



RENO AIR RACING ASSOCIATION, INC., DBA
NATIONAL CHAMPIONSHIP AIR RACES

OFFICIAL RULES OF COMPETITION
2009

REVISED April 5, 2009

EFFECTIVE DATE June 1, 2009

NOTE: All changes/additions/relocations are listed in RED Font.

DEFINITIONSiii

I. PARTICIPATION IN THE NATIONAL CHAMPIONSHIP AIR RACES.....1

II. OFFICIALS1

III. AIRCRAFT ELIGIBILITY.....2

IV. PILOT ELIGIBILITY4

V. BRIEFINGS5

VI. PRACTICE AND QUALIFYING PERIODS6

VII. QUALIFICATION OF AIRCRAFT.....7

VIII. RACE COURSE9

IX. RACING10

X. PYLON TURNS.....11

XI. RACE FINISH.....12

XII. EMERGENCY PROCEDURES12

XIII. RACE CANCELLATION OR POSTPONEMENT.....13

XIV. SAFETY.....14

XV. VIOLATIONS – PENALTIES - FINES14

XVI. PROTESTS16

XVII. GENERAL.....17

XVIII. SPECIAL RULES.....17

XIX. PRIZE MONEY AND PURSE.....18

XX. CLASSES - FIELD - RACES18

APPENDIX A - UNLIMITED CLASS PROGRESSIONa

APPENDIX B - T-6 CLASS PROGRESSIONd

APPENDIX C - SPORT RACING CLASS.....f

APPENDIX D - FORMULA ONE RACE CLASSh

APPENDIX E - SPORT BIPLANE RACING CLASSj

APPENDIX F - JET CLASS PROGRESSION.....k

DEFINITIONS

CERTIFIED: As referred to in the “Official Rules of Competition” and other documents issued by RARA shall apply to a prospective racer that has been deemed “ELIGIBLE” by their respective class AND has:

- Completed “ALL” phases of PRS within the last 24 months; or
- COMPETED in the National Championship Air Races within the past three annual air races.

CHASE PLANE: A Chase Plane is any plane, used for observation, photography or any other use, approved by RARA and the respective class flown by a certified pilot or an approved pace pilot. A chase plane shall not go below 200 feet AGL on the course.

COMPETED: As referred to in the “Official Rules of Competition” and other documents issued by RARA shall be defined as follows:

- Flown at least one complete lap in an official race in the National Championship Air Races (NCAR); or
- Qualified in an aircraft, to race in the National Championship Air Races, by obtaining a speed qualifying the aircraft to compete in the race progression.
- Note: Flight in the National Championship Air Races during the practice or qualification periods that do not result in securing a qualification time will not be considered “COMPETING” in their race class.
- Certified pilots who have not “COMPETED”, as defined above, but who have had time on the race course at Reno at PRS or during race week during the previous 36 months who wish to maintain the certification as a race pilot, may request of their respective class the opportunity to perform a check ride in accordance with the class requirements as listed in their rules. The pilot shall complete the check ride to the satisfaction of the class. The check ride may extend the pilot’s certification for an additional twelve (12) months. It shall be the sole responsibility of the pilot to inform both RARA and the Class of their intended action to assure that adequate records may be maintained and only documented evidence of such action will be acceptable as proof of the extended certification. This process is good to extend a pilot’s certified status for up to a total of forty eight (48) months after which time if the pilot has not “competed at Reno”, he/she shall be required to attend PRS in order to regain his/her certification.

CONDITIONAL ENTRIES: Conditional entries are those entries received AFTER the closing date and time as specified in the entry application. They must comply with the RULES OF COMPETITION and provide all the information specified in the ENTRY FORM. Conditional Entries shall be listed in order of their receipt by RARA which will determine their position or advancement through the following categories.

• **A CONDITIONAL ENTRY TO FILL THE FIELD** is one received after the closing date when the field is not filled in its respective class. The entry shall be advanced to fill said field, shall receive all the rights and privileges of an “on time entry” and be assured of the opportunity to qualify.

•A CONDITIONAL ENTRY TO FILL THE FIELD UPON THE FAILURE OF SUFFICIENT AIRCRAFT TO QUALIFY is a Conditional Entry that shall be allowed to qualify, if prior to or during the qualification period, if “on time” or “Conditional Entries to fill the field” are unable to qualify. Should they qualify they shall receive all the rights and privileges of an “on time entry”.

•A CONDITIONAL ENTRY TO FILL THE FIELD IF THE FIELD IS NOT FULL BY THE FIRST HEAT RACE IN ITS CLASS is a Conditional Entry that has not had the opportunity to qualify. In the event that other qualified aircraft are unable to start the first heat race of that class, then it shall be allowed to start as the LAST place aircraft in medallion, bronze or lowest race in that class. It shall be then allowed to advance as provided in the class rules of progression and shall receive all the rights and privileges of an “on time entry”.

DESIGNATED OBSERVATION AREA: A designated observation area is an area NORTH of the pit/crowd line approved by the FAA/RARA for maximum of THREE (3) CREW MEMBERS per aircraft in that race, wearing the proper credentials, to observe that race. Any violation of the maximum of three (3) crew members shall result in the closure of the designated observation area to that class for the remainder of the air races for that year.

ELIGIBLE: As referred to in the “Official Rules of Competition” and other documents issued by the Reno Air Racing Association (RARA) shall refer to a prospective racer or aircraft that has met all of the requirements of their respective class.

INSTRUCTORS: The qualifications for instructors at PRS are as follows.

- A flying instructor shall be a currently certified racer, approved by the specific Class and RARA, who is allowed on the race course with or without a student pilot at PRS.
- A ground school instructor shall be a currently certified or past racer nominated by the class and approved by RARA.

PACE PILOT: The qualifications for a pace pilot for both Racing and PRS are as follows.

- The pace pilot for any class shall be a currently certified racer or past racer and approved by both RARA and the Class for which he/she is to pace.
- The Pace Pilot shall be trained in pace/safety duties by each class.
- The Pace Pilot shall not be allowed to go onto the race course unless he/she holds the qualifications of a certified racer, has had legal time on the race course within the past twenty-four (24) months, or holds a current aerobatic card.
- The pace pilot, as such, is not certified to race.
- No more than two (2) people are allowed in a pace/ safety plane.

PASSENGER: For purposes of entering the race course at Reno Stead Airport during any period that the FAA Waiver is in effect, a passenger is defined as any person in any approved race, pace, chase or training aircraft who is not an approved pilot in command of said aircraft in accordance with RARA pilot registration requirements. During PRS an

Instructor Pilot authorized by the Class and RARA, or a student dully registered for training are approved passengers.

PYLON RACING SEMINAR (PRS): Each year the Reno Air Race Association (RARA) in conjunction with the Racing Classes, presents a seminar for prospective race pilots to acquire the necessary skills to determine their suitability to become a pilot certified to race at Reno. A pilot must be at least EIGHTEEN (18) YEARS OF AGE at the start of PRS. All pilots between the ages of 18 and 21 years of age must have ALL of the class requirements with respect to total hours as pilot in command and in type PRIOR to the start of PRS. The pilot must complete all phases. They shall pass the check ride and be signed off by the class within TWELVE (12) MONTHS in order to become certified to race at Reno.

TELEMETRY AREA: A Telemetry Area is an area NORTH of the pit/crowd line approved by the FAA/RARA for the placement of a bona fide telemetry unit of a racing aircraft to receive telemetry from said aircraft during a race. A maximum of THREE (3) CREW MEMBERS of said aircraft who are wearing the proper credentials may be at the telemetry station at any time. Any violation of the number of crew members shall result in the telemetry station for that aircraft being removed from the telemetry area for the remainder of the air races for that year.

REPLACEMENT AIRCRAFT: In the event an “ON TIME ENTRY” is unable to compete due to mechanical problems, an application, filling all of the requirements of the ENTRY FORM and Section III., AIRCRAFT ELIGIBILITY, will be accepted by RARA for a REPLACEMENT AIRCRAFT. The application shall be submitted by the owner or pilot of the original aircraft and shall be received by RARA prior to the close of business on the SATURDAY prior to Air Race week. The Replacement Aircraft shall retain its respective order and shall not be bumped by any conditionally approved aircraft. The Replacement application fee shall be \$300.00.

I. PARTICIPATION IN THE NATIONAL CHAMPIONSHIP AIR RACES

PARTICIPATION in the NATIONAL CHAMPIONSHIP AIR RACES (NCAR) is on an invitation basis and is open to qualified pilots and aircraft meeting the eligibility requirements of these rules and those of the classes invited to participate.

APPLICATIONS for entry must be on the "INVITATION TO PARTICIPATE IN THE NATIONAL CHAMPIONSHIP AIR RACES" entry form furnished by the RENO AIR RACE ASSOCIATION, INC. (RARA).

ENTRIES shall be addressed to the Reno Air Race Association, Inc., 14501 Mt. Anderson Street, Reno, NV 89506 or sent by FAX to the Reno Air Race Association, Attn: Pilot Coordinator at fax number 775-972-6673.

ENTRY FORMS received by RARA at their offices prior to the close of business at the date and time stated on the entry form and complying with the requirements of THE RULES OF COMPETITION and the ENTRY FORM will be considered "ON TIME" entries and shall be assured the opportunity to qualify. RARA will be the sole judge of acceptance or rejection of the application.

ENTRIES will not be accepted by RARA unless complete information specified on the entry form is supplied. An entry that contains any false statement shall be considered void and the entry fee forfeited and retained by RARA.

FEES will not be refunded for any reason other than rejection or refusal of the entry by RARA. RARA reserves the right to invite or exclude any owner, pilot or aircraft.

ENTRIES received after the closing date and time stated in the ENTRY FORM, shall be considered "CONDITIONAL ENTRIES" and shall be listed in their order of receipt by RARA. RARA shall notify each CONDITIONAL ENTRANT of their position in the field.

THE CONDITIONAL ENTRY classification has been added by RARA in an attempt to provide a full field of racers in the race classes as outlined below.

- To fill the field in the event it is not filled by closing time;
- To fill the field in the event an accepted aircraft is unable to qualify;
- To fill the field in the event any accepted aircraft is unable to start in the first heat race of its class.

CONDITIONALLY accepted and replacement aircraft applications will be rejected if they arrive too late **for RARA to process** insurance and other paperwork.

II. OFFICIALS

AUTHORITY over all **practice, qualification and** racing events of the NCAR is vested in RARA **through its officials, as listed below**, which shall conduct and judge the **events** in accordance with The Rules of Competition and the **conditions of** the FAA waiver.

- The Contest Committee consisting of a Chief Judge and not less than **six (6) nor more than eight (8) Contest Committee Judges, a maximum of nine (9):**
- Director of Operations/Deputy Director of Operations:
- Air Boss/ Deputy Air Boss:
- Race Control Supervisor and Race Controllers:
- Chief Starter (F-1 and Biplanes) and Assistants
- Chief Timer and Assistants (timers, starters, flaggers & scorer)
- Chief Pylon Judge and Assistants (pylon judges & speed bumps)
- **The Tech/Safety Inspection Committees and the Pilot Qualifications Committees of each Class while performing their duties during the NCAR pursuant to the Rules of Competition for RARA, their respective Race Class rules and the FAA regulations.**

NO OFFICIAL shall have **a** conflict of interest arising from involvement or connection with **individual** race sponsors, event sponsors or any racing team entered.

THE CONTEST COMMITTEE shall act in a judicial capacity and will be responsible for the interpretation and application of contest rules pertaining to the Air Racing event.

- Each Contest Committee member will act in an observer/umpire capacity during all qualification and racing events and shall station himself best to observe each contest:
- Settle disputes and protests formally presented:
- Determine penalties:
- In consultation with RARA authorize deviations or special provisions to the rules when necessary for safety of spectators and/or contestants.
- May exclude any contestant from participation if the contestant is operating under any physical deficiency making him/her unable to meet the physical requirements for their current medical certificate. They may require a medical examination of any contestant if they deem it necessary.

III. AIRCRAFT ELIGIBILITY

ALL AIRCRAFT, ON-TIME ENTRIES, CONDITIONAL ENTRIES and REPLACEMENT AIRCRAFT must meet the eligibility requirements for the appropriate class, as stated in the class rules, by reference made a part of these rules.

NO AIRCRAFT may enter to race in more than one (1) race class.

NO AIRCRAFT weighing less than 4,500 pounds empty weight shall be allowed to enter as an Unlimited Racer.

THE FOLLOWING certificates, permits, logs, forms and documentation for an aircraft shall be available for inspection by the FAA and RARA: Registration Certificate, Airworthiness Certificate, Special Flight Permit, Operating Limitations, **Airframe and Engine** logs. Additional documentation, in particular, notice of any modifications performed on the aircraft **or engine**

since the last inspection and required by the FAA or Class rules for inspection purposes shall also be available for examination by the Tech/Safety Inspection Committee of the class. Specific reference is made herein to:

- FAR 21 Section 21.93 for clarification of changes in type design;
- FAR 1.1 to identify major alterations that might appreciably affect weight, balance, structural strength, performance, power plant operation, flight characteristics, or other qualities affecting airworthiness;
- FAR 91 Section 91.9 civil aircraft flight manuals, markings and placard requirements.

ANY PILOT with a new aircraft not previously inspected by the Technical Inspection Committee and any pilot whose aircraft has had a “major change” as defined by FAR 21 Sec. 21.93 or a “major alteration” as defined by FAR 1.1 incorporated since the previous aircraft registration must register and have their aircraft ready for inspection no later than 1200 hours the first Sunday of race week. All FAA approved documentation must be presented to the Class Tech/Safety Inspection Committee during the inspection of the aircraft.

THE CLASS Tech/Safety Inspection Committee shall have final authority as to the eligibility of any aircraft for competition. Each Race Class is responsible for insuring that their Tech/Safety Inspection Committees are available in a sufficient amount of time to accomplish the necessary aircraft inspections prior to any aircraft flight at Stead that supports class pilot qualifications, race qualification or racing practice.

Any Aircraft that is “trucked in” and “assembled” at Stead for the NCAR, shall require the Technical Inspection to flying.

Each class shall supply RARA with a list of the members of their Tech/Safety Committee by August 1st of each Race year.

THE CLASS Tech/Safety Inspection Committee shall advise the Chief Judge of the Contest Committee and RARA (Pilot Registration) of all aircraft eligibility and safety qualifications. Each Race Class is responsible for insuring that each racing aircraft has been inspected and approved by their respective Tech/Safety Inspection Committee prior to flying on the race course. The Race Class shall provide a record of the aircraft inspected to RARA on a timely basis.

THE DECISION of the Tech/Safety Inspection Committee relative to the eligibility of an aircraft shall be final.

ALL RACING aircraft must be issued a race number prior to practice or qualification. The individual race class organizations will be responsible for control and issuance of race numbers for their respective race class.

ASSIGNED air race numbers must be properly applied on each racing aircraft prior to flying on the race course. The preferred location is: number(s) painted on the top of the upper left wing, reading from the leading edge towards the trailing edge, and on the bottom of the right wing and on each side of the fuselage clear of the wing, in readable block style and in contrasting color to the background on which they are applied. Characters should be AT LEAST THIRTY (30) INCHES HIGH, with minimum stroke of two and one half (2 1/2) inches.

If the size of an aircraft prohibits the use of a number of this size, the largest number possible must be applied. The Chief Timer shall have the right to require contestants to replace or change the size, type, or location of their racing numbers.

OPERATIONAL transmit and receive VHF radios are required for all race classes qualifying and/or racing at Reno. Additionally, each VHF installation will incorporate mechanization that allows keying the VHF microphone from either the throttle or the stick (i.e. Hands on Throttle and Stick or HOTAS mechanization) and incorporate a head set to receive incoming VHF transmissions. The HOTAS requirement is a RARA requirement which is mandatory for all aircraft participating at Reno in the NCAR. Violations will result in disqualification.

CONTESTANTS shall be responsible for furnishing their own APUs, tractors, and other ground support equipment. **RARA tow vehicles will be available to assist as requested.**

IV. PILOT ELIGIBILITY

PILOTS and alternate pilots must meet the eligibility requirements for the appropriate class, as stated in the rules for the class, by reference made a part of these rules. There will be no exceptions for non-compliance with class pilot eligibility requirements. In addition to the class rules, a pilot must be **at least** twenty-one (21) years of age in order to fly a racing aircraft on the Reno race course during race week.

It shall be the sole responsibility of the contestant to present his/her credentials to the FAA/RARA representatives and to present **the necessary aircraft documents to the class Tech/Safety Committee** for review upon arrival at the race site.

THE RESPECTIVE racing class Pilot Qualification Committee shall have final authority as to the eligibility of any contestant pursuant to its **class specifications**. Such committees shall be available at the race site no later than 0800 hours on the Sunday beginning race week to pass on the qualification of all contestants. The decision of the Pilot Qualification Committee relative to the eligibility of any contestant shall be final. **The Pilot Qualification Committee of each class shall advise the Chief Judge of the Contest Committee and RARA of all pilot eligibility qualifications. No pilot will attempt to practice, qualify or race until passed by said Pilot Qualification Committee.**

Each class shall supply RARA with a list of the members of their Pilot Qualification Committee by August 1st of each Race Year.

ALL CONTESTANTS must have at least a Private Pilot Certificate. Race Class rules may require a commercial Pilot Certificate. **Foreign Pilots must provide a current/valid pilot license issued by their country and present photo identification from their country such as a valid Passport or Drivers License. This photo identification must be in the pilot's possession or readily accessible in the aircraft when exercising the privileges of that pilot certificate.**

RARA requires each contestant to have a Current Medical Certificate **in accordance with rules of the class in which he/she intends to race.**

EVERY PILOT flying in the NCAR must be certified. All certifications are approved by the individual race classes and pilots may be considered for certification if they have competed

in Reno within the past three years or **have** successfully completed all phases of the PYLON RACING SEMINAR (PRS) in the previous twenty-four (24) months.

PRS ATTENDANCE will be required for a pilot or alternate pilot who falls into one of the following categories:

- Never competed in the National Championship Air Races;
- Never competed in the Race Class, in the National Championship Air Races.
- Not competed in the Race Class in the National Championship Air Races in the past three Races.

PILOTS with past experience competing at Reno in the National Championship Air Races may be exempt from the above if:

- A pilot has competed in a similar Class e.g. Formula One/Biplane; Unlimited/Jet on the same race course in the past three (3) years and receives a check ride satisfactory to the Class;
- A pilot seeking to fly in a slower **or similar** Class and has competed in Reno in the last three (3) years, may request from the slower/**similar** Class the opportunity to perform a check ride. Upon completion **and** approval of the Class, **he/she shall** be eligible to participate **in that class. E.g. Unlimited to Jet; Sport to T-6; Biplane to Formula One or visa versa.**

V. BRIEFINGS

ALL RACE PILOTS must attend a General Pilot Briefing before practicing, qualifying, or racing on the racecourse. These briefings will be conducted by the Air Boss or the Deputy Air Boss. Dates, times and locations of the General Pilot Briefings will be included in the general instruction letter sent to each Air Race pilot. All pilots must personally attend one of these two briefings and have signed in on the attendance roster. The pilot's signature on the attendance roster verifies that the pilot has read and understands the Racing Rules of Competition and the Operational Rules and Regulations applying to the Stead Airport. It also signifies that the pilot has been briefed and understands the provisions of operating within the FAA Certificate of Waiver. Any pilot unable to attend either of these briefs will not be permitted to fly in the waived airspace.

IN ADDITION to the General Pilots Briefing there will be a Daily Pilot Class Briefing. This briefing is mandatory for any pilot desiring to fly on the race course that day. The times of these briefings will be published in the daily schedule for each class. Pilots will be required to sign in on the pilot attendance roster. Any pilot failing to attend the briefing or failing to sign the roster will not be permitted to fly that day. **Any pilot who has someone other than him/her self sign in on his/her behalf shall be disqualified from racing for the remainder of that years racing.**

UNDER SPECIAL circumstances, pilots who miss either the mandatory general briefing or the daily briefing must be briefed by the Air Boss or a designated representative before they are permitted to fly.

RARA shall hold a CREW CHIEF briefing at a time and place to be announced to provide the crew chiefs information on matters pertaining to the Ramp and Hanger rules affecting their respective classes.

THE PACE PLANE PILOT, in the Unlimited, Jet, T-6 and Sport Classes, shall brief the pilots before takeoff for each race and cover the following items:

- Time to start engines, Time to takeoff, Rendezvous area, Rendezvous speed and altitude, Emergency procedures, VHF Comm. Frequency, Number of laps for the race, AND other procedures as necessary.
- If a Pace Plane is unavailable, it is the responsibility of the pole position pilot to brief the other pilots before the race.

VI. PRACTICE AND QUALIFYING PERIODS

THE PRACTICE and qualifying periods will be controlled by Race Control on the designated Race Control radio frequencies. Any action requested by Race Control must be adhered to or disqualification from further participation may occur. Pilots demonstrating their ignorance of, or disregard for, the Rules of Competition, the FAA Waiver or FARs will be immediately grounded and referred to the Contest Committee for appropriate action. It is desirable to have the Class President or a Class representative with the timing crew during qualification.

ALL AIRCRAFT will communicate with Race Control on the Race Control frequency to obtain permission to take off for practice or qualifying and may be held on the ground or at the end of the runway if the race course is too crowded. The pilot may request takeoff and orbit away from the race course and await clearance to enter the race course when a position is available. The practice and/or qualification order is on a first-come basis after engine start, unless specific times had been pre-scheduled through Race Control. Formula and Biplane pilots will abide by the qualifying procedures adopted by their respective class organizations regarding communications and race course entry/exit during practice/qualifying periods.

NO MORE than four aircraft will be permitted on the race course at the same time during a practice period, unless authorized by Race Control. The Class President of an individual racing class may, after approval by the Air Boss, authorize more than four aircraft to occupy the race course during practice periods only.

WHEN A PILOT has announced his/her intention to qualify, only three (3) aircraft will be permitted on the race course at the same time, with the last aircraft entering the course being asked to pull off the course.

During any practice period, preferably after all aircraft in that class have qualified, a maximum of eight (8) aircraft may be permitted on the race course, to simulate actual race conditions, with approval of the respective Class President and Race Control.

VII. QUALIFICATION OF AIRCRAFT

OPERATIONS PERSONEL will be on station and ready to qualify aircraft between the hours of 0730 -1700 Monday, 0730-1700 Tuesday and 0730-1200 Wednesday of Race week.

ALL AIRCRAFT must qualify within the listed qualifying hours unless authorized by RARA to fill the field. Unless an aircraft can complete his qualification prior to the deadline, it will be flagged off the course. Official time shall be designated as the U.S. Naval Observatory atomic clock time. The Chief Timer shall be the sole judge of the time and no protests will be entertained.

QUALIFICATION periods will be scheduled, and the time periods allotted for qualification will be posted on the daily schedule and announced at the daily briefing. The qualification period may be shortened or extended by RARA in the best interest of the Air Races.

ALL ENTRIES must qualify in order to establish starting positions for their respective heats.

UNLIMITED, JET, T-6 AND SPORT aircraft have the option of running one or two timing laps during their qualification period. When ready to initiate their qualifying attempt, Unlimited, Jet and Sport Class aircraft must contact the Chief Timer at their pylon #4 to ask for the clock and communicate their desire to run one lap only or two consecutive laps: T-6 aircraft will make the same call at their pylon #3. The Chief Timer will acknowledge this radio call and will place the aircraft on the clock when it crosses the start/finish line on that lap. The speed from the fastest lap will be used for qualification.

FORMULA ONE AND BIPLANE aircraft will run two timing laps. Speed from the fastest lap will be used for qualification. Requests for the clock will be made by VHF radio at pylon # 4 after completing one (1) level lap. If there is no acknowledgement from the Timers of the request for the clock, the pilot may employ the wing rock method to initiate his/her qualifying run.

All Classes will initiate their timing run from level flight after passing the last pylon on their respective course preceding the start-finish line (Home Pylon), namely outer eight (8) for the Unlimited, Jet, T-6 and Sport classes and inner six (6) for the Formula 1 and Biplane classes.

- A GREEN FLAG signal will be given the aircraft at the start of the qualification;
- A WHITE FLAG signal will be given at the end of the first timed lap;
- A CHECKERED FLAG signal will be given upon completion of the qualification attempt.

ALL PILOTS must register, have their aircraft inspected, and in place and ready to qualify no later than 1200 hours on Tuesday of race week. Pilots and aircraft failing to meet this deadline will be considered a "conditional entry" and added to the end of the conditional entry list. On-time Entries shall always take precedence over a Conditional Entry in the order of qualification.

ALL PILOTS, except unlimited pilots and jet pilots, will be permitted to qualify his/her aircraft only once, and once so qualified with an official time, will not qualify again for any reason.

UNLIMITED and Jet qualifiers shall be allowed a second qualifying attempt provided the second qualifying attempt takes place at a time when no entrant is ready and waiting to attempt their initial qualification. The pilot who wished to attempt a second qualifying run shall indicate in his radio request to the Chief Timer that this is a second qualification attempt. If two or more pilots wish to make a second qualifying attempt at the same time, they shall be given an opportunity to re-qualify in the order of their request for a second qualification. When an entrant completes a second qualification, the best speed of the two qualification attempts shall be used as that pilot's qualification speed. No pilot may have more than one re-qualification attempt.

A QUALIFYING attempt may be aborted by abruptly pulling off the course without passing the home pylon at racing altitude or within reasonable time anytime during the timed laps. Aircraft should call over the radio to race control on race frequency their race number and aborting. If the abort was on the first timed lap, the aircraft may either reinitiate a timing run with the proper communication procedure when desired in that qualifying session or during a later qualifying session. If the abort was on the second timed lap, the aircraft may either re-initiate a timing run with the proper communication procedure during that qualifying session without landing, or land and make a decision within one hour after landing to accept the first timed lap as its official time. If the first time is rejected as the aircraft's official time, then that time is permanently lost and the aircraft must make another attempt to qualify.

IF IDENTICAL qualifying speeds are posted by two or more aircraft, their order in qualification shall be the same order in which they achieved their speeds.

IN THE event of a pylon cut during a qualifying run, the following procedures will be employed to determine a qualifying time.

- If two (2) laps were timed and a pylon was cut on only one (1) lap, the lap on which a pylon was not cut shall be used.
- If only one (1) lap was timed and a pylon was cut on that lap, the aircraft will be given a second (AND FINAL) opportunity to qualify. The second opportunity to qualify shall be allowed AFTER all other aircraft ready and waiting to qualify during that particular qualification period have had an opportunity to qualify.
- If two (2) laps were timed and pylon cuts were recorded on both laps, the aircraft will be given a third (AND FINAL) one (1) lap opportunity to qualify, after all other aircraft in its class have had an opportunity to qualify.
- If time does not permit another qualification run, a time penalty of four (4) seconds times the number of pylons cut on either of the qualifying laps will be added to that specific lap. The best resulting time will be used as the qualifying speed.
- Cutting inside the race course during a qualification run is not permitted and no time will be allowed for that lap.

THE AIR BOSS may, at his discretion, grant permission for the performance of a "TEST FLIGHT" during the qualifying period of another class only if there is no chance of conflict or hindrance between the race aircraft of the two classes. These requests MUST be

coordinated well in advance with the Air Boss and be approved by the Class Presidents of both classes.

VIII. RACE COURSE

IN 2003, RARA chose to employ an OPTIMUM RACE PATH based upon a speed and G forces provided by each Race Class to determine the minimum radius turn and a more representative circuit around the pylons. No pylons were moved at that time, yet the course lengths increased due to the difference in distance between pylon to pylon (straight line distances) and a curved track which is more representative of the path that can be flown. Pylons at the Reno National Championship Race Course have been relocated a number of times as speeds have increased and to provide additional safety for the pilots, spectators and surrounding neighbors, changing the course lengths.

THE CURRENT RACE COURSE LENGTHS ARE:

- JET CLASS: The Jet Class course is 8.4371 based upon a speed of 515 MPH and 3.5 Gs.
- UNLIMITED CLASS: The Unlimited Class course is 8.4333 miles based upon a speed of 500 MPH and 3.5 Gs.
- SPORT CLASS: The Sport Class course is 6.9992 miles based upon a speed of 375 MPH and 3.0 Gs.
- T-6 CLASS: The T-6 Class course is 5.0693 miles based upon a speed of 225 MPH and 2.0 Gs.
- FORMULA ONE CLASS: The Formula One Class course is 3.1875 miles based upon a speed of 250 MPH and 3.0 Gs.
- BIPLANE CLASS: The Biplane Class course is 3.1761 miles based upon a speed of 210 MPH and 3.0 Gs.

SEE ATTACHMENTS C, D, E, F, G and H FOR COURSE DIAGRAMS.

RACE FLAGS, as designated below, will be displayed at Home Pylon during all racing events.

GREEN FLAG: Used to start a race or a qualification run and to resume normal racing after an emergency has been declared over.

BLACK FLAG: Used to signal an aircraft to vacate the course.

YELLOW FLAG: Used to indicate that an emergency is in progress.

WHITE FLAG: Used to indicate the beginning of the final lap of a race.

CHECKERED FLAG: Used to indicate the finish of a race or qualification attempt.

THE SOUTH DEADLINE FOR ALL CLASSES SHALL BE THE SOUTH EDGE OF RUNWAY 8/26.

IX. RACING

AIR STARTS will be used for all Unlimited, Jet, Sport and T-6 races.

A RACEHORSE START will be used for all Formula One and Biplane races.

THE STARTING TIME for all aircraft will be the time that the first racing aircraft crosses the starting line.

THE STARTING LINE for the Unlimited, Jet, and Sport Classes is a line parallel to runway 8/26 at its intersection with the northbound entry corridor. Lap #1 for these classes shall be from the starting line to the finish line at Home Pylon. Subsequent laps shall be on each class's specific race course.

THE STARTING LINE for the T-6, Formula One and Biplanes is a line projected south from Home Pylon at right angles to runway 8/26. Formula One and Biplanes on a runway 8 departure must make one lap before the start time begins.

FORMULA ONES and Biplanes will not take-off on runway 26. The alternate start for Formula One and Biplanes will be from runway 32. The alternate start procedure will entail a left turn at a TEMPORARY TURN PYLON on Taxiway B after take-off on runway 32 the aircraft will join the course at pylon 4. Formula One and Biplanes will continue around the course until the start of the race which will occur when the aircraft pass the FORMULA ONE/ BIPLANE starting line. Race Control and the respective class will ensure cross wind components for a 32 departure are within the limits established by each class prior to authorizing a 32 launch.

STARTING POSITIONS: Qualifying speeds will determine starting positions in accordance with class rules for the Wednesday and Thursday heat races. The positions for the Friday, Saturday and Sunday races will be determined by the finishing position from the previous day or as stated in the class rules of progression.

IN NO CASE will the start of a race be delayed or expedited for:

- Orbiting pilots with low-fuel conditions
- Pilots unable to find the starting formation
- Pilots with mechanical or physical problems

ANY aircraft assigned to compete in a particular race which is unable to join the starting formation, or having joined the formation subsequently drops out for any reason prior to the start of the race, will not be regarded as a legal start and will not be eligible for prize money or trophies for that race.

THE RACE starts officially when the Pace Plane Pilot, or if there is not a Pace Plane, when the Pole Position Pilot announces a "race start" over race frequency at a predetermined point on the initial approach to the race course. All aircraft will enter the race course within their race corridor to officially start in a race.

- Entry at any other point will result in disqualification from that event. All aircraft must have entered the start corridor by the time the pole position aircraft crosses the start line to start the timing of the race, or they will be disqualified and not be considered an official starter.

ALTERNATE AIRCRAFT will not take off if all assigned aircraft in a race become airborne for a start.

THE MINIMUM RACE ALTITUDE on the Race Course is the Race plane's cockpit (pilot's eye level) at the top of the pylons on the Race Course and above the bottom of the "R" in RENO at the home pylon. The responsibility for calling violations of low flying shall vest in the Pylon Judges at each pylon, the Contest Committee when in position to view a violation and the Race Control Supervisor. The timers shall report a low flying violation at the Home Pylon, supported by the video evidence. All low flying violations shall be reported to the Contest Committee. Violators will be disqualified from the race in which the violation occurred. Repeat violators will be disqualified from future participation.

THE MAXIMUM RACE ALTITUDE on the Race Course shall be 500 feet AGL. As all Races are timed using high speed cameras, a maximum altitude of 250 feet AGL MUST be maintained when passing the home pylon during qualifications and on the FINAL lap of any race. Failure to maintain an altitude below 250 feet AGL MAY result in **NO TIME**.

AN ESCAPE ROUTE is available for Unlimited, Jet, Sport and T-6 racers unable to remain within the boundaries of their race course when approaching the southern deadline, the south edge of runway 8/26. They must climb to 1,500 feet AGL while crossing their extended deadline west of the threshold of Runway 8, then pass behind the spectator area above 1,500 feet AGL then cross the threshold of Runway 26 and rejoin the circuit. Extreme caution is advised as aircraft on the race course have the right of way. No penalty will be incurred for performance of this maneuver.

AN AIRCRAFT overtaking a slower aircraft shall not pass between that aircraft and a pylon and will pass on the outside unless the overtaken aircraft is extremely wide and can be kept in sight at all times by the overtaking pilot during the pass.

THE PILOT of an overtaken aircraft must not in any way impede or interfere with a faster overtaking aircraft. The overtaking pilot must keep the overtaken aircraft in sight at all times during the pass.

X. PYLON TURNS

THE ENTIRE AIRCRAFT must remain outside all guide and race course pylons during a race or during a qualification attempt.

TURNING INSIDE of, or having any part of the aircraft over the pylon, constitutes a pylon cut and will be called by the pylon judges at that pylon. A pilot that has cut a pylon may continue to race but will be penalized two (2) seconds times the number of laps in the race for each pylon cut. The penalty time will be added to the actual finish time to arrive at a revised race time, which will be used to compute the final race speed. Protests to the contest committee will not be allowed on penalties for pylon cuts.

AIRCRAFT will not be notified of a pylon cut until completion of the race.

AN AIRCRAFT forced over or inside a pylon by the illegal flying of another aircraft shall be considered to have suffered a "FORCED CUT" and shall not be penalized. The Pylon Judges shall be the sole judge of whether or not a cut is a "FORCED CUT". A protest to the

Contest Committee will not be allowed on the determination of whether or not a cut is a “forced cut”. If a cut is judged to be a “forced cut”, the aircraft flying illegally will be disqualified from the race in which the violation occurred.

SHOULD the pilot of the aircraft that was, in the **judgment** of the Pylon Judge, forced to cut a pylon, deliver to the Scorer’s office within one (1) hour of the decision on the forced cut, a written statement that his/her cut was not forced, then the provisions for a pylon cut will be enforced **on that aircraft and the disqualification of the alleged pilot/aircraft precipitating the “forced cut” shall be lifted.**

A TEMPORARY TURN PYLON, when used for the start of a Formula One or Biplane race, shall be considered part of the Race Course and treated as all other pylons. The provisions for a pylon cut shall be enforced.

XI. RACE FINISH

THE OFFICIAL FINISH LINE for all races **is** a line projected from Home Pylon at right angles to Runway 8/26.

THE **OFFICIAL** FINISH for **the racers** of any race **shall occur** when the **leading** aircraft passes the finish line after completion of the required number of laps. All **following** aircraft will **then** be given the Checkered Flag as they **cross** the finish line and the **unofficial** finishing position will be determined by the number of laps completed by each aircraft crossing the finish line. The winner shall be determined **by** the race time, including any added time for penalties. **The winner and the finishing position of all racers in the field shall be determined by adjusting their unofficial finish time with any penalty time.**

ALL RACES shall be considered completed upon the receipt of the checkered flag by the leading aircraft.

A SAFETY LAP will not be flown **and all aircraft shall depart the course in trail after receiving the checkered flag.**

UNOFFICIAL FINAL RESULTS will be posted within one-half (½) hour of the finish of a **race**. Such results will become official after one (1) hour following posting if there is no protest.

XII. EMERGENCY PROCEDURES

WHEN A PILOT declares a “MAYDAY” or when it is obvious that a racing aircraft is having an emergency, Race Control will announce by radio that an emergency is in progress and the yellow caution warning flag will be displayed at the Home Pylon.

ANY AIRCRAFT declaring “MAYDAY” or obviously leaving the race course for an emergency condition will not be allowed to re-enter that race and will have terminated the race at that point.

WHEN A ‘MAYDAY’ has been declared, all other aircraft will continue to race.

A SAFE ‘MAYDAY’ altitude will vary depending on the pilot, the type of aircraft, the course and other factors. No specific altitude is designated.

FAILURE to give way to an aircraft with an emergency will result in a severe penalty.

EMERGENCY **CONDITIONS** will be terminated as soon as possible after the distressed aircraft **has safely landed and shall be decided by CFR**. The pilot of a distressed aircraft may aid in **terminating the Emergency** by declaring his safety on the runway. Race Control will notify officials on ground via the operations frequency **that the emergency is over**, whereupon **the** yellow signal **flag** will be **lowered** and the green signal **flag** will be prominently displayed at the Home Pylon.

IN THE EVENT that a race must be terminated before its normal end, due to an emergency condition, Race Control will notify pilots by radio that the race is terminated and a red flag will be displayed at the **Home** Pylon. Aircraft shall pull up and off the course in trail at the **Home** Pylon as is normally done at the end of a race. Landing instructions will be given as soon as possible after the race termination. This procedure is to prevent uncoordinated departures from the race course **should a race be terminated**.

XIII. RACE CANCELLATION OR POSTPONEMENT

THE RARA Director of Operations/Deputy Director of Operations **and the Chief Judge of the Contest Committee in cooperation with RARA** shall have the authority to postpone or **delay** any racing for reasons of safety, weather, or course conditions.

IN DETERMINING whether a race should be postponed, the Director of Operations/Deputy Director of Operations shall consult with representatives of the FAA, RARA and the president(s) of the affected racing class. Any postponement will remain in effect until those listed above agree to resume the competition. In determining whether a race should be rescheduled, agreement must be unanimous between the Director of Operations/Deputy Director of Operations and the Class President.

IF AT ANY TIME it becomes necessary to stop a race, and the lead aircraft has completed more than 50% of **that** race, **the race** shall be declared completed. Finishing positions shall be **determined by** the aircraft positions at the time of official race stoppage.

IF THE RACE is stopped before the lead aircraft has completed 50% of the race it **may** be started again after suitable time has been allowed for contestant preparation.

- Only those aircraft competing in the stopped race and who had made an official start will be permitted to restart even if the field is not filled.
- Aircraft that had officially started the race but dropped out of the field before the race was stopped will be allowed to enter the restarted race.
- Aircraft not officially starting the race will not be allowed to enter the restarted race.
- Aircraft disqualified during the completed portion of a stopped race will not be allowed to enter a restarted race, but they will receive last place money.
- If the race was not officially started, the aircraft originally scheduled to start the race will be allowed to enter the **rescheduled** race.

XIV. SAFETY

SAFETY IS THE MOST IMPORTANT CONSIDERATION AT THE RENO NATIONAL CHAMPIONSHIP AIR RACES.

RARA AND THE CONTEST COMMITTEE will assure that the provisions of the FAA waiver are adhered to and will cooperate with the designated FAA officials in the interest of spectator and participant safety.

THE CONTEST COMMITTEE, Air Boss or Deputy Air Boss may order off the course, any pilot who appears to be a menace to himself or to other participants.

FIRE RETARDENT flight clothing and gloves are mandatory for all race classes. Helmets and oxygen masks shall be used in accordance with individual class racing rules.

XV. VIOLATIONS – PENALTIES - FINES

THE FOLLOWING shall be deemed violations of these Rules of Competition and will be grounds for disqualification. The length of a disqualification for any of the following shall be dependent upon the severity of the violation as determined by RARA in consultation w/ the Contest Committee and the Class President.

- Bribery or an attempt to bribe anyone connected with any competition and/or the acceptance of such offer:
- The intention to enter or to aid in the entry of an unqualified participant or aircraft:
- Failure to give way to an aircraft with an emergency:
- Any action or proceeding prejudicial to the event or to the best interest of air racing:
- Any unsportsmanlike conduct, any protest offensively formulated, any abusive language or threat uttered publicly or otherwise against participants, officials, or committee members, before, during, or after competition:
- Reckless or dangerous flying:
- Violations of any FAA rules, regulations or the Waiver:
- Low flying over spectators at any time:
- Failure of pilot or aircraft to conform to regulations set forth in the specifications and Technical Inspection Regulations of the racing class involved:
- Attempt to race an unqualified aircraft in a race as substitute for a qualified aircraft:
- Attempting to fly on the race course prior to personally attending and signing in for the required pilot briefing(s):
- Attempting to fly on the race course without an assigned race number correctly applied on the aircraft:
- Any pilot taking an unauthorized passenger on the race course at any time shall be disqualified from racing for that year and/or the following year dependent on the timing of the violation. Should the infraction occur during practice, the qualification

period, or Wednesday thru Friday of Race Week, the disqualification shall be for the remainder of the current year. Should the infraction occur on Saturday or Sunday of Race Week, the disqualification shall be for the remainder of the current year AND the following year's Air Races:

- Any pilot **crossing over a** prescribed DEADLINE during participation in any race will be disqualified from that race with no right of protest and will receive last place money for **that race**:
- Should a pilot not climb to and maintain the 1,500 AGL altitude required by the ESCAPE ROUTE, discussed in the RACING SECTION, he/she will be disqualified and receive last place money for that race.
- A pilot displaying erratic, reckless, dangerous or unsportsmanlike flying will be ordered of the course by radio and Black Flag. There shall be no right of protest and the pilot shall receive last place money for that race. The pilot will meet with the Contest Committee and the Class Pilot Qualifications Committee after landing to discuss the reason for the erratic behavior.
- Any participant "jumping the start", "slingshotting" or "diving for the deck" at the start of a race will be subject to disqualification and last place money for that race. The Chief Judge of the Contest Committee will be the sole determiner of any of these infractions, and no protest may be filed.

THE FOLLOWING are deemed penalties and shall not result in a disqualification.

- The penalty for a pylon cut during a race shall be two (2) seconds per lap for each pylon cut. A four (4) second penalty shall be applied for each pylon cut during qualifications should the pilot/aircraft be unable to re-qualify. Protests to the Contest Committee will not be allowed.
- A pylon cut allegedly assigned to the wrong aircraft will be discussed with the Contest Committee and the Chief Pylon Judge, through the formal protest process.
- The penalty to the affected class for a violation of the number of credentialed members of that class or the presence of any person not having the appropriate credentials within the "Designated Observation Area" or the "Telemetry Area" shall result in the class' inability to occupy those areas for the remainder of the year's races. Should a violation occur, the class will be asked to immediately correct the situation and if they are able to immediately respond, no penalty will be imposed.

A MONETARY FINE shall be assessed to a CLASS should any pilot, in that class, enter the Race Course in an aircraft, without the appropriate documentation required by RARA and the FAA, to fly at any RARA sanctioned event. All fines shall be deducted from the annual Race Purse for the subject Class for that Race Year and retained by RARA.

- DURING PRACTICE or QUALIFICATION the Class of the aircraft the which the pilot is/was flying when violation is/was discovered and documented, shall be fined Five Hundred (\$500.00) Dollars for the first violation by that class in that year. The fine shall be doubled for each subsequent violation within the Class

- DURING A RACING PERIOD the Class of the aircraft the pilot(s) is/was flying, when the violation is/was discovered and documented, shall be fined Five (5%) percent of the total Class Purse for that race day **for each violation**.

XVI. PROTESTS

THE RIGHT to protest is vested in **the** competitors and principal owners **of the affected aircraft** only. The Contest Committee may institute a protest by virtue of their judging authority **at any time without the required fee**.

ALL PROTESTS must be in writing and accompanied by the prescribed **Two Hundred (\$200.00) Dollar** protest fee and delivered to the Chief Scorers office within one (1) hour of the posting of the unofficial race results **for protests relating to decisions or actions of the judges, timers, scorers other officials or participants, and at least four (4) hours before the first scheduled race in a class in which there is a protest against the validity of an entry aircraft or qualification of a participant**.

All contestants **shall** remain available for a period of one (1) hour after the posting of the unofficial results of an event for the purpose of **receiving notice of** a protest **should one be filed**. Failure to remain in the area to receive notice of a protest will not stop the hearing of a protest.

- **Protests** relating to an air racing event **and any error or irregularity** committed during a competition will be presented to the Contest Committee which will convene to deal with any issue under their jurisdiction as soon as practicable **and in no event later than one (1) hour after finish of competition of the day and will remain in session until all protests have been resolved and the official results posted**. The decision of the Contest Committee shall be final and all parties concerned shall be bound by the decision and no further appeal to the decision will be granted.
- A technical protest of racing **aircraft** will be presented to the Contest Committee and the Chief Tech/Safety Inspector of the class. When a protest has been made against the legality of the **aircraft**, the protestor will be **responsible for** the expenses incurred by the **party protested against** and/or class as a result of the protest if the **aircraft** is found to be legal.
- The Contest Committee shall notify all parties concerned of the **time and place of the** hearing of any protest. **All parties** shall be entitled to call witnesses and they and the witnesses shall be given the opportunity to be heard. Persons knowledgeable in specialized areas pertinent to the **incident** may be called by the Contest Committee to assist in a fair and equitable judgment. The president **of the class involved**, or his designee will be notified and may **be** present at the protest hearing if **they wish**.
- All prizes won by a competitor who has been protested against will be withheld until a final decision on the protest has been determined.
- Any disputes and/or unresolved conflicts concerning these rules that could directly jeopardize the NCARs shall be resolved at the sole discretion of RARA.

XVII. GENERAL

RARA WILL make available to each participant a copy of these Rules of Competition and the attached Appendices as well as the FAA Certificate of Waiver and it shall be the responsibility for each contestant to read and comply with them before flying at Reno.

XVIII. SPECIAL RULES

SPECIAL RULE changes deemed necessary during the event will be approved by RARA in consultation with the FAA, the Contest Committee and the Class Presidents. Such changes will be acknowledged by the Director of Operations, Chief Judge of the Contest Committee, and the President(s) of the classes involved. These changes will be signed by the Chairman of the Board of RARA and posted in the contestant areas and presented at the pilot briefings. If a difference exists between any RARA rule and a class rule, RARA will be the deciding authority.

Authorization for a passenger ride around the Race Course shall be obtained from the RARA Director of Operations and the FAA will be notified. The passenger ride shall be no lower than two (200) hundred feet AGL. Should an infraction of this height limitation occur, the same penalty shall be imposed as that for taking an unauthorized passenger on the Race Course.

RARA has instituted the following policy to validate Pilot & Aircraft prior to taxi for qualification and racing.

- Each Race Class President or his designated representative shall, prior to the initial class briefing of the day, identify a member of their class as the class coordinator responsible for ensuring that only those pilots or alternate pilots approved in writing via the RARA Authorized Pilot/Race Aircraft List enter the race course at any time the FAA waiver is in effect. The list is generated, updated and maintained by the RARA Pilot Coordinator.
- Each Class President will be issued a copy of the List on the opening Sunday of race week, prior to the Sunday morning class brief. Updates, as authorized by RARA, will be provided to the Class President during the initial class briefing on the day after the day of approval by RARA.
- The class coordinator will be required to attend the first class briefing of the day and ensure all pilots/alternate pilots who are scheduled to fly, as depicted on the Official Pairing Sheets, sign-in prior to the start of the briefing. Additionally, the class coordinator will identify himself or herself to the RARA Authorized Pilot/Race Aircraft Monitor who will also attend the first class briefing of the day.
- The RARA Authorized Pilot/Race Aircraft Monitor and the class coordinator will document in writing that all pilot/aircraft combinations contained on the pairing sheets for that race day are consistent with the current RARA Authorized Pilot/Race aircraft List. If a pilot or alternate pilot is not authorized in a given race aircraft consistent with the current RARA Authorized Pilot/Race Aircraft List, the affected aircraft will be

removed from the race schedule unless an authorized pilot designated on the list and who has attended the briefing is substituted on the pairing sheet.

- The designated class coordinator is responsible to insure that only an authorized primary/alternate pilot enters a race plane for either a qualification attempt or a race event. The RARA Authorized Pilot/Race Aircraft Monitor will also be on the ramp and will visually confirm pilot/race plane compliance to the degree possible consistent with the list.
- It is the responsibility of the Class, through the Class President, to assure that only pilots that are certified, insured and named, either as the pilot or alternate pilot, fly at Reno in any practice, qualification or racing event. RARA will monitor the briefing sign-ins and the announced pairings to maintain its records, BUT should an ineligible pilot be found in an aircraft, flying within the waived airspace, the Class shall be held accountable for the violation! This is a serious breach of liability rules established by RARA and its insurance carrier and could invalidate said race insurance.
- Any pilot who enters the race course during **practice**, qualifications or race periods without being authorized on the RARA Authorized Pilot/Race Aircraft List shall cause **the class** to be fined in Accordance with VIOLATIONS, PENALTIES & FINES.

XIX. PRIZE MONEY AND PURSE

PRIZE MONEY SCHEDULES for a full class shall be made available to RARA on the Saturday prior to racing.

IF THERE IS less than a full field in any racing class after the qualification period is completed, all unearned prize money shown on the prize money schedule shall be retained by RARA.

THE RACE CLASS shall provide RARA with either an individual pay out schedule with the amount due the Class Participants or an invoice for the total Class Purse based upon a full field of racers or based on the actual number of racers that qualified. The individual checks will be handed out to the contestants during the Awards Ceremony and checks for the Race Class will be presented to the Class Representative during the Awards Ceremony for that Class.

RARA will make every effort to make the checks payable as directed by the Class or the Race Contestant. All IRS 1099 forms will be issued to the payee on the check and thus it is the responsibility of the recipient to ensure it is correct prior to it being cashed.

SPECIAL prizes may from time to time be offered through RARA by specific sponsors. Rules governing these prizes will be distributed prior to the races in accordance with RARA rules.

XX. CLASSES - FIELD - RACES

COMPETITION at the NCAR is currently comprised of the following Classes, number of aircraft in that class's field and the number of Races for each class.

<u>CLASS</u>	<u># OF AIRCRAFT*</u>	<u># OF RACES**</u>
UNLIMITED	24 FASTEST QUALIFIERS	12
T-6	18 FASTEST QUALIFIERS	9
SPORT	24 FASTEST QUALIFIERS	12
FORMULA ONE	24 FASTEST QUALIFIERS	9
BIPLANE	24 FASTEST QUALIFIERS	9
JET	8 FASTEST QUALIFIERS	5

*While more than the number of aircraft listed above, as “FASTEST QUALIFIERS, often arrive at the NCAR, RARA will attempt to provide ramp and hanger space for all “ON TIME” and “CONDITIONAL” entries. Space will be allocated for those entries on a “first come first served” basis by order of the receipt of their COMPLETED entry form.

** Indicates the current total number of races scheduled for use in determining the “Rules of Progression” to the Championship in each class. The actual number of races scheduled and flown could change due to unforeseen and varying conditions.

THE RULES of PROGRESSION, as submitted to and approved by RARA, are attached in Appendices A thru F and are hereby made a part of these rules, and shall govern the position and progression of all aircraft in all races. Should any class chose to submit a revised Rules of Progression prior to the final Race of Sunday, based upon the available number of aircraft or for any other reason, it must be submitted to and approved by RARA prior to the Race.

APPENDIX A - UNLIMITED CLASS PROGRESSION

I. GENERAL

- A. There are no lock-ins or assured positions for the Sunday Gold Championship race.
- B. The starting order for the first day of competition will be by the order of qualifying time.
- C. The starting order in all races after the first day of competition will be determined by the previous day's finishing positions as defined below (Refer to enclosed Figure A-1, "Race Progression Chart")

1. Disabled Aircraft

If any aircraft scheduled to race on a given day are permanently disabled, other aircraft will move up one slot starting from the dropout's last starting position, and the first available aircraft (the next qualified aircraft) will move into the last starting position in either the Bronze or Medallion race, depending on which day of racing is underway. The disabled aircraft will be bumped down one race for the next day's race.

2. Finish Position

Finishing position is as specified in Section VIII, paragraph H.2.

II. EXAMPLE OF RACE PROGRESSION

An example of a typical racing event is included. The example is for a four day racing event, where 27 aircraft advance to the Sunday Championship races. Figure A-1 (included in the Unlimited Class Race Rules) shows a typical race progression chart which will be explained in detail in the following paragraphs.

- A. The first day of racing (Thursday) will contain a seven aircraft Silver race, a seven aircraft Bronze race, and a seven aircraft Medallion race. The Silver race will contain qualifiers 7 through 13, the Bronze race will contain qualifiers 14 through 20, and the Medallion race will contain qualifiers 21 through 27.
- B. The second day of racing (Friday) will contain a seven aircraft Gold race, a seven aircraft Silver race, and a seven aircraft Bronze race.
 - 1. The seven Gold aircraft include the six fastest qualifiers and the winner of Thursday's Silver race. If any of Friday's Gold aircraft fail to start the Friday Gold race, they will be dropped to Saturday's Silver race; i.e., non-starters drop only one race in one day. Those aircraft that start the Friday Gold race will be in the field for Saturday's Gold race, with others being in order of finish from Friday's Silver race.
 - 2. The seven Silver aircraft include the six last finish places from Thursday's Silver race plus the winner of Thursday's Bronze race. If any of Friday's Silver aircraft fail to start the Friday Silver race, they will be dropped to Saturday's Bronze Race. Those aircraft that start the Friday Silver race will be in the field for Saturday's Silver race, and if their

finish position is high enough could be in the field for Saturday's Gold Race, with others being in order of finish from Friday's Bronze race.

3. The seven Bronze aircraft include the six last finish places from Thursday's Bronze race plus the winner of Thursday's Medallion race, and/or any dropped down from Thursday's Silver race. If any of Friday's Bronze aircraft fail to start the Friday Bronze race, they will be dropped down to a pool of aircraft allowed to start in Saturday's or Sunday's Bronze race, depending upon their finish. None of the top 27 qualifiers will drop below the Bronze level for Sunday's races.
 4. Starting position in each race will be in order of finishing from the previous day's races. Aircraft that bump up into or are added to an event are at the bottom position of that particular race in their order from the previous day's race. Aircraft that are dropped down from a previous day's race as a result of not starting that race will be dropped to the bottom position of the race into which they replaced, with the order being the order in which they would have started the previous day's race (if more than one was dropped down), and they will be behind the people bumped up into the particular race as a result of finishing a race in the previous day. This procedure will also apply to positioning for subsequent days of racing.
- C. The third day of racing (Saturday) will contain an eight aircraft Gold race, an eight aircraft Silver race, and an eight aircraft Bronze race.
1. The eight Gold aircraft include seven from the Friday Gold race plus the first place finisher of the Friday Silver race. If any of the Saturday Gold aircraft fail to start the Saturday Gold race, they will be dropped to Sunday's Silver race; i.e., non-starters drop only one race in one day. Those aircraft that start the Saturday Gold race will be in the field for the Sunday Gold race, with others being in order of finish from the Saturday Silver race.
 2. The eight Silver aircraft include six aircraft from the Friday Silver race plus the first two finishers from the Friday Bronze race and/or any dropped from the Friday Gold race. If any of the Saturday aircraft fail to start the Saturday Silver race, they will be dropped to the Sunday Bronze race. Those aircraft that start the Saturday Silver race (except for the winner of Saturday's Silver Race), will be in the field for the Sunday Silver race, with others being in order of finish from the Saturday Bronze race.
 3. The eight Bronze aircraft include five from the Friday Bronze race plus three aircraft from the Thursday Medallion race and/or any dropped down from the Friday Silver race. If any of the Saturday Bronze aircraft fail to start the Saturday Bronze race, they will be dropped to a pool of aircraft and allowed to start in the Sunday Bronze race. None of the top 27 qualifiers will drop below the Bronze level for the Sunday races.
- D. The fourth day of racing (Sunday) will contain a nine aircraft Gold race, a nine aircraft Silver race and a nine aircraft Bronze race.
1. The nine Gold aircraft include eight from the Saturday Gold race plus the first place finisher of the Saturday Silver race. If any of the Saturday Gold aircraft fail to start

the Saturday Gold race, they will be dropped to the Sunday Silver race i.e., non-starters drop only one race in one day. Those aircraft that start the Saturday Gold will be in the field for the Sunday Gold race, with others being in the order of finish from the Saturday Silver race.

*** *The winner of the Sunday Silver race may elect to advance to the Gold race and when the election is made will forfeit his position and prize money as the winner of the Silver race. The forfeited prize money will become the 9th place prize money in the Gold race.*

2. The nine Silver aircraft include the seven from the Saturday Silver race plus the first and second place finishers from the Saturday Bronze race and/or any dropped down from the Saturday Gold race. If any of the Saturday Silver aircraft fail to start the Saturday Silver race, they will be they will be dropped to the Sunday Bronze race. Those aircraft that start the Saturday Silver race will be in the field for the Sunday Silver race and if their finish position is high enough could be in the field for the Sunday Gold race, with others being in order of finish from the Saturday Bronze race.

*** *The winner of the Sunday Silver race may elect to advance to the Gold race and when the election is made will forfeit his position and prize money as the winner of the Silver race. The forfeited prize money will become the 9th place prize money in the Gold race.*

3. The nine Bronze aircraft include six from the Saturday Bronze race plus three aircraft from the Thursday Medallion race and/or any dropped down from the Saturday Silver race. If any of the Saturday Bronze aircraft failed to start the Saturday Bronze race, they will be allowed to start in the Sunday. Bronze race. None of the top 27 Qualifiers will drop below the Bronze level for the Sunday race.

APPENDIX B - T-6 CLASS PROGRESSION

Qualifiers:

The twenty one (21) fastest qualifiers will be used for the Heat Races, and subsequently, the Medal Races. The next qualifiers (22-23) will be used as alternates, as required. There will be six (6) heat races that will qualify for the Medal Races (Gold, Silver, and Bronze).

Heat Races:

Racers will be assigned to Heat Races based on their qualification speeds, as follows:

Gold Heat 1A will consist of the seven (7) fastest qualifiers.

Silver Heat 1B will consist of the next seven (7) fastest qualifiers.

Bronze Heat 1C will consist of the next seven (7) fastest qualifiers.

Gold Heat 2A will consist of the seven (7) fastest racers of Heat 1A.

Silver Heat 2B will consist of the seven (7) fastest racers of Heat 1B.

Bronze Heat 2C will consist of the seven (7) fastest racers of Heat 1C.

Line-up for the Heat Races 1A, 1B and 1C will be based on qualification speeds in descending order, i.e., fastest qualifier on the pole position.

Line-up for Heat Races 2A, 2B and 2C will be determined by finishing position in the previous heat races 1A, 1B and 1C.

Medal Races:

The Gold Race will consist of the seven (7) fastest racers of Gold Heat 2A.

The Silver Race will consist of the seven (7) fastest racers of Silver Heat 2B.

The Bronze Race will consist of the seven (7) fastest racers of Bronze Heat 2C.

Line-up for the Medal Races will be based on the finishing position of each racer in Gold, Silver and Bronze Heat 2 with the fastest in the pole position and progressing outward in descending order.

Alternates:

Alternates for each of Medal Races will be taken from the next fastest qualified racer in descending order. An alternate will be used in the event of a Do Not Start.

Any open position in a race due to a "Do Not Start" (DNS) will be filled from the remaining unused qualified racers in sequence of the then current race position or filled on a voluntary basis. Voluntary racers will start in the last position, if this occurs in a heat race the Alternate will start the next heat race in his/her prior position (unless the DNS pilot was

disqualified). If a racer Does Not Start a Medal Race, the racer will not be awarded any money or trophy. The alternate racer (the next fastest racer) will not forfeit his/her prior winning trophy and will only be awarded one prize money check equal to the higher finishing position in that Medal Race and all other prize money will be accordingly adjusted to the other racers in sequence with the last place money not being distributed.

Did Not Finish (DNF) and Did Not Start (DNS):

Racers that Did Not Finish or Did Not Start a Heat Race he/she will be realigned in the next scheduled race in the last position of their qualification class.

If a racer Did Not Finish two consecutive Heat Races, they will be disqualified from the Medal Races and the next fastest aircraft will be moved up in sequence to race in that Class as will all other racers in sequence be advanced. The next fastest aircraft that did not qualify will be placed last in Bronze

DNF is defined as not completing all scheduled laps in a scheduled event.

DNS is defined as not passing Home Pylon at the start entering the course.

MANIPULATING SPEED (SANDBAGGING):

Defined as - to change or present something in a way that is false but personally advantageous.

In the spirit of fairness in competition, all competitors are expected to operate their aircraft so as to extract maximum speed during qualifying and racing. Manipulating speed for personal advantage, i.e. sandbagging, will not be tolerated and may result in disqualification.

Competitors will be monitored for inconsistent lap times, sudden bursts of speed or slowing, and other intentional acts to gain or maintain a personally advantageous position.

The BOD will act on all suspected incidences of sandbagging.

APPENDIX C - SPORT RACING CLASS

- A. Sport Class Air Racing intends to advocate fair competition among race contestants and allow each participant maximum opportunity to compete in race heats based on performance through qualification speeds and subsequent race results. The class will field 28 Qualified Racers for sanctioned events, 24 Primary and 4 Alternate to compete in heats of 8 aircraft each.
- B. The Heat Races will take place before Sunday's Championship Races, and will be conducted as follows: After all official qualification times are established, the racers will be aligned in decreasing order of 1-28 according to speed. The fastest 8 speeds will be paired for the "A" Heat of each day the second fastest 8 paired for the "B" Heat and the third fastest 8 paired for the "C" Heat.
- C. After the days' race heats have been completed, all 28 times (24 primary and 4 alternate) will be re-aligned for the following day's heats. This process will be repeated each day for subsequent race heats. A racer will always carry forward his most recent speed for alignment in subsequent heats, not necessarily the fastest.
- D. In the event of an in-flight mechanical or other problem resulting in an early landing, (did not finish a Race, known as a DNF), that Racer will be placed in the bottom of the heat for which his initial qualifying time originally placed him for the subsequent day's heat.
- E. Failure to start a race, (known as a DNS), will also place a racer in the bottom of the heat for which his initial qualifying time originally placed him for the subsequent day's heat. A DNS will always line up behind a DNF in the event that both apply. Failure to start two consecutive days' race heats will result in disqualification from all subsequent race heats. A race start is defined as crossing the start line (extended centerline of the runway) in the race heat formation.
- F. A DNF will be paid according to his finishing position, the last DNF placing higher than a preceding DNF in the same heat. A DNS will not be paid for the heat as the alternate will be paid instead. If an alternate does not start, the vacated purse will be allocated to the Class administrative fund. If the alternate is from an earlier heat of the same day he will be awarded the prize money accorded his finishing position as an alternate. His vacated purse from the previous heat will be allocated to the Class administrative fund. No alternate will be awarded multiple purses from the same day of racing.
- G. On Sunday, the Super Sport, Gold Sport, and Silver Sport Championships will be held. Again using each racer's most recent speed, the top 8 Super Sport Aircraft will compete for the Super Sport Championship. The top 8 Sport Aircraft will compete for the gold Sport Championship. The 2nd 8 Sport Aircraft will compete for the Silver Sport Championship. If there are less than 8 Super Sport Aircraft in the field, the top Sport Aircraft will be given an opportunity to fill the field up to 8 aircraft. Any Sport Aircraft electing to fill the Super Sport vacancies will give up his Gold Sport Championship prize money in favor of the Super Sport prize money, but he will not give up his trophy or other prizes that he might have earned in the Gold Sport Championship race.

H. AIRCRAFT FUELS AND ADDITIVES:

1. There will be different rules for Super Sport vs Sport Racers. Sport Racers may run any universally available fuel acquired from the fuel vendors stationed on the flight line, however, no additives of any kind are allowed. Super Sport racers will have no restrictions on their fuel
2. Gaseous based alternative fuels, such as Nitrous Oxide, etc., are permitted for Super Sport racers but prohibited for Sport racers.
3. Water/Alcohol based Anti-Detonation Injection (ADI) is permitted for Super Sport racers but prohibited for Sport racers.
4. For either Sport or Super Sport water may be injected or sprayed in any capacity for any purpose of cooling the aircraft engine or other components.

APPENDIX D - FORMULA ONE RACE CLASS

Basis: 9 races available, 24 aircraft field

Format: Qualifying, Heat set 1 (1A, 1B, and 1 C), Heat set 2 (2A, 2 B and 2 C), Silver Final, Gold Final

- A. Qualifying: Points will be awarded in order of speed. Fast qualifier gets 1 point, slow qualifier gets 24 points. In the event of identical times being recorded, the tie breaker is the first to have posted the time. A Did Not Qualify (DNQ) will result in last place (maximum) points being awarded.
- B. Heat Set 1(8 laps, 8 aircraft maximum per heat): Assignments for Heat Set 1 are based on qualifying times. Qualifying times are 1-8 are assigned to Heat 1A, times 9-16 to Heat 1-B and times 17-24 to Heat 1C. Starting grid positions are determined by choice in order of qualifying speed - faster qualifier in race gets first choice, slow qualifier gets last choice.
- Points will be awarded in order of race speed. Fast race speed of Heat Set 1 gets 1 point, slow race speed of Heat Set 1 gets 24 points.
- C. Heat Set 2 (8 laps, 8 aircraft maximum per heat): Assignments for Heat Set 2 are based on race speeds recorded for Heat Set. Heat Set 1 speeds 1-8 are assigned to Heat 2A speeds 9-16 to heat 2B and speeds 17-24 to Heat 2C. Starting grid positions are determined by choice in order of Heat Set 1 speed - fast Heat Set 1 speed in race gets first choice, slow Heat Set 1 speed in race gets last choice. Points will be awarded in order of race speed Fast race speed heat of Heat Set 2 gets 1 point; slow race speed of heat Set 2 gets 24 points.
- D. Gold and Silver Finals (8 laps, 8 aircraft per race): Aircraft are assigned to the Gold and Silver Finals by virtue of their fastest heat speed from either Heat Set 1 or Heat Set 2, Fast heat speeds 1-8 will be assigned to the Gold Final. Fast heat speeds 9-16 will be assigned to the Silver Final. Last heat speeds 17-24 are eliminated from further assigned competition and will be paid as if a Bronze final as flown, based on total points accrued through qualifying and Heat Sets 1 and 2, providing a green start flag was taken for Heat Set 2 (i.e., the aircraft would be capable of competing if a Bronze final would be flown). Starting grid positions are determined by total points accrued - lowest point total in race gets first choice, highest point total in race gets last choice. Payout for Finals based on order of race finish.
- E. Miscellaneous:
1. Aircraft can only drop down one bracket for heat Set 2. Example: An aircraft that qualifies in the top eight but is a DNS for Heat 1 A will receive last place points, but is assigned to Heat 2B, not Heat 2C.
 2. Points are awarded to the aircraft, not the pilot.
 3. A Did Not Start (DNS) for any Heat event will result in last place (maximum) points awarded. If more than one DNS is recorded for a given race set, all will be awarded maximum points. Starting grid choice for aircraft in Heat Set 2 that were a DNS in Heat Set 1 will be determined by a qualifying speed - DNS aircraft with fastest

qualifying speed will choose position ahead of other DNS aircraft. A DNS for a Final Event will pay out last place for that event. For multiple aircraft that DNS a final event, fewest total points accrued will be used to determine finishing order.

4. A Did Not Finish (DNF) for any Heat event will result in placement and points awarded between finishing aircraft and DNS aircraft based on event flown and number of laps completed. Aircraft that DNF in a higher event will be placed higher and awarded less points than aircraft that DNF in a lower event for a given Heat Set (i.e./ Heat 1A vs. Heat 1C). For multiple DNF aircraft from the same heat, the number of laps flown will determine placement and points awarded. If two or more aircraft are a DNF on the same lap of the same heat, qualifying speed will be used to determine placement and points awarded. A DNF in a Final Event will result in placement and payout between finishing aircraft and DNS aircraft for that event. Multiple DNF aircraft in a Final Event will be placed in order of number of laps completed. For multiple aircraft that DNF on the same lap, fewest total points accrued will be used to determine finishing order.

APPENDIX E - SPORT BIPLANE RACING CLASS

- A. Aircraft will be assigned to “medal groups” according to their qualifying speeds. Assuming that 24 entrants post qualifying speeds, the fastest 8 qualifiers go into medal group “Gold”, the second fastest 8 qualifiers go into medal group “Silver”, and the remaining 8 into medal group “Bronze”. Each entrant will remain within his medal group for the remainder of the week’s racing. *In order to encourage qualifying speeds that are a representative of an entrant’s true potential, one half the prize money will be awarded based on the qualifying speed. The other half of the prize money will be awarded in accordance with the biplane purse distribution schedule and the results of the last race in each medal group judged by the sanctioning body to be complete.
- B. Positioning for the first heat race in each medal group will be according to qualifying times, with the fastest qualifier on the inside of the first row, next fastest on his/her right, 3rd fastest completing that row on the right side. The second row will be comprised of the 4th fastest on the inside and 5th fastest on the outside. The third row will be as the first row – fastest to slowest, inside to outside.
- C. Positioning for subsequent heat races or medal races will be according to finishing position in the previous race in the manner prescribed in Section B.
- D. For safety considerations, final grid configuration will be left to the discretion of the class president.
- E. Any aircraft moving forward an appreciable amount after being positioned on the runway for start will be penalized by having 30 seconds added to his/her race time.
- F. Should an entrant drop out of competition, all competitors behind said entrant move up one position regardless of medal group placement.

APPENDIX F - JET CLASS PROGRESSION

- A. JET Class Air Racing intends to advocate fair competition among race contestants and allow each participant maximum opportunity to compete in race heats based on performance through qualification speeds and subsequent race results. The class will field 18 Qualified Racers for sanctioned events, 16 Primary and 2 Alternate Racers to compete in heats of 8 aircraft each.
- B. After all official qualification times are established, the racers will be aligned in decreasing order of 1-18 according to speed. The fastest 8 speeds will be paired for the "A" Heat of each day the second fastest 8 paired for the "B" Heat.
- C. After the days' race heats have been completed, all 18 times (16 primary and 2 alternate) will be re-aligned for subsequent heats. This process will be repeated each day for subsequent race heats. A racer will always carry forward his most recent speed for alignment in subsequent heats, not necessarily the fastest.
- D. In the event of an in-flight mechanical or other problem resulting in an early landing, (did not finish a Race, known as a DNF), that Racer will be placed in the bottom of the heat for which his initial qualifying time originally placed him for the subsequent day's heat.
- E. Failure to start a race, (known as a DNS), will also place a racer in the bottom of the heat for which his initial qualifying time originally placed him for the subsequent day's heat. A DNS will always line up behind a DNF in the event that both apply. Failure to start two consecutive days' race heats will result in disqualification from all subsequent race heats. A race start is defined as crossing the start line (extended centerline of the runway) in the race heat formation.
- F. A DNF will be paid according to his finishing position, the last DNF placing higher than a preceding DNF in the same heat. A DNS will not be paid for the heat as the alternate will be paid instead. If an alternate does not start, the vacated purse will be allocated to the Class administrative fund. If the alternate is from an earlier heat of the same day he will be awarded the prize money accorded his finishing position as an alternate. His vacated purse from the previous heat will be allocated to the Class administrative fund. No alternate will be awarded multiple purses from the same day of racing.