



**MODEL AIRCRAFT ASSOCIATION OF AUSTRALIA Inc.**  
**62<sup>nd</sup>. AUSTRALIAN CHAMPIONSHIPS**  
**ALBURY**  
**28<sup>th</sup> DEC. 2008 – 3<sup>rd</sup> JAN. 2009**

**VINTAGE COMBAT**

**1.1 The Model**

(a) A Vintage combat model must be built in accordance with a design, which was in common use prior to and up to 31<sup>st</sup> December 1970 or was kitted prior to that date.

(b) Models must be an accurate plan view of the original.

(1) Models must not exceed original overall dimensions or be more than 6mm smaller on any dimension.

(2) Elevators must be dimensionally accurate within  $\pm 2$ mm.

(3) The CD may decide not to accept a model, which in their opinion has been altered in outline so as to change the appearance or performance of the model as originally designed. Examples:

- Elevator shape, size or hinge moment being altered. (Violates rule 1.1(b)(2) and/or 1.1(b)(1))

- External bellcranks, which are shown internal on the original plan and visa-versa.

- The onus of proof in any such case must always lie with the competitor.

(c) The model shall be covered in a material that was available at the time that the model was in use. Examples:

- Tissue

- Glass cloth

- Nylon fabric

- Silk fabric

- Terylene netting

- Combination of any of the above

(d) The name (and mark no.) plus the year of the model must be clearly visible on the upper flying surfaces.

(e) The following alterations from the original plan are permitted:

(1) Sheeted areas may be added to or omitted. Examples:

- Leading Edge, Trailing Edge or Center Sheeting as shown on the plan may be deleted.

(2) Changes to wing section, internal structure or degree of asymmetry of wing.

Examples:

- Whilst retaining the original wing planform the engine pod and elevator may be moved inboard or outboard to give a different degree of asymmetry to the wing.

- Internal structure may be lightened or strengthened limited by 1.1(e)(6)

- Wing thickness may be increased or decreased.

(3) Additional booms or replacement of wire booms with wooden ones and vice versa and spacing of booms (noting that the original elevator size and hinge moment must be maintained).

(4) Recessing the engine into the leading edge.

(5) A balanced elevator may be changed to a conventional elevator and vice versa. The elevator must retain the original outline.

(6) Model alterations must be carried out using constructional techniques and materials that were used by aeromodellers at the time the model was in use except as noted below. Examples:

- The use of Carbon, Kevlar or Boron fiber is not permitted.
- Modern adhesives are permitted.
- Styrofoam or other expanded foam may be used only where shown on the original plan. (eg Styrobat, Aeromodeller January 1967) It is acceptable to substitute wood where foam is called out on the original plan, but not to use foam on models where this is not called out on the original plan.

(7) Fins and fences may be omitted or altered.

(8) Where the original model had an upright engine this may be converted to "sidewinder".

(9) Heat shrink covering material may be used in lieu of the materials noted in 1.1(c).

## **1.2 Engine**

(a) Eligible Engines

(1) Any plain bearing crankshaft diesel or glow engine of 2.5cc maximum displacement may be used.

(2) The following ballrace crankshaft engines of pre 31<sup>st</sup> Dec 1970 construction (Any mark or model unless otherwise noted) may be used:

- A.M. 25
- A.M. 35
- C.S. Oliver Mk3 replica
- D.C. Rapier
- E.D. Racer
- Elfin 249
- Enya 15D or G
- ETA 15
- Frog 249
- Oliver Tiger Mks. 2&3
- OS 15D or G
- PAW 249, 249 TBR CT 1&2
- PAW 19D, 19DCT
- MVVS 2.5/1958TRS&D7 Rivers Silver Streak
- Russian Oliver Mk3 Replica
- Super Tiger G20/15D or G & G15
- Taipan 2.5cc
- Taifun Orkan
- Webra Mach 1 & 2

(3) Additional engines may be eligible. If requested by the CD, the competitor must provide documented proof of age, or in the case of a replica/reproduction engine documentary evidence that it is an accurate representation of the original engine.

(b) Fuel tanks must be constructed of metal.

(c) The propeller shall be any commercially available thermoplastic propeller.

## **1.3 Lines**

(a) Control line length must be 15.92 meters (+/- 0.04 meters). It is measured from the inboard face of the control handle to the longitudinal center line of the model.

(b) The longitudinal center line shall be defined as the axis of the propeller.

(c) Two multi-strand control lines of a minimum diameter of 0.34 mm must be used. No free ends capable of entangling opponent's lines. No line splices are permitted. A safety strap connecting the competitor's wrist to the control handle must be provided by the competitor and worn at all times while his model aircraft is flying. This strap will be subject to the full pull test separately to the line pull test.

- (d) Line changes during the combat period shall be permitted.
- (e) Before each heat any sets of lines which may be used, must be checked for length and diameter. A pull test shall be applied to the assembled handle(s), control lines and model aircraft for all equipment to be used in that heat and again if the lines are changed during that heat. The pull test shall be equal to 10 kgf (22.5lbs.).

#### **1.4 Combat Site**

- (a) A combat site must consist of two concentric circles, which shall be marked on the ground.
  - (1) The flight circle: radius 20 meters
  - (2) The center (piloting) circle: radius 2 meters.
  - (3) The flight circle must be laid out on grass. The center (piloting) circle may be laid out on grass or any other material having a maximum radius of 4 meters.

#### **1.5 Streamers**

- (a) The streamer shall consist of double weight crepe paper (80 g/m<sup>2</sup>) or any replacement of equivalent strength, not less than 2,25 m or more than 3 m long and 3 +/- 0,5 cm wide, fixed to a sisal string of 2,5 m minimum length. All streamers must be of the same length. There shall be a clearly visible ink mark 2,5 m from the junction of the string and streamer. The streamer shall be attached to the model aircraft in such a way that the ink mark is level with, or behind, the rearmost portion of the model aircraft (see sketch). The attachment part of the string shall have a minimum length of 0,75 meter.
- (b) The attachment end of the streamer shall be reinforced on either side by tape approximately 2 cm wide affixed diagonally to the length of the streamer with one at right angles to the other and extending for a maximum of 5 cm. An additional fiber/fabric reinforced tape 2 cm wide is affixed across the streamer (see detail below). wide is affixed across the streamer (see detail below).
- (c) The streamer must be attached within 55mm of the longitudinal center line of the model.
- (d) The colour of the streamer must be different for the two competitors in the heat. Each pilot/mechanic(s) shall be issued with a streamer at the start of the heat by the judge assigned to that competitor. A second streamer will be available from this judge when needed.

#### **1.6 Number of Models**

- (a) A contestant will be allowed to use one model per bout
- (b) A contestant will be allowed to use three models for the contest.

#### **1.7 Competitor**

- (a) Mechanics: The pilot may employ a maximum of two mechanics in any one heat. (In exceptional circumstances of wet or extremely windy weather, an additional helper may be used as a streamer holder and must perform no other function for the duration of that combat period).
- (b) During active combat periods, the pilot and his mechanic(s) (including streamer holder if used) must wear protective headgear fitted with an effective retaining strap.

#### **1.8 Officials**

- (a) A Center Marshal, who shall be the overall timekeeper, and one scorer per contestant, shall normally run a contest.
- (b) The Center Marshall must wear protective headgear during the active combat period.
- (c) The Center Marshall will be considered to be part of the course and any model or line contact with him will be treated as if it had contacted the ground. It is the fliers responsibility to avoid the Marshall, not the marshals to avoid the models or lines.

#### **1.9 Method of Starting**

- (a) All signals shall be both acoustic and visual.
- (b) During the starting period the launching positions must be separated by at least a quarter of a lap. The first named competitor in the draw shall have the choice of streamer colour and the other the choice of starting position a lap.
- (c) The motor(s) must be started by flicking the propeller by hand.
- (d) A first signal, given by the Circle Marshal, shall signify the beginning of the 60 seconds

period when the mechanic(s) or the pilot have the opportunity to start, run and adjust their motors.

(e) A second signal, given by the Official Timer, shall signify the beginning of the combat period on or after which the model aircraft may be launched.

(f) From the moment the Official Timer has given the signal to launch the combat heat lasts for four minutes.

(g) When the Circle Marshal is satisfied that each model aircraft has completed two level laps, anticlockwise, separated by approximately half a lap, he will give a signal that combat may commence.

(h) Combat may begin after a restart signal from the Circle Marshal following an interruption when one or both model aircraft have been grounded. This signal shall be given as soon as the Circle Marshal is satisfied that there is approximately half a lap separation between the two model aircraft.

### **1.10 Termination of the Contest**

(a) The Circle Marshal shall give an acoustic signal to terminate the combat heat four minutes after the signal to launch.

(b) The same acoustic signal shall be given if the heat has to be terminated due to disqualification of one or both competitors or for any other reason.

(c) The Circle Marshal shall signal both pilots to fly level and anti-clockwise and to cease combat when both streamer strings have been cut. If one pilot has only the string remaining he may request the circle marshal instruct both pilots to fly level and anti-clockwise and to cease combat. This decision may not be reversed, once made.

### **1.11 Scoring**

(a) Scoring shall commence from the signal to launch and continue for the four minute period.

(b) 60 points shall be awarded for each distinct cut off the opponent's crepe paper streamer. There is a cut each time the model aircraft, propeller or lines fly through the opponent's streamer resulting in paper particle(s) becoming detached from the streamer.

(c) A cut must contain at least one part of the paper streamer. A cut that contains string alone will not count.

(d) One point shall be awarded for each whole second that a model aircraft is airborne during the four minute period.

(e) Should the mechanic(s) damage the streamer, or the model aircraft cut its own streamer, whilst the model aircraft is on the ground the mechanic(s) must replace it with a new streamer. If they launch the model aircraft without so replacing it, the competitor shall be penalized by 60 points. Airtime will not be counted while the model aircraft is airborne with the damaged streamer.

(f) In the event of a mid air collision, if the streamer falls to earth attached to any part of the model or engine it will not be counted as a cut, if however the streamer falls separate to any part of the model a cut will be scored.

(g) Each warnable offence (see 1.14(b).) shall be penalized by the deduction of 30 points from the competitor's score.

### **1.12 Attempts**

(a) Only one attempt will normally be allowed to complete a combat heat except for when:

(1) A streamer breaks or fails to unfurl from the rolled state.

(2) In the event of a model aircraft fly-away, as a result of the lines having been severed by his opponent's model aircraft, lines or engine, in which the model aircraft and streamer may not be retrievable due to the distance flown, the circle marshal asks the affected pilot whether he wants a new attempt or not. The affected pilot must respond immediately, without consulting others about the status of the heat. If the pilot wants to continue the flight he must use a new full-length streamer. The pilots should be informed before the beginning of the competition where the fly-away area is defined. This area should be clearly defined by the organizers.

(3) In the event of a line tangle resulting in the control line(s) breaking and only one model aircraft being grounded, making it impossible to clear the line tangle.

(4) If, as a result of a line tangle, an opponent's model aircraft cuts its own streamer in flight or the streamer, unless only string remains, becomes wrapped around the model aircraft and/or the lines, the heat shall be re-flown.

### **1.13 Conduct**

- (a) A pilot must remain inside the center circle while his model is flying except at the moment of release of his model by the mechanic.
- (b) After a mid air collision the heat shall continue as if both models had landed.
- (c) If the pilot(s) accidentally leave the center circle during a combat bout, the Center Marshall must blow his whistle to stop combat although the bout timer will continue to run. He will then direct the flyer(s) back to the center. The combat will be restarted as at the start of the bout. If the Center Marshall declares that no-one flyer was responsible he need not penalize either. Any cuts taken during the period will not be counted, and attacking during the pause may lead to disqualification.
- (d) If the control lines are changed during the bout, repeat the pull-test per 1.3(e). Failure to do so will result in disqualification.

### **1.14 Offences**

- (a) If during the servicing of a grounded model the mechanics break or cut the streamer it must be replaced with a new full length streamer prior to launch. If during servicing the streamer should become entangled and subsequently fail to unfurl the pilot must immediately land to have the streamer untangled or replaced. No additional penalties other than loss of airtime will be incurred per 1.11(e).
- (b) The following offences will be a warning and each and every occurrence will result in a 30 point deduction.
  - (1) If a pilot unintentionally leaves the center circle while his model is airborne.
  - (2) During the bout the mechanics enter the flying circle at an oblique angle or cut across the flying circle to reach a downed model. One penalty only will be incurred for each offence even if more than one mechanic is involved.
  - (3) If the mechanic(s)/pilot do not immediately, or after a line disentanglement withdraw a grounded model to outside the 20 meter circle prior to servicing it.
  - (4) If prior to the launching signal, the model is launched.
  - (5) If the streamer becomes detached from the model during combat but not as a result of a mid air collision. (See also 1.11(f))
  - (6) If the pilot leaves the center circle without informing his opponent and the Center Marshall.

### **1.15 Cancellation of the Flight (Disqualification)**

- (a) An entrant will be eliminated from the heat and his opponent declared the winner if:
  - (1) He deliberately attacks the streamer of his opponent's model prior to the Circle Marshall's signal to commence.
  - (2) His model fails to become airborne within two minutes of the signal to launch.
  - (3) He attempts to fly a model, which at the time of launch, does not have a strong effective control mechanism, or does not have a secure engine attachment, or does not have a running engine.
  - (4) He interferes with his opponent, or forces his opponent to leave the center circle.
  - (5) He deliberately flies in a dangerous manner.
  - (6) He attacks his opponent's streamer without his own, or the remaining parts, attached to his model.
  - (7) He is not present at his allotted flight time, unless he has the express permission of the Circle Marshall.
  - (8) He leaves the center circle intentionally whilst his model is flying, or without informing his opponent of his intention to do so when his model is grounded.
  - (9) He flies in such a manner as to inhibit his opponent, or his opponent's mechanics, from clearing any line entangle
  - (10) He flies other than in an anticlockwise direction when only his model is in the air and there is no line entangle.
  - (11) At the start of each bout and after a restart when one or both models have been grounded, both models MUST fly level and anticlockwise and combat MUST NOT commence until a signal is given by the Circle Marshall. Attacking the opponent's streamer before this signal will result in disqualification.
  - (12) For any other flagrant breach of the rules.
  - (13) He releases the handle, or removes the safety strap, for any reason, while the model is flying.

- (14) He deliberately attacks or interferes with his opponent's continuously level flying model which clearly has no paper streamer left. He may, however, follow closely.
- (15) The mechanics jump over the opponents model and lines kept within the pitting area.
- (16) He fails to clear any line tangle prior to relaunching his model.
- (17) He flies level (upright or inverted) at a height of less than 6 feet for more than two consecutive laps whilst the bout is under-way unless instructed to by the Circle Marshall. The Circle Marshall will warn a flier that he is approaching this limit.
- (18) The Circle Marshall believes that he has behaved in an un-gentlemanly manner.

### 1.16 Contest Procedure

- (a) Contestants will normally compete with each other in a knockout competition chosen by random draw. The losers of each of the first round flight will be allowed to compete in a further losers re-fly round.
- (b) The winners from this round will be drawn with the winners from the first round to provide a second round of contests.
- (c) The rounds will continue until eight contestants are left so that quarter, semi and final rounds provide an over all winner.
- (d) When there is a uneven number of competitors. The bye in the first round is moved to the losers round with an extra life. (Each competitor should have two bouts)
- (e) Competitors must enter the circle within 5 minutes of being called by the Center Marshall.
- (f) If a competitor is unable to enter the circle for any reason to compete against their drawn competitor, their competitor will be awarded the win.

### 1.17 Approved Models

- (a) The following model designs have been verified as acceptable for vintage combat. No documentary evidence is required, although the CD may request the competitor provide copies of the plans, to verify the model has been constructed per the requirements of 1.1.
- (b) Additional models may be acceptable, provided documentary evidence is provided to the CD proving the model complies with 1.1(a). It would be prudent to verify model acceptability with the CD prior to commencing model construction.

<b>Model</b>	<b>Designer</b>	<b>Model</b>	<b>Designer</b>
Anduril	Mick Thompson	Piranna Mk 2	Frank Smart
Apache		Proton O.F.W.	Fisher
Assagai	Alan Thompson	Razor Blade	Pete Tribe
Banshee	Mike Davis	Razor Blade 64	Pete Tribe
Barbarian	John Dixon	Rhino Mk 5	John Dixon
Billy Bones	Dave	Packwood Rogue A.M.	Staff
Boogy-man	Terry Lee	Satana	
Bumble Bug	Vernon Hunt	Schuco-Hegi 160 (D)	
Buzzard	Neil Blackburn	Scorcher (UK)	
Chaos	Peter Freebrey	Sennapod	
Cleaver	George Copeman	September Warrior B.	Bumstead
Cobra 2	Don Halls (AUS)	Shrike (UK)	
Combat King	Contest Kits	Splinter Bill	Netzeband(USA)
Cutlass	A.M. Staff	Squig J.	Benoy
Dominator	Mike Davis	Streamer Eater A.	Ytreoy
Dongus Johnson/Pinckert	(US)	Styrobat	Peter Short
Dragoon	Ho Fang Chuin (PRC)	Super Chopper R.	Gordon
Duellist A.	Tristany (ESP)	Super Twister	John Chamberlain
Early Bird	Richard Wilkins	Sword J.	Templeman
Falco		Talon	Dave Platt
Flingel	Bunt Stoo Holland	Terminator	Stoo Holland
Gladiator	G.F	The Proposition	
Ironmonger	Richard Evans	Titan Mk 1	John Shaw
Jaguar	Mick Chesterton	Titan Mk 5	John Shaw
Junior Monitor	Henry Nicholls	Toreador	Henry Nicholls
Junior Satan	Carl Goldberg (USA)	Turncoat	Moggs Morris
Kanible	John Dixon	Twister Mk 1	John Chamberlain
Kanible GT	John Dixon	Twister Mk 10	John Chamberlain
Karnivore	Dave Gibbard	Twister Mk 4	John Chamberlain

Ker-Mando K. Jaques	Twister Mk 9 John Chamberlain
King Twister Mick Chesterton	U.F.O. Dave Budd
Kombat Kapers R. Gibbard	Unlimited R. Smith
Komm-Batt	Warlock Steve French
Liquidator Frank Dowling	Warlord Heanor MAC
Lynx O.F.W.Fisher	Warlord Mick Chilton
Mini Voodoo Riley	Wooton (USA) Warlord Vernon Hunt
Mister Pogle Terry Mortimer	Warmonger Mk 1 John Dixon
Oliver Twist MK6 Martin Cowley	Warmonger Mk 2 John Dixon
Oliver Twist MK7 Martin Cowley	Warmonger Mk 3 John Dixon
Olympic Rocket C Bergmaschi (I)	Warrior Frank Smart
Pallisandra	Wildcat (USA)
Panic Peter Freebrey	Yeti John Dixon
Peacemaker George Aldridge	Zack-Zack Klaus Seegers (D)
Pedro J Whalley	Zig-Zag Brian Mills
Piraja	Zot Box M Red Pin
Piranna Mk 1 Frank Smart	Zot Box N Red Pin