigned Task (MAT)** - Speed over a course of one or more turnpoints, with a finish at the contest site.

**10.3.2.2.1** The CD shall designate a minimum flight time.

**10.3.2.2.2** The CD may designate from zero to 11 turnpoints. Designated turnpoints must be attempted in the designated sequence, but a pilot may elect to finish after any turnpoint in the sequence.

**10.3.2.2.3** A pilot who achieves all designated turnpoints may elect to fly to additional turnpoints. Such pilot-selected turnpoints must comply with any restrictions the CD has imposed under [Rule 10.3.2.2.4](#), and no turnpoint may be repeated unless at least two intervening turnpoints are claimed (the Start and the Finish are not turnpoints).

**10.3.2.2.4** The CD may restrict:

- The maximum number of turnpoints to a number less than the normal maximum of 11
- The number of times any particular turnpoint may be claimed
- The choice of the first turnpoint (applies only if the CD designates no turnpoints per [Rule 10.3.2.2.2](#))

**10.3.2.2.5** The CD may designate a final turnpoint that all pilots must use immediately prior to a finish. This final turnpoint shall be no further than 5 miles from the finish (gate or cylinder perimeter).

**10.3.2.3 Turn Area Task (TAT)** - Speed over a course through one or more turn areas, with a finish at the contest site.

**10.3.2.3.1** Turn areas are turnpoints with a designated radius defining a cylinder.

**10.3.2.3.2** The CD shall designate a minimum flight time, a sequence of one or more turnpoints and a radius for each which shall be an integral number of miles not greater than 30.

**10.3.2.3.3** Turnpoint cylinders shall be chosen so that no task leg can be shorter than the restrictions imposed by [Rule 10.3.1.1](#).

**10.4 Control Points** (moved to [Rule 5.6.1](#)).

## 10.5 † Flight Documentation

### 10.5.1 † General

**10.5.1.1** All contest flights shall be documented by means of a Flight Recorder ([Rule 10.5.2](#)).

**10.5.1.2** Flight Documentation consists of a Flight Log and any Task Claim form pertinent to the flight.

#### 10.5.1.3 Task Claim Form

**10.5.1.3.1** A Task Claim Form is submitted to the Scorer in the following circumstances:

- A Modified Assigned task was flown
- A Safety finish ([Rule 10.9.5.3](#)) is claimed
- The pilot of a motorized sailplane used the power unit after launching
- Flight Documentation includes an incomplete flight log

**10.5.1.3.2** After scores have been calculated and before they are Official, any pilot may submit a subsequent Task Claim form for the purpose of obtaining a more accurate score ([Rule 11.2.2.7](#)).

**10.5.1.4** The CD and the Scorer shall ensure that all flight documentation is promptly analyzed. Documentation submitted by 20:00 should be analyzed before the next pilots' meeting; documentation submitted later should be analyzed before 12:00 the next day.

**10.5.1.5 †** The Scorer shall publish daily flight documentation available to entrants no later than the next daily pilot meeting. This requirement can be satisfied by posting such documentation in an accessible place on a common storage medium (e.g. compact disk or thumb drive), or on a website to which access is readily available to any entrant.

**10.5.1.6 †** At the end of the competition the Scorer will publish all flight documentation to a publicly accessible website.

### 10.5.2 Flight Log requirements

**10.5.2.1** A valid Flight Log is one that:

- Was produced by a Flight Recorder that meets the provisions of [Rule 6.7.4](#)
- Shows the takeoff, the path of the flight, and the landing.
- Has a typical interval between fixes of 15 seconds or less.
- Between takeoff and landing, shows no interval between fixes exceeding 15 minutes (See [Rule 6.3.3.2](#) for motorized sailplanes constraint).

**10.5.2.2** At any control point, valid control requires that the Flight Log show the entire path of the sailplane within 2 miles of the control cylinder.

### 10.5.3 Turnpoint control

**10.5.3.1** The standard turnpoint radius is 1.0 miles; this applies except when the CD declares a different radius as part of a Turn Area Task.

**10.5.3.2** Proper control at a turnpoint requires at least one fix whose distance to the turnpoint is not greater than the turnpoint radius.

**10.5.3.3** If the closest fix is outside the turnpoint radius, a miss distance shall be calculated: it is the distance from the closest fix to the turnpoint, minus the turnpoint radius. If the miss distance is not greater than 1 mile, turnpoint control is valid but a penalty applies ([Rule 12.1.4.1](#)) ; if greater than 1 mile, there is no valid control.

### 10.5.4 † Flight log problems

#### 10.5.4.1 † Use of multiple flight logs

**10.5.4.1.1** A pilot with multiple incomplete flight logs may receive credit for a flight by submitting all available flight documentation.

**10.5.4.1.2 †** The CD shall examine all flight documentation to determine the points at which the flight was properly controlled. Any portion of a Flight Log may be used to determine proper control.

#### 10.5.4.2 † Use of a sub-standard flight recorder

**10.5.4.2.1 †** A pilot without a flight log from a primary flight recorder meeting the requirements of Appendix B may receive credit for a flight by submitting a flight log from a flight recorder in the sub-standard category.

**10.5.4.2.2 †** The acceptable sub-standard flight recorders are listed in appendix B.

**10.5.4.2.3 †** The transfer of the flight log from the flight recorder must be done by a procedure



acceptable to the scorer, which may include direct supervision if deemed appropriate by the scorer

**10.5.4.3 †** An entry may make use of the provisions of either [Rule 10.5.4.1](#) or [Rule 10.5.4.2](#) a total of once during a competition without penalty; subsequent use of either rule incurs a penalty ([Rule 12.1.4.8](#)) for each such case.

## **10.6 †** Launching

### **10.6.1** Order of Launch

**10.6.1.1** The initial day's launch positions will be determined at random. Positions for subsequent days will be determined by placing the front 20% of the previous competition day's list at the back of the launch grid, for each class.

**10.6.1.2** If the grid layout has multiple gliders in each row, organizers may elect to allow row gridding: pilots are assigned a grid position but may place their gliders on any available position within their assigned row on a first-come, first-served basis or as instructed by the CD. (But any division between competition classes shall be preserved.)

**10.6.1.3** Grid lists for all competition days will be made available no later than the second daily pilots' meeting.

**10.6.1.4** The CD shall maintain an auxiliary launch list, indicating the order in which launches after the last scheduled grid position shall take place. Pilots who wish to pull back or re-launch are placed on this list on a first-come, first-served basis.

### **10.6.2** Launch procedure

**10.6.2.1** Pilots shall have their planes in the proper grid position at Grid Time and be ready to launch 20 minutes after Grid Time. A pilot who is not in proper position at Grid Time, or is not ready to launch in sequence will be deemed to have pulled back.

**10.6.2.2 †** A pilot may pull out of his grid position at any time and move so as to launch in accordance with the CD's auxiliary launch list ([Rule 10.6.1.4](#)). Such pull-backs are intended to be used to deal with unforeseen problems, and not as a routine part of contest strategy.

**10.6.2.3 †** There is no limit on re-launches following landings on the contest site.

**10.6.2.4 †** Not Applicable

**10.6.2.5** Launches aborted due to no fault of the sailplane pilot will be re-launched as soon as is practical.

**10.6.2.6** Sniffer - The CD may select a radio-equipped sailplane, flown by an experienced soaring pilot, to obtain an accurate assessment of the soaring conditions and to assist in selection of the time for the first launch.

**10.6.2.7** Not Applicable

**10.6.2.8** Not Applicable

**10.6.2.9 †** Except as provided in [Rule 10.6.3](#) contest launches will be by aero-tow. The aero-tow operation should be capable of launching all sailplanes in one hour or less. Towplanes will tow at 80 miles per hour (unless otherwise requested) in a pre-selected pattern to an altitude of 2000 feet AGL (or as specified by the CD).

**10.6.2.10** The Operations Director will record take-off roll times, sailplane competition ID, and towplane numbers.

**10.6.2.11** Re-launch following retrieval from off-site landings will not be allowed. However, the CD may permit relaunched after off-site landings due to a condition judged to be the responsibility of the contest organization.

**10.6.2.12** The CD may suspend the launch for safety reasons. Launching should be resumed at the earliest practicable time, preserving launch order. The CD will declare a no-contest day if the delay is so long that the remaining soaring day makes fair competition unlikely.

### **10.6.3 †** Motorized sailplane engine use procedures

When approved by contest organizers and the CD, pilots of motorized sailplanes may elect to use their engines in accordance with the following rules:

**10.6.3.1** The final responsibility for any decision to use the engine for self-launch or any other time lies with the pilot.

**10.6.3.2** Pilots shall follow procedures and a flight path as specified by the CD. These shall be chosen to maximize safety (which includes ensuring adequate separation from other sailplanes) and to minimize competitive imbalance by keeping all sailplanes in substantially the same conditions of

weather and lift.

**10.6.3.3** Pilots who wish to run their engines after aero tow shall begin to do so within 2 minutes of tow release; the engine run shall not exceed 5 minutes.

**10.6.3.4** Motors must be shut down no higher than an altitude specified by the CD, which shall normally be 800ft higher than the aerotow release altitude. The designated procedure shall allow any motorized sailplane unable to start or stow its engine to make a safe unpowered return to the home field.

**10.6.3.5** Within 10 minutes after motor shut-down, motorized sailplanes must be at a designated position close to the normal aerotow release area and no higher than normal aerotow release height. The flight log must show that any climb from this position was achieved in normal lift, and not as the result of a pull-up from high speed.

**10.6.3.6** Pilots of motorized sailplane launches found not to have complied with specified procedures will be penalized. The penalty ([Rule 12.1.4.4](#)) shall consist of a fixed minimum plus a number of points that in the estimation of the CD represents the maximum possible advantage obtained from the violation (but the total penalty shall not be less than the fixed minimum). Height violations normally incur a penalty of one point per foot.

**10.6.3.7** † Re-launching.

**10.6.3.7.1** † Pilots may land at the home field without the use of power and then re-launch in the sequence of the CD's auxiliary launch list ([Rule 10.6.1.4](#)).

**10.6.3.7.2** † Pilots in the air may start their power unit within 1 mile of the home airfield, then follow the launch procedures above. A pilot who makes use of this option is not eligible for a start time earlier than 15 minutes after engine start; a start time earlier than 20 minutes after engine start incurs a penalty ([Rule 12.1.4.10](#)).

**10.6.3.7.3** † Whether or not it includes a landing, each re-launch counts towards the maximum number of launches allowed each day ([Rule 10.6.2.3](#)).

**10.6.3.7.4** † Any use of the power unit other than during the initial launch of the day must be noted on a Task Claim form submitted to the Scorer.

**10.6.3.8** Except as provided here ([Rule 10.6.3](#)), any use of the power unit ends a pilot's competition flying for the day.

## 10.7 Communication

### 10.7.1 General

**10.7.1.1** Use of electronic communication devices outside those specified in [Rule 6.11](#) will be considered Unsportsmanlike Conduct. (Penalty described in [Rule 12.2.5.3](#).)

### 10.7.2 Radio usage

**10.7.2.1** The contest frequency is 123.3 Mhz; 123.5 Mhz is used for pilot-crew communications. If 123.3 Mhz becomes unusable, the CD may designate 123.5 Mhz as the contest frequency.

**10.7.2.2** The contest frequency is used for all official contest functions: launching, starts, finishes, task announcements, etc. Radio-equipped towplanes shall use the contest frequency when a glider is being towed.

**10.7.2.3** The contest frequency should be used sparingly, for necessary contest- and safety-related transmissions.

**10.7.2.4** Transmissions shall use the ICAO phonetic alphabet when appropriate.

**10.7.2.5** While on course, each pilot should monitor the contest frequency for safety messages from other pilots.

**10.7.2.6** Crews shall not initiate a radio call to their pilot, except in an emergency, or to relay information previously transmitted by the CD. Otherwise, transmission of soaring or contest information to pilots by crew is prohibited.

**10.7.2.7** Relaying of information between aircraft for any reason other than safety is prohibited; unsportsmanlike conduct penalty may apply ([Rule 12.2.5.3](#)). This specifically forbids team flying.

## 10.8 † Starting

### 10.8.1 Task opening

**10.8.1.1** As the last pilot who accepts the designated launch starts the takeoff roll, the CD will announce the time of the class's task opening, which shall be approximately 15 minutes after this launch, and long enough to allow this pilot a fair chance to climb prior to the task opening.

**10.8.1.2** After the announcement of task opening time, the CD should consult with the task advisors as to whether the selected task is fair and safe. If a delay or a task change is deemed necessary, this should be announced 10 minutes or more before task opening time; task changes later than this should be avoided when possible.

**10.8.1.3** An advisory should be transmitted five minutes before the task opens.

**10.8.1.4** An advisory shall be transmitted at the time the task opens

#### **10.8.2** † Valid start

**10.8.2.1** † A valid start is a start obtained after the task has opened and after the pilot's last launch. A pilot must have a valid start to be given a scored start time and position. The last valid start of the claimed task is used unless

**10.8.2.1.1** † it incurs a penalty under [Rule 10.8.5.6](#) and [Rule 12.1.4.3](#), in which case the best-scoring valid start is used or

**10.8.2.1.2** † the pilot has achieved one fix more than 5 miles outside the start cylinder after a start which otherwise qualifies, in which case that previous start may be used.

**10.8.2.2** A start is not allowed while on tow or while a motorized sailplane's power unit is in use.

#### **10.8.3** Single-point start

**10.8.3.1** Each task shall include a Start Point and a Start Radius which shall be an integral number of miles not less than 5 nor greater than 20.

**10.8.3.2** The Start Point and Start Radius should be chosen so that pilots are likely to be able to find lift prior to starting and to return to the home field if they fail to do so.

#### **10.8.4** Multiple-point start

**10.8.4.1** Up to four start groups containing 2 to 4 start points each shall be declared; each start group shall contain the same number of points. The start groups shall be labeled with sequential letters, and the points within a start group with sequential numbers starting at 1. Start point names thus consist of a letter followed by a number.

**10.8.4.2** Each start point is the center of a start cylinder, whose radius is an integral number of miles not greater than five, as designated by the CD. Cylinder perimeters shall be no closer than 1 mile.

**10.8.4.3** For each task, each pilot is assigned a start number not larger than the number of points in a start group; the total of pilots assigned each number shall be approximately equal. A pilot may elect to start within any start group, but must start from a point whose number matches the assigned number. (Thus with three groups, a pilot assigned number 2 may start from A2, B2, or C2.)

**10.8.4.4** If there was a pilot option, the chosen start point must be claimed on the Task Claim Form. If a pilot claims a start from a point that was not assigned, a penalty applies ([Rule 12.1.4.2](#)).

#### **10.8.5** † Start control

**10.8.5.1** † Each task shall include a Maximum Start Height (MSH) above the home field. This height shall not be less than 3500' AGL nor more than 10000' AGL.

**10.8.5.2** The Start Point, Start Radius, and MSH define a three-dimensional Start Cylinder.

**10.8.5.3** † A start occurs each time a sailplane exits a Start Cylinder (either through the side or the top); at least one fix must lie within the cylinder. The following shall be determined:

- Start Fix - the latest fix within the Start Cylinder
- Start Time - the interpolated time the sailplane exited the Start Cylinder
- † Start Position - the interpolated position at the Start Time

**10.8.5.4** A pilot may claim a start based on a fix near to but not within the Start Cylinder; such a start incurs a penalty. The following shall be determined:

- - Start Fix - the fix claimed by the pilot
- - Start Time - the time of the Start Fix.
- - Start Position - the position of the Start Fix

**10.8.5.5** For each start, the following shall be determined:

- - Control Fix - the fix with the greatest altitude during the 2 minutes preceding the Start Fix.
- - Control Height - the difference (in feet) between the altitude of the Control Fix and the elevation of the home field.
- - Start Distance - the distance (in miles) from the Start Fix to the Start Point.

**10.8.5.6** If the Control Height exceeds MSH or the Start Distance exceeds the Start Radius, a penalty will apply [Rule 12.1.4.3](#).

**10.8.6 †** The distance of the first task leg shall be taken as the distance from the Start Position to the control fix at the first turnpoint, but not greater than the distance from the Start Point to that control fix

**10.8.7 †** While inside or within 2 miles of any Start Cylinder that has been designated for use by any competition class, pilots are expected to avoid flight at indicated airspeeds greater than 115 mph and to pay particular attention to safe flight near circling sailplanes.

**10.8.8** Start time reporting

The CD may require pilots to report their start times by radio. The following rules apply:

**10.8.8.1** To avoid a penalty ([Rule 12.1.4.6](#)), a start time must be reported within 15 minutes after the start is made, and must be accurate within 2 minutes.

**10.8.8.2** Beginning no later than the time of task opening, a contest official designated by the CD shall monitor the contest frequency, maintain an official list of reported start times and the time the report was received, and confirm receipt of reports.

**10.8.8.3** Crews may report start times for pilots by appearing in person before the official designated by the CD.

**10.8.8.4** Deliberate mis-reporting of start times can be penalized as Unsportsmanlike Conduct. (Penalty described in [Rule 12.2.5.3](#).)

**10.8.9** During contests that include more than one competition class, starts shall be chosen to minimize the possibility of conflicts between pilots of different classes.

**10.9 †** Finishing

**10.9.1** General

**10.9.1.1 †** Each task shall include a Finish Cylinder ([Rule 10.9.2](#)).

**10.9.1.2** Communications

**10.9.1.2.1** When four miles from the finish point, the pilot shall transmit "[Contest ID] four miles."

**10.9.1.2.2** When a finish could come from more than one direction, radio calls shall include the direction from which the pilot is finishing.

**10.9.1.2.3** Pilots are encouraged to make additional radio calls when they feel these increase safety, but to avoid unnecessary radio chatter.

**10.9.1.3** During finishes, contest officials may provide information concerning the runway in use and the estimated wind direction and velocity. They will not be responsible for giving traffic control information.

**10.9.1.4** Pilots must pay particular attention to safety during the process of finishing, landing, and rolling to a stop. A pilot whose finish, pattern, landing, or rollout is deemed unsafe by the CD is subject to a penalty for unsafe operation ([Rule 12.2.5.1](#)).

**10.9.2 †** Finish Cylinder

**10.9.2.1** A task shall include a Finish Point not more than 2 miles from the home field and a Finish Radius not greater than 2 miles.

**10.9.2.2 †** A task shall include a Minimum Finish Height above the home field, set by the CD so that pilots who finish at or above that height can return to the home field with at least 500' of altitude available for a normal landing.

**10.9.2.3 †** The Finish Point and Radius define a three-dimensional Finish Cylinder that extends from the ground to an unlimited altitude. A competitor is eligible for a finish when a flight log shows a fix within this cylinder.

**10.9.2.4 †** The finish time is taken as the interpolated time the sailplane entered the Finish Cylinder. The Finish Altitude is the interpolated altitude at the finish time.

**10.9.2.5 †** A penalty applies when the Finish Altitude is less than the Minimum Finish Height. This penalty ([Rule 12.1.4.5](#)) is based on the Finish Height Difference, which is the Minimum Finish Height minus the Finish Altitude.

**10.9.2.6** Communications

**10.9.2.6.1** When four miles from the finish point, the pilot shall transmit "[Contest ID] four miles" [Rule 10.9.1.2.1](#).

**10.9.2.6.2** Upon entering the finish cylinder, the pilot shall transmit "[Contest ID] finished." If the

finish is substantially above the bottom of the finish cylinder, the altitude may be included; altitude should be announced as either MSL or AGL.

**10.9.2.6.3** Upon entering the downwind leg of the landing pattern, the pilot should transmit "[Contest ID] downwind for runway [runway ID]."

**10.9.2.7** The distance of the final task leg shall be taken as the distance from the control fix at the final turnpoint to the Finish Point, minus the Finish Radius.

### **10.9.3** † Finish Gate - Not Used

### **10.9.4** † Rolling finish

**10.9.4.1** † When a Finish Gate is in use, the CD shall designate one or more rolling finish areas on the home airfield.

#### **10.9.4.2** Communications

**10.9.4.2.1** When four miles from a rolling finish, the pilot shall transmit "[Contest ID] four miles, rolling finish."

**10.9.4.3** Pilots performing a rolling finish shall touch down and roll to a stop as specified by the CD, and will be timed as the sailplane comes to a complete stop.

**10.9.4.4** If announced by the CD prior to the start of competition, a time adjustment will be added to rolling finishes. This adjustment will be based on the vertical and horizontal distance between the rolling finish and the location designated for a flying finish.

**10.9.4.5** The CD shall ensure that the Scorer is informed of all rolling finishes, including the time adjustment (if any) that applies to each.

### **10.9.5** Safety finish

**10.9.5.1** The Safety finish area is a cylinder centered on the finish point with a radius of 5 miles.

**10.9.5.2** If weather conditions warrant, the CD may activate the Safety finish by a radio announcement on the contest frequency.

**10.9.5.3** When the Safety finish is active, a pilot may claim a finish by obtaining one fix within the Safety finish cylinder; the altitude of the fix must be such that the slope to the finish point is not less than 200 feet per mile. The safety finish must be claimed on a Task Claim Form ([Rule 10.5.1.3.1](#)).

**10.9.5.4** After a Safety finish there is no requirement to return to the home field; a pilot may elect to land at any location or to remain flying.

**10.9.5.5** † The pilot's scored finish time is taken as the time of the claimed fix plus a time adjustment of one minute per mile for the distance from the fix to the finish point.

**10.9.5.6** The CD may de-activate the Safety finish. At least 5 minutes notice of the time of de-activation shall be transmitted on the contest frequency.

## **10.10** Post-Flight

### **10.10.1** Landing at the Contest Site

#### **10.10.1.1** Flight Documentation Interval (FDI)

This is the maximum time that may elapse between a landing at the contest site and the submission of valid flight documentation ([Rule 11.2.2](#)) to the Scorer. (Penalty specified in [Rule 12.1.4.7](#).)

**10.10.1.2** When not otherwise designated by the CD, an FDI of 1 hour shall apply.

### **10.10.2** Landing away from the Contest Site

#### **10.10.2.1** Submission of Flight Documentation

**10.10.2.1.1** The pilot shall submit flight documentation to the Scorer as soon as practicable. In general, this should be done within one hour of returning to the contest site. But in no case shall it be later than 09:00 of the next day.

**10.10.2.1.2** In the unusual case where it is impractical for a pilot to return to the contest site, the pilot may arrange with the Scorer to submit flight documentation by e-mail. This arrangement requires direct telephone communication between the pilot and the scorer, and is allowed no more than once during a contest. The Scorer must receive the Flight Documentation no later than 09:00 of the next day, or a penalty shall apply ([Rule 12.2.5.5](#)).

#### **10.10.2.2** Notification of landout

**10.10.2.2.1** It is a pilot's first duty, after landing and securing the sailplane, to complete an Outlanding Report and then telephone the contest site. Pilots who fail to promptly supply full information are subject to an administrative penalty ([Rule 12.1.4.9](#)).

**10.10.2.2.2** The Outlanding Report shall include a contact telephone number (if available), the turnpoints achieved, the landing location and retrieve instructions. If the landing site is an airfield, the name of the airfield suffices as the location; otherwise, the latitude/longitude coordinates of the landing site, accurate within 0.5 miles, shall be included.

**10.10.2.2.3** The telephone call is normally directed to the contest Retrieve Office. Pilots may alternatively contact their crews with the necessary information, directing their crews to supply this to the Retrieve Office prior to departing the contest site. Pilots who fail to ensure that the Retrieve Office is properly notified are subject to an administrative penalty ([Rule 12.1.4.9](#)).

**10.10.2.2.4** Use of other means of communication is authorized only when telephone contact is impractical.

**10.10.2.3** The Retrieve Office will stay open until all pilots are accounted for or until an announced cutoff time, whichever is later. If the Retrieve Office is informed of a crew-pilot rendezvous problem, it will stay open until told the problem is resolved.

**10.10.2.4** Retrieves will normally be by vehicle and trailer. Aerotow retrieves (using towplanes authorized by the CD) are permitted from sites approved by the CD on a first-to-telephone-in/first-served basis. Pilots of sailplanes capable of self-launch may elect to self-retrieve.

### **10.10.3** Airfield landing bonus

**10.10.3.1** A pilot with an incomplete task who lands at a designated airfield can receive a score bonus for such a landing.

**10.10.3.2** The landing must take place at a field designated by the CD as eligible for such a bonus. Eligible fields shall be designated prior to the start of the competition. Unless otherwise announced, all airfields depicted on a current Sectional chart shall be considered eligible. The home airfield is always eligible.

**10.10.3.3** A pilot whose scored distance is zero receives no bonus.

**10.10.3.4** A pilot of a motorized sailplane receives no bonus for a landing that takes place after the use of the motor.

### **10.11** Multiple Task Attempts

**10.11.1** A task may be attempted more than once; the best-scoring attempt will be used.

**10.11.2** A pilot who has completed a task may elect to land at the contest site; having landed, flight documentation must be submitted within the Flight Documentation Interval ([Rule 10.10.1.1](#)). The pilot may then re-launch for another attempt; no result of the subsequent flight can affect the distance and speed obtained from the first.

**10.11.3** A pilot who has completed a task may attempt to fly the task again without a re-launch. But in this case, the completion of the first task remains contingent on a landing at the contest site; should the second attempt end in an outlanding (or the use of a motorized sailplane's power unit), the first attempt is not considered complete ([Rule 11.2.2.4](#)).

**10.11.4** An outlanding (or the use of a motorized sailplane's power unit other than as specified in [Rule 10.6.3](#)) ends an entrant's competition flying for that day.

### **10.12** Airspace

**10.12.1** Tasks should be set to avoid flight through closed airspace ([Rule 5.6.2](#)) or areas of high-density traffic.

**10.12.2** A start cylinder or a turn area used with a Turn Area Task may overlap closed airspace. Such overlap does not alter a pilot's responsibility to remain clear of the closed airspace.

#### **10.12.3** Airspace clearance requirements

##### **10.12.3.1** Horizontal

A serious violation occurs if any fix lies within closed airspace.

##### **10.12.3.2** Vertical

A minor violation occurs if any fix has a vertical separation from closed airspace less than 500 ft but not less than 100 ft; a serious violation occurs if any fix has a vertical separation from closed airspace less than 100 ft.

#### **10.12.4** Penalty application

Multiple minor airspace violation penalties ([Rule 12.2.5.6.1](#)) may be applied to one flight, but not more than one per 5 minutes. No more than one serious airspace violation penalty ([Rule 12.2.5.6.2](#)) shall apply to one flight. When both minor and serious violations occur, only the serious violation shall be applied.

**10.12.5** Gaps in a Flight Log longer than one minute shall be interpreted unfavorably to the pilot. During each such gap:

- the closest horizontal approach to or from the nearest closed airspace shall be calculated assuming a speed of 100 mph
- if in the judgment of the CD there was any realistic possibility of a vertical airspace violation, the closest vertical approach to the nearest closed airspace shall be calculated based on a climb rate of 1000 feet per minute

## **11.0 † SCORING**

### **11.1 General**

**11.1.1** A Contestant is a regular entrant whose Scored Distance ([Rule 11.2.3](#)) is greater than zero.

**11.1.2** A Finisher is a Contestant with a complete task ([Rule 11.2.2.4](#)).

**11.1.3** A valid competition day is a day on which every regular entrant is given a fair opportunity to compete, and at least 25% of Contestants achieve a Handicapped Distance not less than the Standard Minimum Task Distance.

**11.1.4** Only the best flight on each valid competition day shall count towards an entrant's final score.

**11.1.5** When more than one complete flight log is available, the best-scoring such log is used to evaluate a flight.

### **11.2 † Task Measurement**

#### **11.2.1 Precision**

**11.2.1.1** Times will be rounded to the nearest whole second. The CD shall ensure that all clocks used for contest timing are synchronized and correct.

**11.2.1.2** Control points ([Rule 5.6.1](#)), landing sites, and other points of significance will be designated by latitude/longitude coordinates with accuracy per [Rule 5.6.1.3](#). Coordinates for a landing at an airfield will be taken at a standardized location on the airfield.

**11.2.1.3** Distances will be calculated to an accuracy of 0.01 miles or better using Great Circle methods, based on a spherical earth of radius 3958.7559 miles (6371.0 kilometers).

**11.2.1.4** When time interpolation is called for during evaluation of a flight log, the interpolation shall be linear with distance.

#### **11.2.1.5 Altitude measurement**

**11.2.1.5.1** When the Scorer must measure a pilot's height above ground level (AGL), this height shall be the difference between a recorded fix and that of a fix recorded on the ground. For all purposes except finish height, a fix prior to takeoff shall be used. For finish height, the Scorer shall use the more favorable of a pre-takeoff or post-landing fix.

**11.2.1.5.2** When the Scorer must measure a pilot's height above sea level (MSL), this shall be the height AGL as determined under [Rule 11.2.1.5.1](#) plus the altitude of the home field.

#### **11.2.2 † Task Evaluation**

**11.2.2.1** Each pilot shall submit flight documentation each day a launch is made; it shall accurately document each flight that the pilot made. Failure to submit flight documentation incurs a contest penalty ([Rule 12.2.5.5](#)).

**11.2.2.2** If the flight documentation includes a Task Claim form under the provisions of [Rule 10.5.1.3](#), task evaluation is based on this form, which may not be altered once submitted (but a subsequent Task Claim can be submitted under the provisions of [Rule 11.2.2.7](#)). When there was any pilot option at the time of landing, the Task Claim should include the point being sought at the time of landing; when this is absent, the flight shall be scored as if the pilot had listed the Finish as the point being sought.

#### **11.2.2.3 Valid turnpoints**

**11.2.2.3.1** Valid turnpoints are turnpoints that meet the requirements of [Rule 5.6.1](#) and [Rule 10.5.3](#).

**11.2.2.3.2** At each valid turnpoint the Scorer shall determine the fix that in combination with other control fixes gives the pilot the greatest scored distance. Each such control fix is used as the terminating point of one task leg and the originating point of the subsequent leg.

**11.2.2.3.3** If a flight is being evaluated based on a Task Claim form that includes an invalid

turnpoint, the Task Claim is considered to have ended at the last valid turnpoint.

**11.2.2.4** Task completion - If all turnpoints are valid, yield a Handicapped distance ([Rule 11.6.2](#)) not less than the Standard Minimum Task Distance and the pilot obtained a scored start time, a finish time prior to finish closing and landed at the contest site, then the pilot has completed the task. Otherwise the task is incomplete.

**11.2.2.5** For incomplete tasks, a scored landing point shall be determined by the Scorer. This is generally the fix that yields the greatest scored distance, but the following restrictions apply:

- The fix shall be no later than Contest Sunset time.
- For a motorized sailplane, the fix shall be prior to use of the power unit

**11.2.2.6** While it is the Scorer's duty to ensure that documentation is evaluated and scores are calculated promptly and accurately, it is the duty of each entrant, prior to a day's scores becoming Official, to review scores and bring to the attention of the Scorer any question that arises or problem that is found.

#### **11.2.2.7** Subsequent Task Claim

**11.2.2.7.1** After initial submission of flight documentation, a pilot may elect to submit a subsequent Task Claim form to the Scorer. A pilot may do this to claim control fixes different from those determined by the Scorer, to correct a prior task claim, or in general to obtain a more accurate score.

**11.2.2.7.2** A subsequent Task Claim form will be accepted if it is received prior to a day's results being declared Official and if it results in a more accurate score.

#### **11.2.2.8** † Procedures for airspace clearance violations

**11.2.2.8.1** If it is determined that a flight includes a serious airspace clearance violation, the Scorer shall give the affected pilot the opportunity to withdraw the flight log for that flight. This withdrawal shall be treated as a failure to submit flight documentation.

**11.2.2.8.2** Notwithstanding the withdrawal of flight documentation, the pilot's daily status as a Competitor and a Finisher shall be determined and used in calculating daily scores for other entrants.

**11.2.2.8.3** A withdrawn flight log is not published, and no copy is retained by the Scorer.

**11.2.2.8.4** † A pilot with more than one contest flight that includes either a serious airspace violation or a failure to submit flight documentation is disqualified from the competition.

### **11.2.3** Scored Distance

**11.2.3.1** Scored distance is the sum of the distance achieved on each leg of the task (but no leg shall have a length less than zero).

**11.2.3.2** For all Tasks, the first leg originates at the start position ([Rule 10.8.5.3](#)) and is subject to the length limitation of [Rule 10.8.6](#).

**11.2.3.3** For completed tasks, the final leg ends at the finish point; any finish radius is subtracted from its length.

**11.2.3.4** For incomplete tasks, a length for the incomplete task leg is calculated. This shall be the distance from leg's originating point to the control point being sought (which shall be the valid control point that yields the best distance) minus the distance from the scored landing point to that control point. If the point being sought was the finish point, this leg length shall not be greater than the full length of the final leg minus any finish radius.

**11.2.3.5** Scored Distance is zero if:

- The pilot has no valid start time ([Rule 10.8](#)).
- The pilot lands at the home field (or the pilot of a motorized sailplane used the power unit after launch) and the distance calculated above is less than half the Standard Minimum Task Distance.

### **11.3** Scoring Nomenclature

SMTT - Standard Minimum Task Time ([Rule 10.3.1.1](#))

HCP - Sailplane's Handicap Factor ([Rule 11.6.1](#)).

HCPDIST - Handicapped Distance ([Rule 11.6.2](#)).

Contestant - defined in [Rule 11.1.1](#)

Finisher - defined in [Rule 11.1.2](#)



SCR - Scored Completion Ratio ([Rule 11.6.5](#))

TOC - Actual Time on Course ([Rule 11.4.1](#)) - applies only to a Finisher

STOC - Scored Time on Course ([Rule 11.6.3](#)) - applies only to a Finisher

TASKDIST - Task Distance - The sum of the lengths of all legs of the task

HCPSPD - Handicapped Speed ([Rule 11.6.4](#)) - applies only to a Finisher

MINTIME - Minimum Flight Time, as declared by CD

UF - Undertime Finishers - Number of Finishers whose TOC is more than 15 minutes under MINTIME

BESTDIST - Best distance achieved ([Rule 11.6.9](#))

BESTSPD - Best Speed - Greatest value of HCPSPD achieved by any Finisher

MSP - Maximum Speed Points ([Rule 11.6.6](#))

MDP - Maximum Distance Points ([Rule 11.6.7](#))

MAXTATDIST - the maximum possible distance for a Turn-Area task. This distance is computed from the center of the start cylinder, less the start radius. If multiple start points are used, MAXTATDIST is computed separately for each start cylinder ([Rule 11.6.3.2](#)) - applies to a finisher of a MAT or TAT whose TOC is less than MINTIME

UTFACTOR - Undertime Factor ([Rule 11.6.3.2](#)) - applies to a finisher of a MAT or TAT whose TOC is less than MINTIME

STF - Short Task Factor ([Rule 11.4.2](#))

BONUS - Airfield Landing Bonus ([Rule 10.10.3](#), [Rule 11.4.3](#))

POINTS - the calculated score ([Rule 11.6.8](#), [Rule 11.6.10](#))

#### 11.4 Scoring Equations - General

##### 11.4.1 Time on course:

TOC = (Scored finish time) - (Scored start time)

##### 11.4.2 Short Task Factor:

If there are no Finishers, STF = 1.0

Otherwise,  $STF = (TOC \text{ of Finisher with BESTSPD}) / SMTT$   
(but not greater than 1.0)

##### 11.4.3 Airfield Landing Bonus

For eligible pilots ([Rule 10.10.3](#)), BONUS = 25; otherwise, BONUS = 0.

##### 11.4.4 † Worst Day Score Adjustment

If this is declared to be in effect, an adjustment is calculated and added to the cumulative score of each entrant.

###### 11.4.4.1 † Worst Day Score Differential

For each entrant, WDSA is the greatest difference on any contest day between the entrant's score (before application of a Contest penalty) and the highest score achieved by any regular entrant in the class on that day.

###### 11.4.4.2 † A Worst Day Score Adjustment is added to each entrant's cumulative score, as follows:

After one official day: WDSA = zero

After 2 official days:  $WDSA = 0.25 * WDSA$

After 3 official days:  $WDSA = 0.5 * WDSA$

After 4 official days:  $WDSA = 0.75 * WDSA$

After 5 or more official days:  $WDSA = WDSA$

#### 11.5 Not Applicable

#### 11.6 Scoring Equations

##### 11.6.1 Handicap Factor

**11.6.1.1 †** Each sailplane is assigned a Handicap Factor from the SSA Handicap List. If a sailplane is not listed, a Handicap Factor can be obtained by contacting the SSA Contest Committee at least 30 days prior to the scheduled competition.

**11.6.1.2** Sailplanes that compete in a configuration different from that on which the listed handicap

was based receive handicap adjustments, as follows:

**11.6.1.2.1** If a sailplane's wingspan has been increased, its Handicap Factor shall be multiplied by the following:

$$1.0 - ((\text{wingspan}) - (\text{original span})) / (2 * (\text{original span}))$$

This adjustment shall not be applied if a specific Handicap Factor for the sailplane with the span increase is listed.

**11.6.1.2.2** If Competition Weight ([Rule 6.12.3](#)) is different from the specified Handicap Weight, the Handicap Factor shall be multiplied by the following:

$$1.0 - ((\text{Competition Weight}) - (\text{Handicap Weight})) * 0.0002$$

**11.6.1.2.3** When winglets are added to a sailplane not handicapped with winglets, the handicap Factor shall be multiplied by 0.99.

**11.6.1.2.4** When wing turbulation is applied to a sailplane that is handicapped without turbulation, the Handicap Factor shall be multiplied by 0.99.

**11.6.1.2.5** When wing-root fairings are added to a sailplane that is handicapped without fairings, the Handicap Factor shall be multiplied by 0.99.

**11.6.1.2.6** Other significant aerodynamic modifications may result in a lower handicap factor being assigned.

### **11.6.2** Handicapped Distance

Handicapped Distance is scored distance multiplied by the Handicap Factor:

$$\text{HCPDIST} = \text{HCP} * \text{DIST}$$

### **11.6.3** Scored Time on Course:

**11.6.3.1** For finishers whose TOC is not less than MINTIME:

$$\text{STOC} = \text{TOC}$$

**11.6.3.2** For finishers whose TOC is less than MINTIME:

$$\text{STOC} = \text{MINTIME} - (\text{MINTIME} - \text{TOC}) * \text{UTFACTOR}$$

For a Turn-area task:

$$\text{UTFACTOR} = 0.1 + 6 * ((\text{DIST} / \text{MAXTATDIST}) - 0.85) \text{ (but not less than 0.1, nor greater than 1.0)}$$

otherwise, UTFACTOR = 0.1

### **11.6.4** Speed:

$$\text{HCPSPD} = \text{HCPDIST} / \text{STOC}$$

### **11.6.5** Scored completion ratio:

$$\text{SCR} = ((\text{Number of Finishers}) - 0.75 * \text{UF}) / (\text{Number of contestants})$$

### **11.6.6** Maximum Speed Points:

$$\text{MSP} = \text{STF} * (600 + 500 * \text{SCR}) \text{ (but not greater than } \text{STF} * 1000)$$

### **11.6.7** Maximum Distance Points:

$$\text{MDP} = \text{MSP} * (0.8 - 0.2 * \text{SCR})$$

### **11.6.8** Points for Finishers:

POINTS shall be equal to the largest of the following three quantities:

$$\text{MSP} * \text{HCPSPD} / \text{BESTSPD}$$

$$\text{MDP} + 30 + \text{MSP} * 0.2 * ((\text{HCPSPD}/\text{BESTSPD}) - 0.4)$$

$$\text{MDP} + 30$$

### **11.6.9** Best Distance:

If there are no Finishers, BESTDIST is the greatest value of HCPDIST achieved by any pilot.

Otherwise, BESTDIST is the larger of the greatest HCPDIST achieved by any Finisher and (BESTSPD \* MINTIME).

### **11.6.10** Points for Non-Finishers:

$$\text{POINTS} = \text{BONUS} + \text{MDP} * \text{HCPDIST} / \text{BESTDIST}$$

(but not greater than BONUS + MDP)

**11.7** Rounding of Scores

Full available mathematical precision shall be carried through all calculation steps. Scores shall be rounded to the nearest whole number, but only as the final calculation step.

**11.8** Scoring Guest Pilots

**11.8.1** Terms such as "Best Speed" and "Best Distance" refer to the performance of regular entrants only; guest pilots achieving a better daily result shall receive a proportionally extrapolated score.

**11.8.2** On a day when the only finishers are guest pilots, the highest speed shall be assigned a score of 600 points.

**11.8.3** At the option of contest organizers, guest pilots shall be ranked and listed either separately from regular entrants at the bottom of official score sheets, or along with regular entrants.

**11.9** † Status of Scores

**11.9.1** The initial status of a competition day is Preliminary; scores published under this status are typically incomplete and subject to considerable change.

**11.9.2** Once flight documentation for all entrants is received by the Scorer, the status of a competition day becomes Unofficial. Scores are subject to change due to analysis of flight documentation, imposition of penalties, resolution of protests, etc.

**11.9.3** † Official status

**11.9.3.1** † A contest day acquires its Official status 24 hours after the latest of:

- † All flight documentation is analyzed and published in accordance with [Rule 10.5.1.5](#).
- Final unofficial scores are published
- Protests are resolved
- † 9:00 the day following the contest day

**11.9.3.2** † A day that meets the requirements of [Rule 11.1.3](#) has the Official status of Valid; otherwise it is a No-Contest day. The CD should announce the status when the day becomes Official.

**11.9.3.3** Other than to correct errors caused by incorrect scoring software, no changes to scores are allowed after a day's official status is declared.

**11.9.5** Contest status - The results of a competition become Official 48 hours after the final official status of every scheduled competition day has been declared. No score changes of any kind are allowed after a contest is declared Official.

**11.10** † Publication of Scores

**11.10.1** † Unofficial score sheets and flight documentation shall be published as soon as practicable, but no later than the next daily Pilot Meeting (or 9:00 the next day, in the case of a day without a Pilot Meeting).

**11.10.2** A score sheet shall be published on every day that any entrant achieved a scored distance greater than zero.

**11.10.3** An Official score sheet shall be published as soon as possible after a competition day is declared Official ([Rule 11.9.3](#)).

**11.10.4** † Published score sheets shall include, at a minimum:

- Each pilot's name and Contest ID
- Each pilot's cumulative score and rank
- Notation as to pending protests
- † Notation as to whether scores are Preliminary, Unofficial or Official

**11.10.5** Score sheets that show daily scores should also include:

- A description of the task
- Speed (for finishers) and distance
- Any applicable penalties or score adjustments
- Daily rank

**11.11** Pilot Ranking Calculation

**11.11.1** † The Contest Weighting Factor is 92.0.

**11.11.2** † At the end of an Official competition each regular entrant receives a Pilot Ranking Score, used to produce the annual SSA Pilot Ranking List and to determine preferential entry into upcoming contests.

Ranking Score = (Contest Weighting Factor) \* (Pilot's cumulative score) / (Class's largest cumulative score by a regular entrant)

(but the ranking score shall not be greater than the Contest Weighting Factor)

**11.11.3** Team entries receive a ranking score that applies to the team; individual members of the team receive a ranking score equal to 75% of the team's ranking score.

## 12.0 † PENALTIES

### 12.1 † Task Penalties

**12.1.1** Task penalties apply only to the entrant's score for the task attempt on which the penalty was imposed. If the day is not a valid competition day, a task penalty does not apply.

**12.1.2** Task penalties are multiplied by the daily penalty factor, which is equal to the largest daily score (before penalties) of any Regular entrant in the class divided by 1000.

**12.1.3** If the amount of a pilot's task penalties equals or exceeds the pilot's score, the pilot receives a score of zero.

#### 12.1.4 † Task penalty categories

**12.1.4.1** Missed turnpoint ([Rule 10.5.3.3](#)): penalty = 25 + 100 \* (miss distance)

**12.1.4.2** Wrong start point ([Rule 10.8.4.4](#)): penalty = 100

**12.1.4.3** Start penalty ([Rule 10.8.5.6](#)): penalty = 25 plus the sum of the following (neither of which shall be less than zero):

Distance penalty = (Start Distance - Start Radius) \* 200

Height penalty = (Control Height - MSH - 100) / 2

**12.1.4.4** Self-launch penalty ([Rule 10.6.3.6](#)): minimum penalty = 100

**12.1.4.5** Finish penalty ([Rule 10.9.3.4](#)): penalty = 5 + (Finish Height Difference) / 5.

**12.1.4.6** Improper reporting of start time ([Rule 10.8.8.1](#)): penalty = 10

**12.1.4.7** Flight Documentation Interval exceeded ([Rule 10.10.1.1](#)): penalty = 50

**12.1.4.8** More than one case of incomplete flight documentation ([Rule 10.5.4.1](#), [Rule 10.5.4.2](#)): penalty = 25

**12.1.4.9** Administrative violations: maximum penalty = 50

Rules violations that do not fall into other categories are termed Administrative; violations can be assessed a penalty or a fine of up to \$5, as determined by the CD and the Contest Competition Committee.

**12.1.4.10 †** Start time earlier than 20 minutes after the use of a motorized sailplane's power unit for re-launch ([Rule 10.6.3.7.2](#)): penalty = 100

### 12.2 Contest Penalties

**12.2.1** Contest penalties apply whether or not the day on which the penalty is imposed is a valid competition day.

**12.2.2** When a precise penalty is not specified, the amount shall be determined by the CD and the Contest Competition Committee.

**12.2.3** If a contest penalty exceeds a pilot's daily score, the excess amount is subtracted from the pilot's cumulative score.

**12.2.4** Contest penalties shall be reported to the SSA Competition Committee.

#### 12.2.5 Contest penalty categories

**12.2.5.1** Unsafe operation (including all phases of flight and ground operation) ([Rule 10.9.1.4](#), [Rule 10.9.4.4](#)): maximum penalty = disqualification.

**12.2.5.2** Landing after the time of Contest Sunset: penalty = 200 points.

**12.2.5.3** Unsportsmanlike conduct (including falsification of flight documentation) ([Rule 6.3.3.6](#), [Rule 6.6.5](#), [Rule 10.7.1.1](#), [Rule 10.8.8.4](#)): maximum penalty = disqualification from the contest and ineligibility for Sanctioned competitions for a period of 5 years.

**12.2.5.4** Underweight or overweight ([Rule 6.8.2.2](#)): penalty =  $(W - 10)^2 / 10$  (W is the number of pounds under or over the correct weight)

**12.2.5.5** Failure to submit flight documentation ([Rule 10.10.2.1.2](#), [Rule 11.2.2.1](#)): penalty = 100

**12.2.5.6** Airspace clearance violations ([Rule 10.12.4](#))

**12.2.5.6.1** Minor Airspace violation: penalty = 25

**12.2.5.6.2** Serious airspace violation: penalty = 100 + loss of all daily points

**13.0 † REPORTING REQUIREMENTS**

**13.1** Daily Reporting

**13.1.1** The CD and the Scorer shall ensure that contest scores are reported at least daily to the SSA website. When possible, preliminary scores should be posted by 20:00, and updated as changes are made and when scores become Official.

**13.1.2** A brief narrative describing each contest day is recommended for inclusion with submitted scores.

**13.2 †** The Competition Director shall ensure that an Accident/Incident Report is filled out for every incident that caused, or had a reasonable probability of causing, damage or injury.

**13.3 †** Administrative Reporting

Within 14 days of the last scheduled competition day, the Contest Manager shall send the following:

**13.3.1** To each entrant and the SSA:

- The Contest Financial Report

**13.3.2 †** To the SSA:

- A copy of each entrant's Registration Form
- The balance of Sanction Fees owed
- Complete Official Scores in computerized form
- The Contest Summary Report
- † Each applicable Accident/Incident Report ([Rule 13.2](#))

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# Appendix A

## Guide to the U.S. Regional Sport-Class Competition Rules

*March 3, 2009*

**A1.0** Note that the primary purpose of a Sport-class Regional competition is to provide an entry level for novice pilots. In line with this, entry priority for a Sport-class Regional competition is the inverse of that for other contests ([Rule 5.4.2](#)).

**A1.6** This rule makes it clear that when contests are co-located, national competitions are given priority. "Preference" does not necessarily mean the national must be launched first every day, it just means that the CD must consider the needs of the national contest first.

**A3.1.3** The Competition Director must not be a contestant. Because of the demands on the CD's time, it will likely be impracticable for the CD to fly the competition tasks; he can fly as sniffer ([Rule 10.6.2.6](#)), to get a good feel for the day's conditions.

**A3.1.5** Task advisors should have the qualifications listed, and be decisive. Radio discussions of the task should be limited to the CD and the Task Advisors, unless another pilot's input is specifically requested by the CD. If you are selected as a Task Advisor, be prepared to give the CD a brief and unambiguous opinion of the flying conditions and the chance of completing contemplated tasks.

**A3.2** If any contest officials are eligible for extension of entry priority under this rule, the Contest Manager must make a point of sending the names to the SSA.

**A5.1.2** A Super-Regional is typically organized and staffed primarily by people from outside the region, and the site is not well-suited to novices. In this case it does not make much sense to force this contest to give priority to pilots who live in the region, or to new pilots in the sport class. The presence of a "Super-Regional" in a particular region does not preclude holding a regular Regional in that region as well at a site that is more appropriate for novices.

**A5.2.1.2.1** A particular site may be suitable for a smaller number of competitors, and thus may request a

smaller maximum on the Application for Sanction form submitted to the SSA. If a smaller limit is imposed, it will be announced well in advance.

**A5.3.10** If the maximum number of competitors has been restricted ([Rule 5.2.1.2](#)), then the number of slots reserved for Foreign Pilots is reduced in the same proportion.

**A5.3.11** In addition to those who have been accepted, any pilot placed on standby should be notified of his position on the standby list.

**A5.4.2.4** There is no obligation to collect a surcharge for late entries; if used, it must be applied fairly.

**A5.4.3** Note that "period of the contest" ([Rule 4.1](#)) includes official practice days, which are part of National competitions only. Practice prior to a Regional contest is considered unofficial and practice tows are not covered.

**A5.5.1.1.2** Note that the exception applies to a pilot who has completed a previous National contest. The intent is to accommodate obviously experienced pilots who have not flown in a recent contest.

**A5.5.3.2** This is to be interpreted to mean that irrevocable notification of intent to enter must be given before the stated time. A pilot may make arrangements to appear later than this time, and to receive the required safety briefing directly from the CD. All pilots have the right to know about any entrant who plans to arrive late.

**A5.5.4** The SSA Board of Directors has specified that insurance coverage is mandatory for towplanes.

**A5.6.1** Considerable care must be used in surveying control points. It can be done by driving to the point with a good GPS unit (a Flight Recorder takes multiple fixes and gives the best accuracy), by flying to the point (making several passes over the point on different headings at reasonably low altitude), or by the careful use of detailed topographic maps.

Certain software now available for PCs provides detailed maps of any chosen area, with the ability to obtain lat/lon coordinates. Such software can be an excellent cross-check of the accuracy of turnpoint coordinates.

**A5.6.1.1** Note that start and finish cylinders and finish gates are usually different and rarely the same point as the home turnpoint. Thus, they should appear as different points in the turnpoint list, and the proper distinction should be made when calculating task distance.

In addition to the required information, a thorough control point list may also include:

- A task area diagram showing the location of all control points.
- A matrix showing the distance and bearing of all control points from home.

**A5.6.2** The Worldwide Soaring Turnpoint Exchange server contains access links to official FFA special use airspace data. The server also contains a program which can be used to create special use airspace files in the TNP (Tim Newport-Peace) format (.SUA) restricted by latitude and longitude based areas as well as specific airspace classes.

**A5.6.3** In order to ensure that this process works smoothly, it is important that every printing of a control point list be dated and every electronic list of turnpoints include a unique version number, so it's easy to tell if a list is the current one.

**A5.6.3.1** It is desirable that the list of control points and their coordinates be produced, cross-checked, and printed well before the start of the contest. Yet in the age of electronic navigation, accuracy demands have increased, and it is unfortunately common that some last-minute adjustments are found necessary. This rule describes specific procedures that must be followed if changes are found necessary after the distribution of any pilot's kit: each affected pilot must be given a copy of the update, and must acknowledge receipt by signature. The CD must retain the signatures as proof that proper notification was given.

**A5.8.2** Note that pilots who fly as guests must be qualified in all respects. Guest status is not to be used as a means of circumventing qualification or equipment standards. Guest pilots must pay the Sanction fee (which, among other things, insures proper status under contest insurance coverage).

**A6.1.4** In this rule, "Configuration" refers to the full aerodynamic configuration of the glider. Thus, for example, this rule prohibits changing the angle at which ailerons are set unless such change can be accomplished in flight (which would be legal in Open, 18-meter and 15-Meter classes, but not in Standard class).

Open class provides a special case - span change are allowed at any time (and this includes wingtip swaps). But note that a big-span glider competing in a Sport-class contest is not in Open class and so is not allowed this freedom.

**A6.3.1** It is an enabled motor that defines a motorglider; gliders with motors are considered non-motorized if the motor is unavailable for use during flight. Thus, a pilot may fly with a motor that is not enabled but which can be enabled after a landout and then used to fly home.

**A6.3.3.4** Note that this rule requires that, prior to the start of the contest, the CD inspect and approve the special equipment that a motorglider must carry. The pilot must request that the CD do the inspection.

**A6.4** Note that a multi-place sailplane is often not a team entry as defined in [Rule 5.2.2.3](#). Team entries are not allowed in FAI-class National contests, but multiplace entries are.

**A6.5.1.2** To be acceptable, a ballistic parachute system must have a specific approval from the manufacturer. The

approval must mention the parachute make and model, and certify that it is designed to lower the aircraft and occupants safely (some ballistic parachutes are designed only to stabilize the sailplane and give the occupants more time to bail out).

#### **A6.5.2** Emergency Locator Transmitters

Though they are not required, the Rules Committee is on record as recommending the use of an ELT by every competition pilot. The potential safety benefit is large, and the cost is relatively low (less than \$250). This could be a suitable topic for a safety briefing.

**A6.6** Note that electronic navigation systems (including GPS, Loran, etc.) are legal in all classes.

**A6.7.2.3** The definition makes it clear that a fix is a single point. In depicting fixes, software may under some circumstances show a circle rather than a point; for the purposes of deciding if a fix is sufficiently close to a turnpoint, measurement is taken to the center of such a circle, not to its perimeter.

**A6.7.7** Note that it is the pilot's responsibility to show the CD and the Scorer that a flight recorder and software can meet specified requirements, and that the effort involved is reasonable. The job of checking out flight recorders and software should be done well before the start of competition. It is the pilot's responsibility to provide contest organizers with the necessary software and hardware to download and evaluate the pilot's flight recorder data.

#### **A6.8.2** Managing weighing

Prior to the start of the contest, the CD should make a chart showing each glider's Contest ID, the maximum allowable weight, and the weight of the main gear and the tail at that maximum weight. Once this is done, only the main gear need be weighed.

Scales should be located so that it is convenient for a glider to be weighed on the way to the grid. Weights should be taken with the wings balanced (not necessarily exactly level) in a cross or headwind (never a tailwind). Unofficial weighings can be done early in the day, but once a glider is officially weighed, [Rule 6.8.2.2](#) applies: a violation can be considered unsportsmanlike conduct.

Pilots high on the score sheet (say, positions 1 through 5) should be weighed every day. Others can be weighed at random. With portable scales, weight checking can be done on the grid, between grid time and launch time. Note that [Rule 12.2.5.4](#) specifies the penalty when a glider is over- or underweight.

Not all contests will have means for precise enforcement of weight rules (i.e. scales). This does not mean that weight rules are suspended - pilots are expected to make a good-faith effort to comply.

**A6.8.3** Under no-ballast rules (including all Sport-class contests), water ballast is not allowed, not even with the dump system disabled (but note the tail ballast exception of [Rule 6.8.3.1](#)). Fixed ballast is legal, but it must be installed for the duration of the contest. It is the pilot's responsibility to maintain a weight and balance within the limits published in their Sailplane Owner's/Operator's Manual.

**A6.9.1** If there is any question about the unloaded shape of the wings, it can be determined by observing the shape a wing assumes when removed from the sailplane and held leading-edge-down.

**A6.9.2** An allowance of 2.5 cm (approximately 1 inch) is provided as a tolerance for errors in measurement, errors in supporting the wings, and errors due to thermal expansion of the sailplane and/or measuring device.

**A6.11** The intent is to keep pilot eyes looking out of the cockpit, not continuously watching computer screens containing internet or other related input. Standard aircraft and weather related information transmitted on aircraft frequencies is not affected by this rule.

**A8.3** The CD must take any protest seriously, and investigate each one carefully; the entire Contest Competition Committee (see [Rule 3.1.4](#)) should be involved.

**A8.5** If a protest cannot be resolved to the satisfaction of all, this rule allows an appeal to the SSA Contest Committee. Thorough, written documentation must be included.

**A9.1** Some kind of safety briefing should be part of every daily pilot's meeting. A common and effective technique is ask a pilot to prepare a 5-minute talk concerning a safety subject on which he is knowledgeable. Such pilots should be contacted at least a day in advance, and the CD should ensure that the pilot's presentation is appropriate.

**A9.2** If non-contest flights will also take place, pilots must be instructed that they, too, must abide by this rule. Any circling glider is likely to attract a gaggle, so pilots must be competent to fly in close proximity to others.

**A9.8** The safety box provides a method for anonymous comments on safety to reach the CD. It should be in a secure location accessible to all pilots. The CD should check it twice a day, taking whatever unofficial action seems appropriate, and keeping all submissions confidential.

**A9.11** A examination is especially advisable in cases where flutter or an overly-hard landing is suspected (since hidden damage has been found to be common in such cases).

**A10.1.2** Grid time is usually declared once and remains constant throughout a contest. This is convenient and

avoids confusion, but can cause the loss of valuable soaring time on days that start earlier than normal. There is no reason why a CD should not declare an earlier-than-normal grid time if weather dictates.

**A10.1.3** The CD should allow as much time before launch as possible. When limited time is available the CD needs to ensure the first-launching pilots have a sufficient and safe amount of time to get ready (e.g. the pilot's meeting should be at the front of the grid and pilots in the first wave to launch should be given early warning).

#### **A10.2.1** Critical Assembly Check

A Critical Assembly Checklist is a short list of steps mandatory for safe flight. It is developed from manufacturer's recommendations and the service history of an aircraft model. The intent of having pilots indicate their Critical Assembly Check partner is to maintain a high level of awareness of this issue without shifting responsibility to the CD or contest organizers. Aircraft assembly and safety continues to be the pilot's responsibility.

The SSA recommends:

- That each pilot or owner develop a Critical Assembly Checklist for each aircraft.
- That each pilot perform a Critical Assembly Check each day.
- That each pilot arrange an independent verification of the Critical Assembly Check by another person.
- That a conspicuous mark be applied to the left wing-root area indicating that the Critical Assembly Check has been independently verified. This can be a mark made on the wing-root tape, or a separate piece of colored tape.

- That tow providers check for the presence of the confirming mark as a requirement for towline hookup.

Note that designing, performing and arranging for the verification of the Critical Assembly Check is entirely the responsibility of the pilot - this recommendation in no way diminishes the pilot's responsibility for safe flight.

Contest Organizers can, at their option, look for the confirming mark at the left wing root and refuse to provide a launch if it is not present.

**A10.2.2** There is no requirement to name a task at the morning pilot's meeting, but it is a good idea for the task sheet to list several possible tasks, and for the CD to designate one as the primary task for the day. In the absence of any subsequent change, this is the task that will be flown.

**A10.2.3** A pilots' meeting at the front of the grid need not be called if the day's task has already been named and is unchanged. If the task is changed, the CD must ensure that each pilot has been informed of the change. By making such an announcement during a mandatory meeting, the CD has met his responsibility to inform all pilots; a subsequent change requires a roll call of all pilots.

**A10.2.4** This rule allows the task to be changed "in the air", by means of a roll call. A typical scenario in tricky weather is that the CD wishes to start the launch before it is clear what is the right task to call. After some radio discussion, the task advisors and the CD agree on a task. The CD announces the task (including turnpoints, start & finish directions, etc.), and then conducts a roll call to ensure that all pilots understand the new task. A roll call starts with the announcement "Answer with your Contest ID if you understand the new task." Then the CD runs down the list of Contest IDs, and each pilot answers when his Contest ID is transmitted.

**A10.3.1.1** The minimum time is supposed to be a minimum, not a target. Multiply the estimate of the winner's speed by the minimum time to get the minimum length of task that should be called, weather permitting. A longer task is desirable if the weather will allow it.

#### **A10.3.1.2** Task-calling considerations for the CD

General

- Select good (i.e. knowledgeable, fair and decisive) task advisors, and use them.
- Using the best available weather information and the help of the task advisors, estimate:
  - - The times at which soarable conditions will start and end
  - - The speed that the winner will achieve
- Be ready to modify these estimates as the day develops.
- Using these estimates and the guidelines on task length of [Rule 10.3.1](#), select three tasks appropriate to the predicted conditions. At the pilots' meeting, name the longest of these as the primary task.
- The mix of tasks should be balanced across all task types.
- Be ready to launch 30 minutes before the earliest possible start of the day.
- Launch the sniffer as early as is practical. Launch the fleet as soon as the sniffer indicates that conditions are acceptable (see the comments for [Rule 10.6.2.6](#), below).
- Understand the importance of an efficient launch. The ideal would be to get everyone into the air in 5 minutes. That isn't possible, but anything that makes the launch go more smoothly is welcome. The saving of even a few seconds per launch adds up.
- Make a point of consulting the task advisors between 15 and 10 minutes before the task opens, to verify that those in the air feel the contemplated task will be safe and fair.
- On difficult days, keep trying until it is really too late to get a fair task in. Listen principally to the weatherman, rather than pilots who may be complaining that they'd prefer to pack up their gliders and go swimming.
- Try to use the full day, not merely the best part of it. Inevitable, 60-90 minutes or more are lost to the launch



and pre-start. Try to call tasks that make good use of the rest.

- Use distant turnpoints in good weather - save the nearby ones for the tough days. Visiting a variety of turnpoints tends to add interest to a contest.

- With Minimum-time tasks (TAT and MAT), inexperienced pilots especially should be made aware of the significance of the Standard Minimum Task Distance. A pilot who flies the minimum possible distance may not have enough distance to get credit for a finish. This is doubly important in Sport class, where the minimum distance to get credit for a finish depends on a glider's handicap.

**A10.3.1.3** This rule imposes an effective maximum length on a task, especially on days where soarable weather is predicted to end early.

**A10.3.2.1** Assigned Task

This task has been in use for many years and is thus understood by most CDs. It is best in contests where pilot skill is reasonably uniform, and on days when the weather forecast is thought to be reliable and does not include problems such as thunderstorms. Using the help of the weatherman and the task advisors, the CD should estimate the speed that the day winner is likely to be able to achieve, and the amount of time available from task opening to the end of soarable conditions. The right task length is then the distance that a pilot who maintains 75% of the winner's speed is able to cover in the time available.

**A10.3.2.2** Modified Assigned Task

The MAT is especially well suited to contests in which pilot ability varies considerably, and to days where the weather may be significantly better or worse than the forecast. Because it is time-limited, it "scales itself" to the actual conditions of the day, and to the abilities of individual pilots.

The CD has many options here: He can assign a large number of turnpoints - so many, in fact, that it is impossible for any pilot to complete them all, in which case the task becomes like an Assigned Task but with the option for those who are slow to return after any turnpoint. He can assign few or no turnpoints, which makes the task like the old Pilot-Selected task. (Note that when no points are assigned, the CD can restrict the choice of the first turnpoint, for example to send the pilots into the same general area without specifying just one point.)

Some care is needed when assigning turnpoints. It is best for the increment in distance for completing assigned turnpoints decrease for successive assigned points. If this is not the case, then late in a flight a pilot can be faced with the choice of coming home early or having to fly a large extra distance, which can be luck-prone.

**A10.3.2.3** Turn-Area Task

This is also a time-limited task, so, like the MAT, it works on days of unpredictable weather and with pilots of different skill. Large turn areas do not force pilots to a single point and thus allow fairer and safer flying on days with thunderstorms or other localized weather problems.

To take full advantage of the TAT, the CD should set reasonably large turn areas (using radii of 8 to 10 miles or more). With small turn areas, the difference between the minimum and maximum possible distances may not be large enough to cope with weather variability.

It is important to look at the minimum and maximum possible distances. In general, the shortest possible distance should be really short - about how far a pilot would fly in the declared minimum time if he maintained half the winner's estimated speed. The longest possible distance should be almost impossible to achieve in the minimum time, requiring perhaps 150% of the winner's estimated speed.

A well-designed TAT will generally have a reasonably large (say, 10- to 15-mile radius) final turn area located so that the distance from its closest point to home is about 10 miles. This will allow pilots to "tune" their distances near the end of their flight. If the minimum possible final leg is long, pilots must turn for home without much certainty as to conditions during the final hour of their flight.

**A10.5.1.5** This rule gives competitors the explicit right to examine any pilot's task claim and/or flight log.

**A10.6.2.1** Experience has shown that grid position markers are essential for smooth gridding. They should be conspicuous, properly spaced, and immovable. On a paved runway, pieces of duct tape can work. On grass, spray paint is sometimes used (it may need to be renewed during the contest).

**A10.6.1.4** This rule means that a pilot who wishes to launch in other than the assigned sequence must inform the CD, who maintains a list of the order of these auxiliary launches.

**A10.6.2.2** A pilot who pulls out of the assigned launch sequence is not automatically placed on the auxiliary launch list - he must see the CD and request this ([Rule 10.6.1.2](#)). A pilot may choose to wait before requesting a relaunch.

Note that this rule discourages pull-backs of the "I'd really prefer a later launch" type.

**A10.6.2.6** The choice of a Sniffer can be important; the best is a reasonably proficient contest pilot, flying a glider of performance and wing loading similar to those in the contest, who can give objective reports on the height and strength of lift, and some evaluation of how conditions appear away from the home field. The right sniffer can be a real asset; the wrong one can unnecessarily delay the launch. If no qualified sniffer is available, consider using one of the designated Task Advisors (if a contest pilot is sniffer and must remain airborne for a

long time before the launch, he should be given the option of landing to clean the bugs from his wings). Some pilots are of the "AGL" persuasion; others are strictly "MSL". Because there are two types, the sniffer should be told to use the phrase "AGL" or "MSL" every time he reports an altitude. Conditions that keep one glider in the air may not be sufficient for the whole fleet. In general, there should be at least 5-mile visibility and the sniffer should be able to maintain 2500' AGL before the fleet is launched (the CD may vary these criteria as local conditions dictate). On days of obviously excellent conditions, the sniffer simply represents an unnecessary expense and delay, and should not be used.

**A10.6.3.3** This rule lets pilots with sustainer engines run them shortly after tow release. A brief engine run is recommended by the manufacturers of many of these gliders, in order to ensure that the engine will work later.

**A10.7.2** The CD should take care that no information disclosing competition status be broadcast by contest officials. For example, a pilot may choose to broadcast the fact that he has landed out (by a transmission to his crew on 123.5), but this should not be done by contest officials (it could give a competitive advantage to pilots still flying).

**A10.7.2.1** This rule makes it clear that towplanes are to be on 123.3, and not another frequency (such as CTAF) while towing gliders. This is based on experience that says the hazard of not monitoring CTAF is less than that of not being on the same frequency as are the sailplanes being towed. When there is other traffic, experience has shown that it's better for the CD to monitor CTAF and talk to the other traffic. The rule allows towplanes to switch to a different frequency to coordinate landings.

#### **A10.8.4** Multiple-point start

These are now available without waiver for National competitions, where large classes make them most useful. To be successful, the various start points must be carefully chosen. The goal is to have start points that, with respect to local terrain and weather, are perceived as equally favorable.

**A10.8.5** These paragraphs describe the only ways in which a pilot can obtain a scored start time; without this, the pilot's score will be zero ([Rule 11.2.3.5](#)). Note that a pilot must have a start after the task has opened and after his last launch.

**A10.8.5.1** CDs are encouraged to set maximum start height 500 feet below cloudbase, for safety and to encourage FAR compliance. To do this, the CD can set a fairly conservative initial start height, and then increase it if advisers report an unexpectedly high cloud base.

**A10.8.8** CDs are encouraged to require start time call backs for Assigned Tasks to allow spectator involvement. Call backs are not necessary for non-AT tasks. In general, a pilot is expected to have a properly-functioning radio, and is responsible for the consequences of his own radio problems.

**A10.9** The CD should ensure that all pilots are supplied with a good diagram and explanation of finish procedures (both flying and rolling finishes should be covered).

With a Pilot-Selected task and a finish gate, although finishers may arrive from any direction, they must fly through the gate only in the designated direction. This may require a pilot to fly wide of the gate and then "hook" the end of it to get a proper finish. Flying through the finish gate in the wrong direction gets a "bad try", is unsafe and is subject to penalty.

#### **A10.9.2** Cylinder Finish

This is a more recent addition which tends to be duller and somewhat safer than a Gate Finish. Here are some considerations:

- It is strongly recommended that the cylinder be centered on the home field, so that all pilots are an equal distance from home when they finish.
- The radius should be one or two miles. Even the smaller of these give a lot of separation between gliders finishing from different directions.
- The minimum finish height should be chosen so that finishers have no trouble flying a reasonably normal landing pattern. 500' should be the minimum for a one-mile-radius cylinder; 800' would work for a 2-mile cylinder. (These might have to be higher for a contest with low-performance gliders, or with the possibility of very strong winds.)
- Pilots missing the bottom of the cylinder receive a graduated penalty of 1 point per 5 feet. The size of this penalty is calibrated to make an "honest mistake" of 50-100 feet low cost the same 10-20 points that a rolling finish previously cost.

**A10.9.4.1** The CD must designate one or more rolling finish areas (which could be "anywhere on the airfield"). There is no connection between these areas and the Finish Gate (where flying finishes are done).

**A10.9.4.3** Because of past practices, it's common for gate personnel to want to give a pilot doing a rolling finish his "mark" as the glider crosses the plane of the finish gate. This is incorrect - for a rolling finish, the time is always the time the wheel stops rolling.

**A10.9.4.4** Time added under this rule is not a penalty, but simply an adjustment to approximate the time the pilot would have finished had he flown to the location of the gate. Use of finish time adjustments will require careful work by finish gate crew. All time adjustments must be announced before the start of the contest.

**A10.10.1** To verify FDI compliance, there must also be a system for recording the time at which flight documentation is turned in.

**A10.10.1.1** Note that any pilot (including a non-finisher) who lands at the home field is now subject to a penalty if he exceeds the FDI.

**A10.10.2.2.1** This rule requires that a competitor who lands out call in (by telephone, not radio, unless a telephone is unavailable); the call must include the information on the Outlanding Report (landing location, turnpoints claimed, etc.). It is natural for a pilot to be principally concerned with the retrieve, yet barring an emergency the retrieve office should insist on a full report.

**A10.10.2.2.2** This rule means that all landings at any airfield are considered equivalent. A pilot cannot receive credit for more distance by flying to the far end of a runway, nor lose distance by electing to fly the safest available landing pattern.

**A10.10.2.4** Aerotow retrieves must be organized and managed by someone who is familiar with local towing considerations. The departure and return of tugs and gliders must be tracked. Fees and procedures should be spelled out in advance.

**A10.10.3** Airfield landing bonus

Contest organizers are encouraged to note fields that are on a Sectional Chart that are not suitable, and fields that are not on a Section but are landable. It is a good policy to see that points marked as landable in any official database of control points coincide with those for which a bonus applies.

But no such efforts in any way modify the pilot's responsibility to evaluate the safety of any potential landing spot, as new wording in [Rule 9.3](#) makes clear. It will always be the case that some airfields shown on a Sectional chart are unsuitable for gliders, especially for long-wingers. No pilot should be under the mistaken impression that the availability of a landing bonus constitutes an endorsement of the safety of an airfield.

**A10.11** This rule makes it clear that a pilot may attempt a task more than once. Combined with [Rule 10.10.1](#) and [Rule 11.2.2.4](#) the effect is to allow a Second task attempt without first landing and turning in flight documentation, but the risk of not landing is that the first attempt will not count if the pilot subsequently lands out.

**A11.1.3** The wording "a fair opportunity to compete" provides a means by which a CD can decide to "scrub" an otherwise valid competition day if he feels it was unfair. This is to be done only under the most extraordinary circumstances, and not to deal with the case of unusual or difficult soaring weather (weather is often unfair, but this unfairness is an inherent part of soaring competition). In general, only some sort of "force majeure" that prevents fair competition qualifies. An example might be an emergency that closed the airfield, making it impossible for some pilots to finish.

**A11.1.5** In the case of minor discrepancies between flight logs (such as between one that shows a pilot just outside a cylinder, and another that shows him just inside) the pilot is scored using the most favorable one. However, the pilot has to use a whole log, not mix and match snippets from multiple logs.

**A11.2.1.3** This radius is the standard FAI earth radius.

The great circle distance from the point whose coordinates are LAT1/LON1 to the point whose coordinates are LAT2/LON2 is given by the formula:

$$\text{DISTANCE} = (\text{EARTH'S RADIUS}) * \arccos (\sin (\text{LAT1}) * \sin (\text{LAT2}) + \cos (\text{LAT1}) * \cos (\text{LAT2}) * \cos (\text{LON1} - \text{LON2}))$$

**A11.2.2.1** It is important to note that flight documentation must be submitted every day on which a launch is made, even if the task was not attempted. A common problem arises when a pilot decides early that he will not attempt the task: he lands, packs up and leaves the field without submitting flight documentation. At the end of the day the retrieve office has no record of his whereabouts, and he may become the object of a search. The flight documentation must reflect the flight actually accomplished, even in the case where claiming a shorter flight might be in the pilot's best interest. A deliberate violation of this rule could be considered unsportsmanlike conduct.

**A11.2.2.3** This rule specifies the way in which a task is evaluated: A pilot's claimed turnpoints are processed in order. If any is invalid, either because the pilot was not allowed to claim that turnpoint or because flight documentation does not support the claim, the task is deemed incomplete.

Note that [Rule 10.3.1.1](#) may restrict the choice of the first and final turnpoint.

**A11.2.2.7** This rule provides for the submission of a subsequent Task Claim. If the revision is not accepted (e.g. because it contained an invalid turnpoint and thus did not result in a higher score), then the original Task Claim stands.

**A11.2.3.2** This rule allows the pilot to start anywhere on the start cylinder and receive distance credit from that point subject to the limitation of [Rule 10.8.6](#). The start fix must be compliant with [Rule 10.8.2.1](#).

**A11.4.2** The Standard Minimum Task Time (SMTT) is defined in [Rule 10.3.1.1](#); for Nationals, it is 3 hours. Note how all scores are reduced if any pilot completes an assigned task in less than the SMTT. In common parlance, this is called short task devaluation.

**A11.6** Strategic considerations for pilots flying modified assigned and turn area tasks

With a Pilot-Selected task there are more choices. The most important is where in the task area the best soaring conditions will be found. The clues for this decision are the terrain, the weather forecast and especially the actual view of clouds and weather you get from the cockpit. If there is evidence that lift is "streeting", you should look for a course in which turnpoints line up with lift streets. It is important to keep all turnpoint restrictions in mind (especially prohibited task legs). Other things being equal, a course with fewer turnpoints is preferable, since every turnpoint tends to involve at least some delay.

Here are the turnpoint restrictions you must keep in mind (see [Rule 10.3.2.2](#)):

- A maximum of 11 turnpoints (or a smaller number as set by the CD) may be claimed.
- Certain turnpoints may be prohibited.
- Certain task legs may be prohibited.
- You must have at least 2 intervening turnpoints before repeating a turnpoint (but note that the start and the finish are not turnpoints).
- The CD may impose extra restrictions on the selection of the first and last turnpoints.
- The CD may restrict the total number of times that certain turnpoints may be claimed.

You must keep a careful record of the turnpoints you visit.

**A11.6.1** This rule provides six ways that a glider's handicap can be adjusted:

- For increased span.
- For extra weight.
- For the addition of winglets.
- For wing turbulation.
- For wing-root fairings
- For other significant aerodynamic modifications.

Most common gliders will have a designation in the handicap table whether the handicap includes winglets, turbulators, and wing root fairings. If not so designated, the handicap adjustments are relative to the how the sailplane was manufactured, as documented in the owner's flight and maintenance manuals and glider logbook. The rule says "applied." You don't get to improve your handicap by removing factory-applied winglets, turbulators, or wing root fairings.

An easy-to-implement rule is favored rather than a much more complex rule that attempts to quantify performance differences less than 1% (10 points per day).

**A11.6.3.2** Despite task-setting guidelines, turn-area tasks are occasionally undercalled, with the winner hitting the back of all the circles and coming home substantially under time. This event dramatically compresses scores of undertime pilots and fails to reflect the true merit of the flights that pilots accomplished.

This rule essentially says that if you do your best and hit the back of all the circles, then you get credit for your speed even if below minimum time. It is graduated, so that pilots don't have to do complex calculations to figure out just how far they've gone. When a pilot flies more than 85% of the maximum possible distance, he starts to get credit for more than the standard 10% of his undertime. At 100% of the maximum possible distance, he receives full credit for his undertime.

Maximum distance is computed so that a pilot leaving from the front of the start cylinder can achieve maximum distance. Otherwise, the incentive to start from the back of the cylinder would be very strong, and we want to discourage such starts.

**A11.6.6** Note how MSP will be less than 1000 if more than 25% (0% for Sport) of competitors land out (as opposed to 40% for Assigned tasks).

**A11.6.8** Since it is very difficult to end up with the best speed if you finish in much less than MINTIME, short task devaluation for modified assigned and turn area tasks is rare except in the case (legal but somewhat unlikely) where the CD declares a MINTIME that is less than the Standard Minimum Task Time.

**A11.7** The only rounding done prior to printing scores is of time (to the nearest whole second).

**A11.10.5** Pilots with identical scores are assigned identical ranks. Pilots listed by daily rank should be shown in descending order by rank, and within this by speed, then by distance. Among pilots with a daily score of zero, those who launched should be listed ahead of those who did not launch.

**A12.2.5.1** Unsafe operation is obviously a general term intended to cover all cases. Since safety is paramount, any such case deserves close attention and, in general, a penalty sufficient to ensure that all pilots are deterred from repeating the violation.

Particular attention must be paid to any case where the violation appears intentional and/or includes a violation of an FAR. By signing the Registration Form, all pilots agree to abide by the Rules and all applicable FARs; failure to do so can easily jeopardize not only the violator, but other pilots, non-pilots, the future of the contest, and possibly even the future of competition soaring. For this reason, it's appropriate to deal with such cases harshly. Here are some guidelines (for a first violation):

- An inadvertent and small violation with no significant potential for harm (pilot finishes at 30 instead of the minimum 50 feet) - 25 points.
- An inadvertent violation with significant potential for harm (confused pilot lands on a taxiway that has been declared off-limits for landing due to foot traffic) - 250 points.
- A deliberate violation (unauthorized aerobatics) - 500 points.
- A malicious violation (pilot does low pass just over the head of person on the ground) - disqualification from the contest.

**A12.2.5.3** Unsportsmanlike conduct can be loosely defined as any attempt to gain an improper advantage. This would include a pilot's attempt to get more points than he deserves (e.g. by stating that he landed at a place different from his actual landing point), or an attempt to harm the score of another competitor (e.g. by stealing a task claim or flight log turned in by another pilot). Any such attempt must be viewed seriously and should probably receive a harsh penalty. Here are some examples of violations that could be penalized as unsportsmanlike conduct:

- Use of illegal equipment (e.g. a gyro that would allow cloud flying).
- Use of disposable ballast when it has been prohibited.
- False radio transmissions (e.g. faking a landout or a valid finish).
- Prohibited radio transmissions (e.g. pilots sharing tactical information, or receiving it from their crews).

## Appendix B Approved Flight Recorders

*March 3, 2009*

The list of approved flight data recorders is available in [FAI/IGC approved loggers](#).  
The specification for the IGC file format is in Appendix 1 of [FAI/IGC GNSS Technical Specification](#).

Primary Logger	All National	Regional FAI	Regional Sports
IGC "All Flights"	X	X*	X*
IGC "All Badges"	X	X*	X*
IGC "Up to Diamonds"	X	X*	X*
ILEC SN10**	X*	X*	X*
NK ClearNav**	X	X*	X*
RC Approved*** COTS log			X
RC Approved**** PDA log			X

Sub-standard Logger	All National	Regional FAI	Regional Sports
IGC "All Flights"	X*	n/a	n/a
IGC "All Badges"	X*	n/a	n/a
IGC "Up to Diamonds"	X*	n/a	n/a
ILEC SN10**	n/a	n/a	n/a
NK ClearNav**	X*	n/a	n/a
RC Approved*** COTS log		X	n/a
RC Approved**** PDA log			n/a

Use of a sub-standard logger may be subject to a penalty (Rules 10.5.4.3 and 12.1.4.8)

- \* Intact physical security seal not required (not available on SN10). Note: valid file-integrity security is always required (Rule 6.7.5.2).
- \*\* Unless subsequently qualified at a higher IGC level
- \*\*\* None are approved at this time, all use of COTS loggers plus download software and procedures in 2009 will be by RC waiver
- \*\*\*\* Approved PDA software:

Software	Link
CE Glide	<a href="http://www.ccsi.com/~inadas/index.htm">www.ccsi.com/~inadas/index.htm</a>
Cumulus	<a href="http://www.kflog.org/cumulus/">www.kflog.org/cumulus/</a>
flyWithCE Navigator	<a href="http://www.flywithce.com/">www.flywithce.com/</a>
Glide Navigator II	<a href="http://www.cumulus-soaring.com/gn.htm">www.cumulus-soaring.com/gn.htm</a>
GPS_LOG*	<a href="http://www.soaringpilotsoftware.com/GPS_LOGpage.htm">www.soaringpilotsoftware.com/GPS_LOGpage.htm</a>
SeeYou	<a href="http://www.naviter.si/index.php">www.naviter.si/index.php</a>
SoarPilot*	<a href="http://www.soaringpilot.com/index.html">www.soaringpilot.com/index.html</a>
pocketStrePla	<a href="http://www.strepla.de/">www.strepla.de/</a>
WinPilot	<a href="http://www.winpilot.com/Gliders.htm">www.winpilot.com/Gliders.htm</a>
XCSoar*	<a href="http://www.xcsoar.org/">www.xcsoar.org/</a>

\* Indicates flight recorder software which is freely available.

Contact the SSA Rules Committee to request additions to this list of approved flight data recorders.

## Appendix C

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