

ADELAIDE GOLDEN ERA RACES 2009

Featuring Golden Era, Reno Warbirds & AT 6 Standard Classes

Entrants

Previous entrants and those who have expressed interest will automatically be sent an entry form when entries for the races commence. There will be a maximum entry of all classes set at 70 to ensure adequate flying for entrants.

Each entrant is permitted to enter any two of the three classes to be run.

Fee for each class entered is \$125.

Prizes and Sponsorship

The major companies that sponsored us for the last races are expected to continue their support. The enormous prize list of previous years cannot be expected, but the major prize winners will not be disappointed.

For the Golden Era event, there will be a separate prize list for radial engine types. This is to encourage the spectacular radial types to enter.

General Rules & Flying Details

NOISE LIMITS: Entrants are reminded that the noise limits will be the same as the last races that is: - **A LIMIT of 98db** Measured at Three (3) metres from the engine, over grass. The reading being the average of that taken at front and from each side inline with the engine. The sound metre will be positioned one metre above the ground up wind from the model. This limit will be strictly enforced and no correspondence regarding the limit will be entertained.

PERMIT TO FLY: No Model will be permitted to enter the race unless a Permit To Fly is valid for the model. The Permit must be dated at least 21 days before the first day of the races. Under no circumstance will a flight test for the issue of an original permit for an aircraft be carried out during the duration of the races.

Entrants will be required to make a declaration that the entrant has had 6 flights of the entered model before the event.

All entrants must produce the Permit to fly for inspection. Random safety inspections may be carried out if the safety officer so requires. Repaired damage must be checked an appropriate MOP inspector.

Any aircraft that exhibits unpredictable handling characteristics in the air and on the ground, such as uncontrolled takeoff direction, violent pitching, skidding or unpredictable flight, will be cause for disqualification.

Tuned pipe, or other exhaust augmentation is not permitted. This includes any form of performance enhancing muffler (e.g. Dubb Jett mufflers) on the AT-6 class or any of the other race classes. Motors used in the AT-6 and Reno Racer classes must be stock standard. The motors from the top 4 placing models may be pulled down after the event to be scrutineered. In the Reno class, G62 motors must run on petrol, and use the original ignition system.

Engine Cowl

Golden Era – as per prototype, however carburettor, spark plug and ignition wire may protrude. A small amount of exhaust manifold protrusion is O.K. but no pipes down the side or underbelly of the fuselage, or large expansion mufflers sticking out in the breeze.

Note that a small portion of the exhaust manifold may protrude, but the main body of the muffler must be cowed as per the prototype. External covered mufflers that are outside the scale planform are not permitted

Reno Unlimited Racers class: - cowl as per the Golden Era, however the cylinder head may protrude a small amount as necessary for example in a Spitfire or Mustang type

Clevises -- All flight control surfaces must have linkage and clevises of at least 4-40 size Pull -Pull activation is recommended with 4-40 linkages. Clevises must have keepers, and control horns must be of sufficient size and strength and size to handle the large loads; and must have minimal play.

NOTE -Aerodynamically balanced control surfaces are recommended.

RADIOS:

TX Must be MAAA checked and must be approved.

Radio: Must have been MAAA checked (no time limit)

Servos- Shall be of sufficient power for the size and weight of the aircraft.

For the Golden Era class the following minimum ratings apply-

Elevators- Must use one servo a side ,each with a minimum torque rating of 69in-oz/ 4.5kg-cms.
Alternatively one servo driving both sides with a minimum rating of 105 in-oz/ 7kg-cm

Ailerons-- Each aileron must use a servo with a minimum rating of 69 in-oz /4.5kg.
Servos must be visible for inspection ie. with the wing off, or through an access panel.

Batteries-All radio systems shall be powered by batteries of 1200 MAH MINIMUM capacity (1800 MAH recommended) Note:- in systems that use two receivers, 2 X 700 MAH would meet this requirement.

Race Numbers

Past experience has shown that individual race numbers are not much use for identification during flight. Therefore no restriction on any number displayed will apply.

TELEMETRY :- **Is not permitted** while racing

Communication during racing **By radio or other signals from an observer to the caller of a contestant, or contestant, during racing is specifically prohibited and will incur a disqualification of the contestant.**

RACECOURSE LAYOUT: See diagram below. Some variation of distances may be required, but the general layout will be very similar.

Friday morning will be taken up with sound checks and processing. Interstate entrants and SA entrants who have not been tested previously, will be required to test fly their models to the Contest Director's satisfaction to prove that the pilot and model are safe and airworthy. SA entrants will be tested before the event if possible to save time. All entrants are urged to start early on this day.

Heats will commence on Friday afternoon at 1.00 PM. and will continue as long as there is enough daylight. We expect to run five to six heats per hour on present indications. There will be four models to a heat. Entrants for a heat will be marshalled to the starting position, as soon as possible after the completion of the previous heat. The start position will allow an immediate takeoff. When your engine is running, signal the starter who will give the takeoff clearance.

NOTE:- THE STARTER MAY DIRECT SOME VARIATION OF THE FOLLOWING PROCEDURE IF REQUIRED-

At the call of the start, a three (3) minute time slot will commence and all competitors must start their engines and takeoff within this three-minute slot. Anyone who cannot start, or who takes off, has problems, and lands will NOT be able to restart and will forfeit the heat. A takeoff that is aborted before the model is airborne may be attempted again within the three minutes, provided that the takeoff path of any other contestants in the heat is not impeded or infringed.

Takeoff: The starter will direct the takeoff direction, which will almost always be into the prevailing Westerly sea breeze. As soon as all models are airborne, or at the expiry of the 3-minute start time, the starter will signal (whistle) the beginning of the one-minute rundown on the clock display. The race commences at the conclusion of the one-minute rundown.

Time periods will be denoted by an audible signal (whistle or gun)

Ten Laps per heat will be flown. A Minimum Flying Height of 6 metres will be rigidly enforced-as low flying is dangerous and will be treated as such. Note: Pylons will be 6 metres high.

A one-minute countdown to the start will commence on a visible large clock, and an audible signal will indicate the start of the race. Timing will start on the audible signal/completion of the countdown, and finish when the contestant crosses the line after ten laps. Initial trials have indicated that the time for the actual race will be in the order of three to six minutes.

After all aircraft have completed, landing will be into wind at the starter's direction.

The next heat contestants will be moving to the start boxes during the landing sequence.

Times for heats are expected to be about three to four minutes. If you finish early you are to climb clear of the race to the east of the field. Land as soon as all contestants in the heat have finished their ten laps. It is expected that at least five rounds of heats will be flown, with contestants able to drop their single worst score. Heats will be made up of models with similar speed characteristics.

To help avoid frequency clashes, contestants are required to bring alternate frequency crystals

The final rounds of the heats will be flown on Sunday afternoon with models grouped together based on earlier results to help create a "Finals" type atmosphere.

Callers/Observer: every contestant must have an observer/caller during the flight .An extra helper is also permitted

Reserve Model: may be used provided that it has been processed and test flown. Note -reserve model does not have to be same as the original but must be processed in the same way as other models of that class.

Hard Hats: will be supplied and must be worn, however bring your own if you have one.

Models will be normally processed on Friday morning, and contestants will be required to fly a proving flight, with the exception of local entrants who have had the opportunity to fly previously. There will be an open day at Constellation model airfield for contestants to demonstrate their model on the weekend before the races. Demonstration flights may also be flown on the Thursday before the races, for those contestants who are available.

In applying scale rules we won't normally be measuring up each aircraft. Plans and drawings of these vintage aircraft may not necessarily be exactly accurate.

The model should not have visible and gross distortions of planform.

For some planform confirmation; three views, photos, or commercially obtained plans may be required to be produced at the time of processing. Colour schemes may vary as required but should reflect the period between the wars for the Golden Era aircraft.

Protests

A protest fee of \$100 is payable, which will be returned if the protest is upheld.

No protest concerning noise can be made by a contestant- noise control is solely in the hands of the Contest Director.

Any decision by Judges is final--This also means any disqualification by safety line judges.

Safety

This is **PARAMOUNT!** Any pilot who infringes the SAFETY LINE - a line 30 metres from the public, or nearby house and property will score ZERO for that flight on first offence, and will be disqualified and unable to fly on a further offence (two strikes and you're out!) Furthermore **ANY PILOT WHO FLIES OVER ANY PART OF THE PUBLIC ENCLOSURE WILL BE DISQUALIFIED IMMEDIATELY.** (Disqualification means no further flying for you!)

Any pilot whose flying is undisciplined, and or appears not to have accurate control of his aircraft, whether it is lack of pilot skills or an unstable aircraft, so as in the Contest Director's /Safety Officer's opinion to be at risk to the public or other contestants will be grounded.

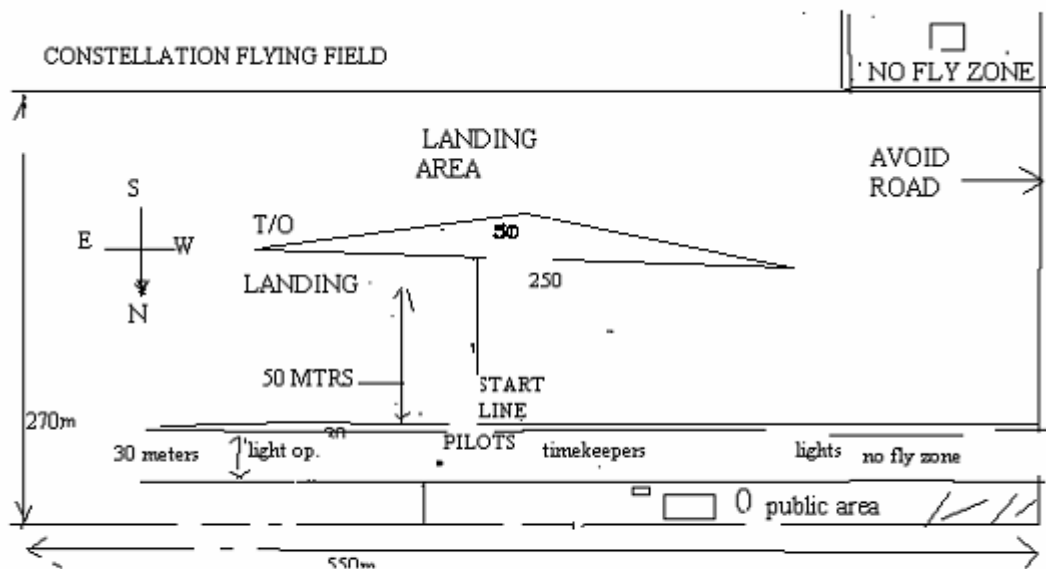
Rest assured that the above sanctions will not be applied in a careless manner, as we want the maximum number of aircraft flying!

Finally, airworthy standards will be applied in regard to servo, and battery size (as per the initial rules information). A Permit to Fly must be in force, and any aircraft suffering damage in a heat will be checked by an Inspector (MOP015) before being permitted to fly again.

Dress Code

It is expected that the Media will be present. Please ensure you are reasonably dressed for the occasion- no tank tops, singlets and shorts, thongs etc. We do care about the image of Aeromodelling that we present to the public.

Racecourse Layout Minor changes may be made on the day .



ANNEX A

GOLDEN ERA CLASS

This is the major event of the weekend and carries the major prize.

Entries are to be a scale representation of any full size aircraft that either attempted to qualify, qualified, or competed in either the Thompson Trophy Races in the USA, or the King's cup races in the United Kingdom, or other races of similar type during the 'Golden Era' No 'builder of the model rule' applies

Size of Model

Model must conform to the basic scale outlines and meet a TOTAL MINIMUM SIZE OF -

MONOPLANES---WINGSPAN PLUS FUSELAGE LENGTH TO TOTAL 156 " (3.96M)

BIPLANES- 117" (2.97M), wing-span is based on the larger(upper) wing.

Scale details

Models are to conform to basic scale outlines, Scale detail eg rivets, panel outlines, etc are not compulsory. Three views or other documentation is required to verify scale likeness for static judging.

A clear windscreen or canopy as applicable, and a pilot bust installed in the cockpit is required; also a minimum instrument panel with at least three scale size gauges.

COLOUR SCHEMES

Scale colour schemes are not required and a personalised scheme is encouraged to assist in identification of the model should more than one example of a prototype be entered.

Colour schemes should reflect the schemes of the era etc.

AIRCRAFT WEIGHT

Minimum Weight. Minimum weight of 3lbs (1.37Kg) per Engine 10 cc is required.
For example 100cc engine minimum wt.= 30lbs.(13.64Kg) (note max eng size 100cc)
Weight measured dry.
An absolute minimum of 7.5 Kg (16.5lbs) applies.

Maximum Weight Aircraft must have a valid permit to fly which fixes the max wt. at 25Kg (55lbs)(dry)

AIRFOILS-

Wing and tail group airfoils may be any suitable for model aircraft. but must follow scale plan form. Tail dimension may be increased by 5% to ensure good flying characteristics.

Control surface dimensions may be varied as long as the aircraft outline is not affected.

Flaps are not compulsory even if the original aircraft used them.

LANDING GEAR

MUST be scale i.e. If the original aircraft had retractable gear the model must do so. The use of wheel pants is optional.

Landing gear must be robust enough to allow normal, and repeated taxi, takeoff, landing and taxi operations.

A steerable tail wheel must be fitted.(may be used in place of a tailskid.)

FLYING WIRES & STRUTS

Flying Wires that are fitted to the prototype must be fitted, but need not be functional. Wires must be .032" (0.8mm) diameter minimum, or structural metal, and cannot be made of nylon cord or other similar material.

ENGINES ---

A maximum size of 100 cc. is allowed (.6.0 cu") Spark ignition engines must be fitted with an external kill switch. Glow engines must be able to shut off from the TX. (note min weight of the aircraft to be at least 3 lbs (1.37Kg) per 10 cc, absolute minimum 7.5 Kg.)

Any fuel that is MAAA legal may be used.

EXHAUST SYSTEMS

No tuned pipes or exhaust augmentation is allowed, Effective Mufflers must be fitted.

ENGINE COWLING

Engines must be **FULLY** cowled as per the prototype, and only the spark plug, ignition wire, and carburettor may protrude. Exhaust should exit as close as possible to the scale position.

Note that a small portion of the exhaust manifold may protrude, but the main body of the muffler must be cowled as per the prototype. External covered mufflers that are outside the scale plan form are not permitted

RENO UNLIMITED RACERS CLASS

This Class is devised to promote the use of Zenoah G62 engines, as Zenoah has been our major engine sponsor for the past four "Golden Era" races.

Entries are to be a scale representation of **ANY** single engine fighter aircraft that flew in combat during WWII, or in the Unlimited Class at the Reno National Championship Air Races.

(Note- Non-warbird types –Lancair, Pond Racer, etc are not eligible.)

MODEL DETAILS

SIZE: Minimum Wingspan - **84"**

ENGINE: **Zenoah G62**

FUEL: **Petrol/oil mixture**

COWL:- For an inline engine type model (e.g. Mustang) the cylinder head may protrude from scale outline. As much of the engine as practicable must be cowled.

MUFFLERS:- Effective Mufflers must be fitted. The muffler must be under cowl, however the header pipe may protrude. The large expansion muffler carried outside the scale cowl is not permitted. Tuned pipe, or other exhaust augmentation is not permitted. The noise limit in General Rules will apply.

SCALE DETAILS

Models are to be recognisable scale models, conforming to scale outlines, Scale detail e.g. rivets. Panel outlines, etc are not compulsory. Three views or other documentation may be required to verify scale likeness for static judging.

A clear windscreen or canopy as applicable, and a pilot bust installed in the cockpit are required; also a minimum instrument panel with at least three scale size gauges.

Flaps are not compulsory even if the original aircraft used them.

COLOUR OF MODEL

Scale colour schemes are not required and a personalised scheme is encouraged to assist in identification of the model should more than one example of a prototype be entered.

AIRCRAFT WEIGHT

Minimum Weight.-- 24 Lbs (10.9 Kg)

Maximum Weight --- 55 Lbs (25.0 Kg)

AIRFOILS-

Wing and tail group airfoils may be any suitable for model aircraft.

Wing and tailplane plan form shall be scale to the prototype.

Control surface dimensions may vary 5% but must reflect the Prototype.

LANDING GEAR

MUST be scale i.e. if the original aircraft had retractable gear the model must do so.

Landing gear must be robust enough to allow normal, and repeated taxi, takeoff, landing and taxi operations.

A steerable tail wheel must be fitted. Tail wheels need not be retractable.

SERVOS-

Shall be of sufficient power for the size and weight of the aircraft.

Elevators- Must use one servo a side, each with a minimum torque rating of 69 in-oz/ 4.5kg-cms.

Alternatively one servo driving both sides with a minimum rating of 105 in-oz/ 7kg-cm

Ailerons- Each aileron must use a servo with a minimum rating of 69 in-oz /4.5kg.

Servos must be visible for inspection i.e. with the wing off, or through an access panel.

Clevises- All flight control surfaces must have linkage and clevises of at least 4-40 size. Pull -Pull activation is recommended with 4-40 linkages. Clevises must have keepers, and control horns must be of sufficient size and strength to handle the large loads; and must have minimal play.

BATTERIES-

All radio systems shall be powered by batteries of 1200 MAH MINIMUM capacity

(1800 MAH recommended) Note:- - in systems that use two receivers, 2 X 700 ma/h would meet this requirement.

AT-6 CLASS

This will be a standard class based on the Midwest AT6 kit.

Aircraft is to be built from the Midwest kit, or may be constructed from plans to identical dimensions, or from an approved fibreglass or ARF kit, to identical dimensions. Aircraft will be measured during processing.

Fixed or retractable landing gear may be used, with steerable tail wheel.

Dummy engine allowed and encouraged (Nose Weight ?). A scale size spinner must be fitted.

No restrictions on colour scheme,

No "builder Of the Model" rule applies.

A Pilot Bust is required

MODEL DETAILS

SIZE:

1. Minimum wing thickness, measured at the junction of the centre section and outer wing .
(i.e. the start of the wing taper) ----- 55mm
2. Minimum wing thickness at Wing Tip (i.e. last rib) ----- 25mm
3. The wing thickness must taper in a straight line to the tip.
4. Minimum wing length from the centre section and outer section join, to the wing tip ---- 740 mm

ENGINE:

120 Size engines of the following make only to be used

Webra Magnum Moki GMS Thunder Tiger. O.S 120 AX

Engines must be stock and unmodified. Maximum Carburettor throat size 9.50 mm

Super chargers, rootes type blowers, fuel pumps, air chambers and tuned pipes are NOT allowed.

FUEL: Will be supplied, and refuelling will be under strict control. Fuel will be 10% nitro with 18% synthetic/castor mix

MUFFLERS:-

Mufflers-Only simple expansion type mufflers can be used. The muffler must be under cowl.

Maximum noise level 98db measured as per General Rules.

PROPELLER-

A standard propeller - APC 15x10 will be supplied. Contestants may use their own APC15x10 which must not be modified (except for balancing and crankshaft size)

WEIGHT

Minimum aircraft weight 14 lbs.(6.36Kg.) (dry).

PERMIT TO FLY

**** Entrants are required to have a Permit to Fly for their aircraft (even though the weight is less than 7Kg.-)**

