



# Southern Utah Pylon Racing Association

## General Race Provisions and Racing Class Rules 2012

**The Mission of S.U.P.R.A. is to promote and encourage participation in the sport of radio control pylon racing in Southern Utah and Southern Nevada**

- **By establishing rules that provide a radio control activity which is safe, inexpensive and insures a level playing field for all competitors**
- **By acting as the controlling body for scheduled events**

Current as of January 21, 2012

Revision 07

### **1. GENERAL RACE PROVISIONS**

**These provisions cover the general formats for all classes. There are differences from class to class. Many of the items listed here and in the specific racing classes are being held to the honor system. We want to keep the fun aspect in racing without feeling like we**

**have to over manage these rules so please read all information carefully.**

- 1.1 AMA membership will be required and proof will be verified.
- 1.2 The current AMA safety code will be followed.
- 1.3 Event will be a two-pylon course.
- 1.4 All planes must comply with the current AMA safety code.
- 1.5 One backup airframe will be allowed under certain circumstances and must be inspected at the same time as the primary airframe and be on the same frequency. Once the backup airframe has been put into service the primary airframe can no longer be used during the current race day. Backup airframes can be used only if:
  - a. They have been inspected and found legal for the class.
  - b. The primary airframe has been found to have either a safety or mechanical issue that cannot be resolved before the start of the next heat and the issue has been noted and agreed upon by the Contest Director or Promoter and the pilot.
- 1.6 Pilots may register for all classes if desired. .
- 1.7 Planes that fly in the Sundowner class may also race in the Sport class. Please refer to the specific classes for more information.
- 1.8 Airframes that are considered to be Quickie style airframes but DO NOT race in the Sport Quickie Class may enter the Sport Class. Please refer to the specific classes for more information.
- 1.9 NOTE: At the Director's or Promoter's discretion, if an airframe or pilot is determined to be "overly qualified" to fly in the Sport Class, the pilot may be asked to move up to another class. This will be done on an as needed basis in an effort to keep the Sport Class as more of a Novice or entry level Class.
- 1.10 Fuel will be provided by the race organization for the Sundowner and Sport Quickie classes only. See specific class rules for more information. All fuel left over from an event will be held by a member of the race committee and will be carried over to the next race.
- 1.11 Propellers will not be provided for any of the current classes. See specific class rules for more information.
- 1.12 Planes may be inspected prior to racing. Inspections will include verification that the control surfaces and clevis' and control rods/horns are secure, props are the correct size where applicable, fuel is the correct type where applicable and that the airframes and engines are in compliance as described in the specific racing classes. Any non-compliance found during inspection may result in disqualification if it cannot be remedied before the start of the first heat of the day.
- 1.13 Inspections of aircraft will occur immediately following the pilot and safety briefing. Pilots will be asked to come to the briefing with their aircraft. Sundowners will be asked to have the canopy off for the inspection.
- 1.14 Heats will be run with 3 or 4 planes per heat depending on number of entries, 10 laps per heat.
- 1.15 All pilots, callers and anyone else considered to be "on the course" or in front of the safety line will be required to wear an approved hard hat, (which will be provided if needed). There will be no flying behind the dead line.
- 1.16 All pushrods must be attached to the control surfaces and servos by either a clevis or other solid form. No ez connectors can be used.
- 1.17 Ez connectors can be used on the throttle connection.

- 1.18** All engines will be required to have the throttle cut-off or engine shut-off available from the transmitter.
- 1.19** All takeoffs will be roll on ground. Pilots will be notified that the heat is starting and, at the starter's signal, will have 90 seconds to get the engine started and the plane airborne. Any pilot not in the air after 90 seconds will be signaled as a "No Start" and will not be allowed to take off.
- 1.20** A re-fly of a heat may be granted under certain circumstances.
- 1.21** At the end of 90 seconds, the starter will signal "go" and the race will begin. The starter calling "go" will be "0" on the clock.
- 1.22** Official timing of the heat for all planes will begin at the "go" signal. From that point, all planes will be timed individually.
- 1.23** At the "go" signal, all aircraft are required to be to the left of the start/finish line. Failure to meet this requirement is a jumped start and will result in disqualification for the heat. Loops to avoid jumping the start are not permissible. Pilots who find they are about to jump the start can execute a sharp left turn and circle back to the start/finish line or pull straight up, as long as the airplane does not cross the start/finish line before the "go" signal. Making a loop or turning right toward the flight line or any other maneuver that results in a safety violation may result in a disqualification for the heat.
- 1.24** The Starter will be tasked with calling jumpstarts.
- 1.25** Aircraft shall not fly lower than the tops of the pylons, (which will be between 15 and 20 feet high), at any time except during takeoff and landing.
- 1.26** If a pilot receives 2 cuts in a heat or if a pilot/plane is disqualified during the running of a heat for any reason, the pilot will fly his model to a safe altitude away from the racecourse and wait for the heat to finish. Planes will not be allowed to land, except under an emergency situation, until the heat has been completed.
- 1.27** ALL planes must have flown prior to racing. (I.e., no maiden flights in first heat).
- 1.28** Entry fees will be \$10.00 for all classes. Entry fees will be on a per plane basis.
- 1.29** Entry fees collected for each race will be distributed in the following manner:
- 1.29.1** 40% of the entry fees collected will be given to the host club of the event.
  - 1.29.2** 10% of the entry fees collected will be held by the racing organization to cover any costs incurred including the cost of fuel.
  - 1.29.3** The remaining 50% of the entry fees collected will be used as prize money for each individual class.
  - 1.29.4** For example, if there is a total of 20 entries in all classes that equates to \$200.00 in TOTAL entry fees. 40%, or \$80.00, will be given to the host club. 10%, or \$20.00 will be held by the racing organization to cover the costs of the race. The other 50%, or \$100.00 will be used as prize money for the classes.
  - 1.29.5** The prize money will be distributed according to the number of entries in each class. For example, if 8 of the 20 entries are in the Sundowner class, there would be a total of \$80.00 received from that class. So 50%, or \$40.00, will be given to the winners in that class.
  - 1.29.6** The number of places paid for each class will depend on the number of entries in each individual class. If there are 4 or more entries in a class, 1<sup>st</sup> through 3<sup>rd</sup> place will be paid with 1<sup>st</sup> place receiving 50%, 2<sup>nd</sup> place will receive 30% and 3<sup>rd</sup> place will receive 20%. If there are only 3 entries, 1<sup>st</sup> place receives 60% and 2<sup>nd</sup> place receives 40%. If there are only 2 entries, 1<sup>st</sup> place receives 100%.

- 1.29.7 Any monies received through means other than entry fees will be held by the racing organization to cover the costs of the race. Any monies left over at the end of the year will be held by the racing organization and will be carried over to the following season.
- 1.30 Results will be entered into the scoring system and announced at the end of each event.
- 1.31 All efforts will be made to insure that the matrix is managed so that everyone in the class gets a chance to race against all other racers in the class. This will depend on the number of rounds that can be completed and the total number of pilots entered into each class.
- 1.32 Points are awarded according to finish position and number of cuts per heat. Depending on the number of planes in a heat, 3 or 4 points will be awarded for first place. Second place will receive 2 or 3 points, (once again depending on number of planes in heat), etc. If a cut occurs, the pilot will be awarded 1 point for the heat. 2 or more cuts in a heat will result in a 0 score for the heat. 0 points will be awarded due to a "Did not start" or "Did not finish".
- 1.33 If at the completion of the event a tie has occurred for any of the places within the class, they will be resolved according to best time for the event. If a cut or breakout occurs in the heat, the time will not count toward a best time for the plane.

## 2. SPORT CLASS

**Note: Models that qualify for the Sundowner class may run in this class. An airframe that is considered to be a "Quickie" style model may race in this class if it is not also flying in the Sport Quickie Class.**

- 2.1 First time or Novice pilots will only be required to fly 9 laps in each heat. The pilot must declare their intent to be considered a novice pilot at registration. If the Director or Promoter feels that a pilot does not qualify as a novice, this exemption may not be allowed. This rule will apply for a total of 3 events or until the pilot wins an event. Once either of these conditions is met, the pilot will no longer be considered a novice and from that point forward the pilot will fly 10 laps per heat. This applies to pilots in the Sport Class only.
- 2.2 This class will use a declared breakout time of 2 minutes 30 seconds on a 700' course, 2 minutes 20 seconds on a 660' course and 2 minutes 10 seconds on a 600' course over a 10-lap heat. Time may be adjusted depending on the course size.
- 2.3 The use of timing devices on the flight line by either the pilot or caller or anyone else to give an indication of lap times to the pilot is not allowed. This includes timers built into transmitters. If it is discovered that a timing device has been utilized the pilot will be disqualified from the heat.
- 2.4 A "0" score will be given for the heat if plane flies faster than the declared breakout time.
- 2.5 All engines and airframes must comply with the current AMA safety code.
- 2.6 Minimum wing area is 400 square inches.
- 2.7 Maximum wingspan is 80 inches
- 2.8 Maximum weight is 20 lbs., fueled and ready to fly.
- 2.9 Power system may be glow, gas or electric.
- 2.10 Engines and mufflers may be modified as long as it does not cause a safety concern.
- 2.11 Mufflers or tuned pipes are required on all 2-stroke engines.

- 2.12 Airframes may be modified as long as it does not cause a safety concern.
- 2.13 Any propeller driven airframe is allowed.
- 2.14 Wings must use bolts to hold the wing on, no rubber bands.
- 2.15 Servos used on flight control surfaces must be of the type that uses 4 screws and all 4 screws must be in place.
- 2.16 Servo must be of adequate size and strength for the surface(s) it controls. It will be at the CD's discretion to not allow an airframe to fly if there is a concern that the servos are not adequate or if there are any questions as to the airworthiness of the plane.
- 2.17 Any fuel may be used as long as it complies with the current AMA safety code.
- 2.18 Any propeller may be used as long as it complies with the current AMA safety code.
- 2.19 EZ connectors are not allowed for any control surfaces, however they may be used on throttle connections.
- 2.20 All engines must have the throttle cut-off or engine shut off from the transmitter.

### 3. CLUB SUNDOWNER CLASS

**PLEASE NOTE: If the listed class does not specifically say that something can or cannot be done to an engine or airframe or any other component, it should be considered that it CANNOT be done.**

**Also note that the models that qualify for the Sundowner class can also race in the Sport Class. If an airframe is raced in the Sport class, it must continue to be legal while running in the Sundowner class.**

- 3.1 The model for this class will be limited to the Hanger 9 Sundowner 50 only.
- 3.2 The engine for this class will be limited to the Thunder Tiger Pro .46 only.
- 3.3 Muffler must be the original OEM, (Thunder Tiger), muffler that is supplied with the engine. No enhancements or modifications can be made to the muffler to increase performance, with the exception that the baffles may be removed. If it is necessary to replace the muffler, it must be a replacement in kind to the original muffler supplied with the engine. No Pitts Style mufflers.
- 3.4 Minimum dry weight of the model will be 5 lbs. 12 oz., (5.75 lbs.), (Ready to fly, no fuel).
- 3.5 Fuel for this class will be provided by the race organization. Fuel will have a Nitro-Methane content of 15%. **NOTE: If a model is flown in this class AND the Sport class, it will be required that the pilot remove the fuel from the tank before and after racing in the Sport class. Only fuel provided for the Sundowner class is to be used during heats flown in this class.**
- 3.6 Propeller will be limited to the APC 10 X 7 Sport Prop only. Propeller will be the responsibility of the pilot. Race organization will not provide propeller. Propeller will not be modified in any way. Only whatever is needed to achieve proper balance may be done to prop as long as it does not change the pitch, length, thickness of blades or hub or anything that else that may change or enhance performance.
- 3.7 It is recommended that the servos installed are the ones listed in the assembly manual. At a minimum, the servos must be a standard size rated at least 40-oz/in. torque at 4.8 volts. No micro servos allowed.
- 3.8 Model must be assembled according to the manual with no changes to the external outline of the model. No modifications or enhancements to the airfoils or any other part

of the model are allowed.

- 3.9 Graphics may be added or removed or plane may be completely re-covered as long as no changes are made to the internal or external structure.
- 3.10 Pushrods may be replaced as long as it does not enhance performance.
- 3.11 Control horns may be replaced as long as it does not enhance performance.
- 3.12 E-Z connectors are not allowed on any of the control surfaces, however they may be used on the throttle connection.
- 3.13 Engine shut off or throttle cutoff must be available from the transmitter.
- 3.14 Tail wheel assembly may be replaced as long as it does not enhance performance.
- 3.15 Main wheels and tail wheel may be replaced as long as they are at least the same width and diameter as the original wheels that came with the kit.
- 3.16 Main landing gear must be the original style that came with the kit. Gear may be re-painted or stripped completely clear of any paint or color, however, nothing may be added or removed from the leading or trailing edges nor any other part of the landing gear that may enhance performance.
- 3.17 The cover over the landing gear mount is optional.
- 3.18 It will be up to the race organizer as to whether wheel pants are required to be installed while racing, (knowing that some of the fields we may be racing at are rough or dirt).
- 3.19 The pilot in the model is optional.
- 3.20 Sealing the hinge gaps is allowed.
- 3.21 Spinner may be replaced, however the spinner must be a minimum size of 2 1/2 inches in diameter.
- 3.22 It is highly encouraged that you add graphics to your aircraft to make it easy to identify while in the air.

#### **4. CLUB SPORT QUICKIE CLASS**

**PLEASE NOTE: If the listed class does not specifically say that something can or cannot be done to an engine or airframe or any other component, it should be considered that it CANNOT be done.**

**This class will follow the basic format of the AMA 424 (Quickie 500 Sport) class with a few exceptions.**

- 4.1 All Engines and airframes must comply with the current AMA safety code.
- 4.2 Minimum wingspan will be 50 inches.
- 4.3 Minimum wing area is 500 sq. in.
- 4.4 Wings and tails must be constructed of either all wood or wood sheeting over a solid foam core. Wings and tails manufactured in molds designed to produce hollow core structures are prohibited. Traditional fiberglass reinforcement, carbon fiber or inset wood spars continue to be acceptable. The last three inches of each wingtip may be made of any material.
- 4.5 Minimum dry weight will be 3.75 pounds, (3 lbs. 12 oz. or 60 oz., ready to fly, no fuel).
- 4.6 Maximum engine size will be .403 c.i. two stroke.
- 4.7 All engines must be of stock configuration with no modifications or enhancements.

- 4.8** Mufflers must be of stock configuration with no modifications or enhancements to increase performance, with the exception that the baffle may be removed.
- 4.9** No tuned pipes or boost mufflers allowed.
- 4.10** Purpose built engines such as Nelson, Rossi or Jett engines are not allowed.
- 4.11** Y.S. engines are not allowed.
- 4.12** Fuel for this class will be provided by the race organization. Fuel will have a Nitro-Methane content of 15%.
- 4.13** Any propeller may be used as long as it is commercially available and complies with the current AMA safety code. (NOTE: Propeller type and size may be subject to change. Propeller may or may not be supplied by the race organization. Check the specific race information for details).
- 4.14** Any type of wheel may be used but is subject to change. Check the specific race information for details.
- 4.15** EZ connectors are not allowed for any control surfaces, however they may be used on throttle connections.
- 4.16** All engines must have the throttle cut-off or engine shut off from the transmitter.