

12a **USRA Provisional Class: HANGAR 9 SUNDOWNER F-1 LITE**

12a. **TIMEFRAME**

The Sundowner Class will remain Provisional at least through 2009

12a.1 **INTENT**

To provide a low cost Reno style F-1 racing event for all pilots. The Sundowner/F-1 Lite class is intended to provide a less expensive means of introducing experienced R/C pilots to giant scale racing and to increase membership in the USRA. The specifications have been developed to create a one plane event using readily available sport type engines that will allow R/C pilots to experience giant scale pylon racing with minimal risk and investment. Once a competitor has grown proficient in this class, they will be encouraged or required to move on to one of the other Giant Scale USRA classes as per section 12.8.

12a.2 **SPECIFICATIONS – AIRFRAME AND EQUIPMENT**

12a.2.1 GENERAL - All pertinent AMA / USRA safety rules apply. Servos operating all control surfaces must be of sufficient size with at least 69.5 in.oz. of torque. **The battery capacity must be a minimum of 1200 mAh or 200 mAh per servo whichever is higher.**

12a.2.2 AIRCRAFT – Hangar 9 Sundowner ARF kit (HAN4500) with no modifications to the airframe. Model must be built according to manufacturer instructions including control linkages, tail wheel assembly, etc. Tape can be used to seal airframe gaps or openings. When in doubt, if the rules don't say that you can do it, then you can't.

12a.2.3 WEIGHT - Ready to fly dry weight can not be less than 11 lbs, 0oz.

12a.2.4 LANDING GEAR - Landing gear and wheel pants must be used unmodified as they come in the kit. Replacement wheels of the same diameter and width as the original units may be used. Replacement axles are also allowed. A cover may be fashioned to fill the space on the bottom of the fuselage where the landing gear mounts.

12a.2.5 Spinner - Must be the diameter specified in the manual and of metal construction. No plastic allowed.

12a.2.6 Covering – Covering may be removed and replaced with different color scheme to aid identification. Altering the color scheme is encouraged. If the airplane is recovered no modifications can be made to the airframe that might go undetected after the plane is recovered. The only exception is to add reinforcements in areas that might need additional strengthening. Fuel proofing of parts of the airplane is allowed. No rounding or smoothing of any airframe part.

12a.3 **ENGINES (internal Combustion)** – Any commercially available 2 stroke or 4 stroke gasoline or glow engine up to 35cc or 2.1 cu in will be allowed. Engines must be unmodified. The original mfg's recommended fuel type must be used for the engine being used; converting gasoline engines to glow will not be permitted.

12a.3.1 MUFFLERS – Only commercially available mufflers can be used. No tuned pipes or tuned mufflers are allowed. The aircraft must pass the AMA max noise limitation at full throttle.

- 12a.3.2 ENGINE SHUT OFF – Aircraft must display positive engine shut down via the transmitter during the engine run-up check.
- 12a.3.3 FUEL TANK – May be any commercially available tank compatible for use with Gasoline or Glow fuel. No bladder or bubble-less tanks allowed.
- 12a.3.4 FUEL – Contestants will provide their own fuel as suitable for the engine they have chosen. Fuel or additives such as Hydrazine, Nitrobenzene and Tetranitromethane will not be permitted. Nitrous Oxide systems are not permitted. Proper handling and safety precautions for fuel must be observed by and is the responsibility of the contestant at all times.
- 12a.4 ELECTRIC MOTORS** Electric motors will be allowed to use a **maximum battery power of 3100 W**. **Maximum Battery Power is defined as the current times the voltage drawn from a fully charged Battery Pack with the electric motor mounted in the aircraft operating at full power while being held in place on the ground.**
- 12a.5 PROPELLERS** – Any commercially available non metal propeller can be used except when using a 2 stroke glow engine of 35cc or 2.1ci such as the MOKI or MARK 2.10 in which only an APC 17 x 12 pattern prop can be used..
- 12a.6 RACE IDENTIFICATION** – Contestants will provide a brightly colored number or panel of sufficient sizes to allow timing and pylon judges to distinguish one airplane from another. It is highly recommended that the color scheme of the aircraft be changed or modified to allow proper identification.
- 12a.7 RACE COURSE** – The standard 1600 ft. course is normally used for giant scale racing, however for smaller flying sites a 1200 or 1000 ft could be used. It is recommended that typical USRA race procedures be used. This information can be obtained via the USRA Internet site at www.usrainfo.org.
- 12a.8 PILOT PARTICIPATION** – The Sundowner class is open to all participants who can demonstrate safe flight with a Sundowner class aircraft. Participants that win a season championship and/or 3 consecutive gold races in one season will be required to move on to another USRA class for the following race season. These pilots can fly in the Sundowner class again only after taking 1 full season off from the class.