NZMAA FLYING RULES
Section 4: Vintage

CONTENTS

PREFACE

The New Zealand Model Aeronautical Association Inc. is the organisation recognised by the Federation Aeronautique Internationale (FAI), the Royal New Zealand Aero Club (RNZAC), and the Air Transport Division of the Ministry of Transport as the controlling authority for model aviation in New Zealand.

Maintenance of these rules is vested in the Vintage Technical Committee of the NZMAA, who are appointed by the Vintage T.C. AGM, subject to approval by the Council of Management of the NZMAA.

The General Rules governing the flying of model aircraft are included in the NZMAA Member's Handbook and in Section 1 of the NZMAA Flying Rules. The General Rules section included herein are specific to Vintage categories.

Notice of proposed changes to these rules will be promulgated in the official newsletter of the NZMAA and voted upon at the next Vintage T.C. AGM. At least six weeks notice must be given of proposed rule changes.

Copies of these rules may be obtained from the NZMAA Secretary or the Secretary of the Vintage Technical Committee at the addresses shown in The Flier's World.

1. PREAMBLE

1.1. AUTHORITY The Vintage Technical Committee is empowered to act on behalf of the NZMAA to administer Vintage aeromodelling in New Zealand.

1.2. PHILOSOPHY The flying of vintage models is intended to be relaxed, informal and of nostalgic appeal to both flier and spectator. It is not intended to advance the state of the art of aeromodelling, but sets out to illustrate its progress. The intent of these rules is to formulate classes suitable to New Zealand conditions and heritage for the purposes of friendly competition.

1.3. RECORDS No New Zealand records will be recognised for vintage classes.

1.4. SAFETY.

1.4.1. Vintage models should be flown with extreme care to ensure the safety of flier and spectators. In vintage events, the Contest Director may ground any model if he considers it unsafe, if it is being flown in an unsafe manner, or if the flier is not covered by Public Liability insurance.

1.4.2. Prohibited:- Metal propellers; Needle pointed spinners; Loose parts which may become detached; Taxi-ing in the pits or near spectators.

1.4.3. Flying:- Models must not be flown over spectators, pits or parking areas

2. ELIGIBILITY

2.1 VINTAGE MODELS

There are two basic categories of vintage model: -

OLD TIME *and* ***NOSTALGIA***

The classes flown in each of these categories are basically the same but with different cut-off dates as follows:-

a. Old Time Indoor 1 Jan 1941

b. Old Time FF and RC 1 Jan 1951

c. Nostalgia 1st Jan 1951 to 1 Jan 1961

Models must have been kitted or the design published prior to the above cut-off dates. See also rule (2.2.)

Old Time and Nostalgia events may be flown simultaneously but shall be separate events and must be scored separately.

It is conceivable that a 1950/51 design could qualify as both Old Time and Nostalgia. Such a “borderline” model may be flown in either category at a given contest but not in both categories. The CD will rule on which category is to apply.

2.2. AUTHENTICATION

Authentication of a model's design and date of origin is the responsibility of the contestant.

Designs which were never kitted or published will be allowed if approved by the Soc. of Antique Modellers (SAM) USA, and other affiliated chapters, otherwise they must be approved by the Vintage T.C. before entry into contest. The drawings must be lodged with the Vintage T.C. The Contest Director shall decide whether to permit an obscure design in a given contest.

Note: The design and authenticated date must be displayed on the model.

DATING

A model which has been kitted or published will be dated according to the earliest verified date of kitting or publishing regardless of when it was designed. A model first kitted or published after the cut-off date may be accepted if it is proven to have been designed and flown before cut-off but shall receive no age bonus points.

3. CLASSES

Models shall be flown in one of the following classes: -

	O/T	***NOS***
• FF PRECISION	Y	Y
• FF RUBBER DURATION	Y	Y
• FF POWER DURATION	Y	Y
• FF GLIDER DURATION	Y	Y
• FF MINIATURE REPLICA	Y	Y
• FF CHUCK GLIDER	Y	Y
• FF CATAPULT GLIDER	Y	Y
• FF RUBBER SCALE	Y	Y
• RC PRECISION	Y	Y
• RC DURATION	Y	Y
• RC 1/2A TEXACO	Y	Y
• RC 1/2A TEXACO SCALE	Y	Y
• INDOOR	Y	N

Note: FF Rubber, Power and Glider duration may be flown together as a Combined FF Duration Event.

4. GENERAL RULES

4.1 MODIFICATION

A vintage model may be modified to permit minor changes to thrustline, strengthening of structure, provision for DT or RC equipment, and the fitting of RC control surfaces. Areas, dihedral angles, moments and airfoil sections must not be altered. No deliberate turbulators or turbulator spars may be added.

4.1.1. FF and RC models may be scaled up or down from the original design if desired.

4.1.2. Gliders may have auto-rudder fitted to aid towing otherwise no auto-rudders or variable incidence tailplanes allowed on other FF models unless used on the original design.

4.1.3. Undercarriages must be to original dimensions. One wheel gear may be changed to two but not vice versa. Where ROG is specified, the model shall take off in the manner of the original.

4.1.4. For power events, except scale, only fixed pitch, two bladed, non folding propellers are permitted. For scale classes three or four bladed fixed pitch propellers may be used if used on the prototype.

4.1.5. Modern materials may be used in construction and covering but the finished model must comply with the appearance of the original.

4.2. CONSTRUCTION OF MODELS

A contestant need not build his/her own model but only one contestant may fly a particular model in a given event.[i]

4.3. NUMBER OF MODELS

Each contestant will be allowed a maximum of two models to complete official flights and fly-offs.

4.4. MOTORS

4.4.1. Ignition motors Spark ignition motors are defined as those using cam operating points, spark plugs, batteries, a coil and condenser (or magneto) to ignite the fuel mixture. Fuel mixtures may be petrol or alcohol based but must not contain nitromethane or other performance enhancing components.

4.4.2. Vintage motors Vintage motors are defined as those first manufactured before 1st Jan 1951. Replicas of a mark first manufactured before 1st Jan 1951 and having no performance enhancing modifications shall be considered vintage.

4.4.3. Maximum engine size:

a.	Vintage motors	1.0 cubic inch (16 cc)
b.	Four stroke motors	1.0 cubic inch (16 cc)
c.	Others	0.65 cubic inch (11 cc)

Amendment No. 1 : Dec 99

4.4.4. Power loading. For FF Duration and RC Duration only, the maximum permissible engine is further limited to :

0.1cu in per 225 sq in of wing area.

For the purposes of this calculation , vintage ignition, vintage diesel and four stroke motors shall be taken as 60% of their rated capacity.

4.4.5. Mufflers. Mufflers are strongly encouraged on non-vintage motors.

4.4.6. Schneurle Ported motors. Schneurle ported motors are not permitted in either Old Time or Nostalgia events.

4.5. WING AREA CALCULATION

Where rules call for an area calculation, the following shall apply: -

a. Wingspan. The distance from tip to tip without considering dihedral. (ie. as it appears on the plan.)
b. Tip Shape. No allowance made for rounded or tapered tips.
c. Constant Chord. Area of constant chord wings is =Chord x Wingspan
d. Tapered or Elliptical Area for tapered or elliptical wings (where either or both leading or trailing edge taper at the wing root or fuselage junction) :
Area = Chord at 25% of wingspan (measured from C/L) x Wingspan.

4.6. BONUS POINTS

Bonus points are added to the flight time score for each flight in FF and RC events as follows: -

a. Age bonus. One point per full year the model predates the cut-off date up to a maximum of 20 points. Nostalgia models shall not attract age bonus points.
b. ROG bonus (FF duration only). 20 points per flight.
c. Landing bonus. (RC only). 20 points for coming to rest within 10 metres of a designated spot. (Measured to the nose of the model).

4.7. SCORING

The score for each flight is the sum of the flight time scores and all appropriate bonuses. Should this total exceed the specified maximum for the class only the maximum shall count.

4.8. FLY - OFFS

Ties for first place may be broken by a fly-off that will normally be held during a pre-announced 15 minute period at the end of the contest.
If RC frequency clashes prevent a common fly-off , the CD will draw names to obtain equal sized groups for a series of fly-offs. In adverse conditions the CD may postpone or cancel the fly-off.

4.9. TIMING

Timing shall start the instant that the model is released for flight and includes the length of the motor run. Timing ceases when the model first touches the ground , collides with an obstacle and ceases forward motion , or definitely disappears from the sight of the timekeeper.

4.9.1. Binoculars. Binoculars are permitted.

4.9.2. If the model disappears, or goes behind an obstacle, or flies into cloud or fog, the timekeeper is to keep timing for a count of 10 seconds. If the model does not reappear the timekeeper is to cease timing and deduct 10 seconds from the flight time.

4.9.3. The timekeeper may advise the elapsed time of the flight to assist the flier to judge his motor run or flight time.

4.9.4. Flight time is recorded to the nearest whole second below the watch reading.

4.10 NO-FLIGHTS

A No-flight entitles the competitor to a repeat attempt. Each competitor may have *two* No-flights per round. Unless specified otherwise a No-flight is recorded:

a. When the flight total is 20 seconds or less in FF events, 60 seconds or less in RC events.
b. When the motor run exceeds the stipulated maximum.
c. If any part of the model becomes detached during the flight.
d. If the model collides with a person or other obstruction at launch, or with another model or towline during flight. Note that if this occurs the competitor may opt to have this flight recorded provided that the option is exercised before his next official flight
e. If the towline breaks or is struck by another line or model during tow and this is observed by the timekeeper.

4.10.1. A third No-flight in a round may be recorded as an official flight except when this is caused by a motor over-run, in which case the flight shall be recorded as zero.

4.11. THERMAL DETECTORS

Only streamers may be used as an indicator of wind direction or thermal activity.

4.12. CONDITIONS

The CD may interrupt a contest if the wind speed measured at 2 metres above the ground exceeds 9m/sec, if visibility does not allow fair observation of the models or if atmospheric conditions are considered unsafe.

4.13. DEFINITIONS

4.13.1 Power Models powered by motors in which the energy is obtained from combustion or by expansion of a fluid or gas acting on a piston, or motors which convert electrical energy into mechanical energy.

4.13.2. Rubber Models powered by an extensible motor which, when wound, releases the stored energy into mechanical energy.

4.13.3 Wing Area. The area of the wing (mainplane) alone calculated in accordance with rule 4.5.

5. OLD TIME FREE FLIGHT

Old Time FF models must be replicas of original FF designs predating 1st January 1951.

5.1.1. All FF models shall be launched from a designated area of approximately 100 x 50 metres.

5.2. OLD TIME FREE FLIGHT PRECISION

5.2.1. Open to power, rubber, or glider.

5.2.2. 3 flights, target time 90 seconds.

5.2.3. No limit on engine run, motor size or towline length.

5.2.4. Flight scored at one point per second up to 90 with one point deducted for every second over 90.

5.2.5. No - flights. In addition to rule 4.10, a no-flight shall be recorded for flights over 160 seconds or where the model comes to rest in a tree or on a rooftop, power line, etc.

5.2.6. Dethermaliser. If the dethermaliser is seen by the timekeeper to operate before 160 seconds the flight shall be scored zero. Age bonus will still apply for this flight.

5.2.7. Bonus. The Age bonus shall be added to each flight.

5.2.8. Maximum score per flight is 90.

5.2.9. Fly-off.Ties for first place will be broken by a fly-off but bonus points will not apply unless scores are tied after the fly-off.

5.3. OLD TIME FF DURATION

5.3.1. There are separate classes for power, rubber and glider but these may combined into one event if desired at the discretion of the CD.

5.3.2. 3 flights, 180 second maximum score at one point per second to 180. No deduction from score for flights over 180 seconds.

5.3.3. ROG Bonus. 20 points per flight for an unassisted ROG. Designs not originally fitted with an undercarriage do not qualify for the ROG bonus.

5.3.4. Maximum engine run for Power models:

a.	Electric:	Basic	30seconds
		Cobalt	25
b.	Vintage ignition		25
c.	Non-vintage Ignition		20

d.	Vintage diesel	20
e.	Other	15

5.3.5. Rubber motors may not be heavier than that used in the original model. If not defined the maximum permitted rubber weight is 100 grams.
Rubber model propellers must be to the original design and must freewheel, old or feather as the original. Hub assemblies may be modified as desired.

5.3.6. Maximum towline length 50 metres.

5.3.7. Bonuses. Age and ROG bonuses are added to each flight score.

5.3.8. Maximum score per flight is 180.

5.3.9. Fly-off.To break a tie for first place, a fly-off with no maximum will normally be used, to which bonuses are added. Should model preservation be in question due to wind strength or other factors, the CD can opt for an appropriate maximum for the fly-off.

5.4. OLD TIME FREE FLIGHT MINIATURE REPLICA

5.4.1. 3 flights, 120 second maximum.

5.4.2. Maximum motor size 0.5 cc (0.034 cu.in.)

5.4.3. Maximum motor run 12 seconds for glow plug motors and 15 seconds for diesels.

5.4.4. Hand launch.

5.4.5. Maximum wingspan (projected) 36 inches. (920 mm)

5.4.6. Age bonus added to each flight. Maximum score per flight 120.

5.4.7. Fly-off as per rule 5.3.9

5.5. OLD TIME FF CHUCK GLIDER

5.5.1. 6 flights, 60 seconds maximum.

5.5.2. No-flight time 10 seconds or less.

5.5.3. No limit to the number of models which may be used.

5.5.4. Age bonus is added to each flight.

5.5.5. Maximum score per flight is 60.

8.7.6. Fly-off as per rule 5.3.9

5.6. OLD TIME FF CATAPULT GLIDER

5.6.1. 6 flights, 60 seconds maximum.

5.6.2. No-flight time is 10 seconds or less.

5.6.3. No limit to the number of models which may be used.

5.6.4. Age bonus is added to each flight.

5.6.5. Maximum score per flight is 60.

5.6.6. The launching device shall be a single loop of rubber of no more than 6.72mm^2, (equivalent to 1/4 x 1/24 inches) in cross-section; 230 mm, (9 inches) in length attached to a 150 mm (6 inch) long handle.

5.6.7. The design may be any Old Time Chuck Glider design modified to provide an attachment for the launching device.

5.6.8. Fly-off as per rule 5.3.9.

5.7. OLD TIME FF RUBBER SCALE

5.7.1. Model must be a replica of a propeller driven aircraft and must have been published or kitted before 1st Jan.1951.

5.7.2. Flight time. The contestant will, before the flight, state a target time he will aim for. This target time will not be less than one second for each inch of wingspan of the model being used, ie. if the model has a wingspan of 30 inches the minimum target time shall be 30 seconds.

5.7.3. The flight will be timed from the moment of launch until it terminates (as specified elsewhere).

5.7.4. A percentage score will be calculated as follows:-

Flight Time divided by Target Time multiplied by 100.

e.g. a. 22 secs flight divided by 30 secs target x 100 = 73.33%

b. 45 secs flight divided by 30 secs target x 100 = 150%

The closest percentage to 100% shall be the winner, the next placing is the next closest to 100% above or below and so on.

5.7.5. The best percentage score of three flights shall be used for calculating placings.

5.7.6. No static judging shall be carried out. However contestants must produce a plan and documentation to establish the fidelity of the model.

6. OLD TIME RADIO CONTROL

Restricted to designs kitted or first published before 1st January 1951

6.1. OLD TIME RC PRECISION

6.1.1. Loading. No wing or power loading restrictions shall apply.

6.1.2. Open to Power, Rubber or Glider.

6.1.3. 3 flights, target time 180 seconds scored at one point per second to 180. One point shall be deducted for every second over 180.

6.1.4. Maximum motor run 60 seconds. Maximum glider towline length 100 metres.

6.1.5. Launch optional (ROG or HL).

6.1.6. Bonuses. Age and landing bonus points shall be added to each flight. A landing bonus of 20 shall be awarded for coming to rest within 10 metres of a designated spot.

6.1.7. Maximum score per flight is 200.

6.1.8. Fly-offs. To break a tie for first place a fly-off to these rules will be held with no Age bonus applied. If scores are tied after the fly-off then the Age bonus will be applied to determine the winner.

6.2. OLD TIME RC DURATION

6.2.1. Loading. Minimum wing loading shall be 8 ounces per square foot of wing area.

6.2.2. 3 flights, 240 second maximum scored at one point per second to a maximum of 240. No points deducted for flights in excess of 240 seconds, though flights over 360 will receive no landing bonus.

6.2.3. Open to Power, Rubber or Glider.

6.2.4. Launch. Power models over 60 inch wingspan must ROG , all others may be hand launched. Maximum towline length for Gliders is 100 metres.

6.2.5. Motor Runs. Maximum motor runs:

a.	Electric	Basic	42 seconds
		Cobalt	35
b.	Vintage ignition		40
c.	Vintage glow/diesel		30
d.	4-stroke glow		25
e.	Non- vintage ignition		25
f.	All other		20

6.2.6 Bonuses. Age and Landing bonus to be added to each flight. Landing bonus of 20 points to be awarded for coming to rest within 10 metres of the designated spot.

6.2.7. Maximum score per flight is 260.

6.2.8. Fly-off. To break a tie for first place a fly-off to an 8 minute maximum will be held with no Age bonus applied. Further fly-offs may be held if scores are still tied. Tied competitors may agree to remain tied.

6.3. OLD TIME RC 1/2A TEXACO

6.3.1. Minimum wing loading shall be 8 ozs per square foot of wing area.

6.3.2. Motor must be stock Cox reed valve 0.049 cu. in. Motors may only be modified as follows

a. Fuel pick-up moved to bottom of tank.
b. Tank vents changed or replaced.
c. Improved needle valve assembly.
d. Addition of muffler.

6.3.3. 3 flights, 8 minute maximum scored at one point per second to 480, no points deducted for flights exceeding 480 seconds.

6.3.4. Launch optional (HL or ROG).

6.3.5. Tank size to be Cox Baby Bee or Texaco Jnr.

6.3.6. Bonus. Age and Landing bonuses shall be applied to each flight.

6.3.7. Maximum possible flight score 500.

6.3.8. Fuel may comprise only Oil, Methanol and Nitromethane.

6.3.9. No-flight time is 120 seconds or less.

6.3.10. Fly-off. No maximum, Bonuses applied.

6.4. OLD TIME RC 1/2A TEXACO SCALE

6.4.1. Model must be a replica of a reciprocating engined aeroplane predating 1st Jan.1951.

6.4.2. Model must have a functioning undercarriage. ROG is not obligatory.

6.4.3. Loading. Minimum wing loading:-

Monoplane	8 oz per square foot.
Multiplane	6 oz per square foot.

6.4.4. Motor must be a stock Cox reed-valve 0.049 cu.in. Motor may only be modified as follows: -

a. Fuel pick-up moved to bottom of tank.
b. Tank vents changed or replaced.
c. Improved needle-valve assembly fitted.
d. Addition of muffler.

6.4.5. Tank size to be Cox Baby Bee or Texaco Jnr.

6.4.6. Although models are not judged for scale, a reasonable effort must be made to replicate the original with realistic colouring and markings.

6.4.7. Model must be of predominantly balsa/plywood construction. Foam may be used for detail only (no foam ARF). A plan or three-view must be provided for confirmation that the model resemble the original aircraft.

6.4.8. Fuel may only comprise Oil, Methanol and Nitromethane.

6.4.9. 3 flights of 480 second maximum. A flight of 40 seconds or less shall be an automatic no-flight. A flight of 120 seconds or less may be optionally declared a no-flight.

6.4.10. Bonus. Landing bonus shall apply.

6.4.11. Maximum possible flight score is 500.

6.4.12. Fly-off. No maximum. Landing bonus applies.

7. OLD TIME INDOOR

7.1 DURATION

7.1.1. Open to Indoor FF Rubber models only. The design of the model must predate 1st Jan 1941.

7.1.2. The model must be tissue covered.

7.1.3. The model must be constructed and powered as per the original design.

7.1.4. Only one model per entry.

7.1.5. Best time of three attempts.

7.1.6. No-flight - 30 seconds.

7.1.7. The model must complete its flight unaided by the contestant. No guiding allowed.

7.1.8. Building plan to be provided.

8.7.6. Contestant must provide documentation to authenticate the date of the design.

7.2. PRECISION

7.2.1. Any model designed prior to 1st Jan.'41 shall be elligible, including appropriate outdoor designs. As far as possible the original materials list shall be followed

7.2.2. Points shall be allocated for Precision, Antiquity, Fidelity and Workmanship as detailed below. The maximum possible score is 50 points.

7.2.3. Precision. 30 points maximum.
The Contest Director shall nominate a maximum target time, based on hall size. The concession target time for models originally built of Pine, Spruce, Wire etc (ie. no balsa) shall be 60% of the maximum target time.
Before flying each contestant will nominate his target time which shall be less than the prescribed maximum target defined above. One point will be subtracted from the maximum (30) for each one percent above or below the nominated target time. Minimum score zero (ie. no negative scores). The best of three flights will count.

7.2.4. Antiquity. 10 points maximum.
Awarded as follows:-

Pre-1930	10 points
1931	9
1932	8
1933	7
1934	6
1935	5
1936	4
1937	3
1938	2
1939	1
1940	0

7.2.5. Fidelity. 5 points maximum.
To be judged on the fidelity of the model to the original design, both in physical form and materials used.

7.2.6. Workmanship. 5 points maximum.
To be awarded at the judges discretion.

7.2.7. Launch. ROG or HL optional.

7.2.8. The contestant may enter any number of models.

8. NOSTALGIA FREE FLIGHT

(All Nostalgia models must be designs dated from 1st January 1951 to 1st January 1961)

8.1. All FF models shall be launched from a designated area of approximately 100 x 50 metres.

8.2. NOSTALGIA FREE FLIGHT PRECISION

8.2.1. Open to power, rubber, or glider.

8.2.2. 3 flights, target time 90 seconds.

8.2.3. No limit on engine run, motor size or towline length.

8.2.4. Flight scored at one point per second up to 90 with one point deducted for every second over 90.

8.2.5. No - flights. In addition to rule 4.10, a no-flight shall be recorded for flights over 160 seconds or where the model comes to rest in a tree or on a rooftop, power lines, etc.

8.2.6. Dethermaliser. If the dethermaliser is seen by the timekeeper to operate before 160 seconds the flight shall be scored zero.

8.2.7. Bonus. No Age bonus shall apply to Nostalgia classes.

8.2.8. Maximum score per flight is 90.

8.2.9. Fly-off. Ties for first place will be broken by a fly-off to the same target time (90 secs).

8.3. NOSTALGIA FF DURATION

8.7.6. There are separate classes for power, rubber and glider but these may combined into one event if desired at the discretion of the CD.

8.7.7. 3 flights, 180 second maximum score at one point per second to 180. No deduction from score for flights over 180 seconds.

8.7.8. ROG Bonus. 20 points per flight for an unassisted ROG with a rubber[ii] model. Designs not originally fitted with an undercarriage do not qualify for the ROG bonus.

8.7.9. Maximum engine run for Power models[iii]:

a.	Diesel	12 secs
b.	Glow	10 Secs

Amendment No. 1: Dec 99

8.3.5. Rubber motors may not be heavier than that used in the original model. If not defined the maximum permitted rubber weight is 100 grams.
Rubber model propellers must be to the original design and must freewheel, fold or feather as the original. Hub assemblies may be modified as desired.

8.3.6. Maximum towline length 50 metres.

8.3.7. Bonuses. Any ROG bonus is added to each flight score.

8.3.8. Maximum score per flight is 180.

8.3.9. Fly-off To break a tie for first place, a fly-off with no maximum will normally be used, to which bonuses are added. Should model preservation be in question due to wind strength or other factors, the CD can opt for an appropriate maximum for the fly-off.

8.4. NOSTALGIA FREE FLIGHT MINIATURE REPLICA

8.4.1. 3 flights, 120 second maximum.

8.4.2. Maximum motor size 0.5 cc (0.034 cu.in.)

8.4.3. Maximum motor run 12 seconds for glow plug motors and 15 seconds for diesels.

8.4.4. Hand launch.

8.4.5. Maximum wingspan (projected) 36 inches. (920 mm)

8.4.6. Maximum score per flight 120.

8.4.7. Fly-off as per rule 5.3.9.

8.5. NOSTALGIA FF CHUCK GLIDER

8.5.1. 6 flights, 60 seconds maximum.

8.5.2. No-flight time 10 seconds or less.

8.5.3. No limit to the number of models which may be used.

8.5.4. Maximum score per flight is 60.

8.5.5. Fly-off as per rule 5.3.9.

8.7. ***NOSTALGIA FF CATAPULT GLIDER***

8.6.1. 6 flights, 60 seconds maximum.

8.6.2. No-flight time is 10 seconds or less.

8.6.3. No limit to the number of models which may be used.

8.6.4. Maximum score per flight is 60.

8.6.5. The launching device shall be a single loop of rubber of no more than 6.72mm^2, (equivalent to 1/4 x 1/24 inches) in cross-section; 230 mm, (9 inches) in length attached to a 150 mm (6 inch) long handle.

8.6.6. The design may be any Nostalgia Chuck Glider design modified to provide an attachment for the launching device.

8.6.7. Fly-off as per rule 5.3.9.

8.7. NOSTALGIA FF RUBBER SCALE

8.7.1. Model must be a replica of a propeller driven aircraft and must have been published or kitted during the period 1st Jan.1951 to 1st Jan.1961.

8.7.2. Flight time. The contestant will, before the flight, state a target time he will aim for. This target time will not be less than one second for each inch of wingspan of the model being used, ie. if the model has a wingspan of 30 inches the minimum target time shall be 30 seconds.

8.7.3. The time will be timed from the moment of launch until it terminates (as specified elsewhere).

8.7.4. A percentage score will be calculated as follows: -
Flight Time divided by Target Time multiplied by 100.
e.g. a. 22 secs flight divided by 30 secs target x 100 = 73.33%
b. 45 secs flight divided by 30 secs target x 100 = 150%

The closest percentage to 100% shall be the winner, the next placing is the next closest to 100% above or below and so on.

8.7.5. The best percentage score of three flights shall be used for calculating placings.

8.7.6. No static judging shall be carried out. However contestants must produce a plan and documentation to establish the fidelity of the model.

9. NOSTALGIA RADIO CONTROL

(All Nostalgia models designs must have been first kitted or published between 1st January 1951 and 1st January 1961)

9.1. NOSTALGIA RC PRECISION

9.1.1. Loading. No wing or power loading restrictions shall apply.

9.1.2. Open to Power, Rubber or Glider.

9.1.3. 3 flights, target time 180 seconds scored at one point per second to 180. One point shall be deducted for every second over 180.

9.1.4. Maximum motor run 60 seconds. Maximum glider towline length 100 metres.

9.1.5. Launch optional (ROG or HL).

9.1.6. Bonuses. Landing bonus points shall be added to each flight. A landing bonus of 20 shall be awarded for coming to rest within 10 metres of a designated spot. No Age bonus applies.

9.1.7. Maximum possible score per flight is 200.

9.1.8. Fly-offs. To break a tie for first place a fly-off to these rules will be held.

9.2. NOSTALGIA RC DURATION

9.2.1. Loading. Minimum wing loading shall be 8 ozs per square foot of wing area.

9.2.2. 3 flights, 240 second maximum scored at one point per second to a maximum of 240. No points deducted for flights in excess of 240 seconds.

9.2.3. Open to Power, Rubber or Glider.

9.2.4. Launch. Power models over 60 inch wingspan must ROG , all others may be hand launched. Maximum towline length for Gliders is 100 metres.

9.2.5. Motor Runs. Maximum motor runs:

a.	Electric	Basic	42seconds
		Cobalt	35
b.	Diesel		30
c.	Glow		20

9.2.6. Bonuses. Landing bonuses to be added to each flight (where applicable).

9.2.7. Maximum possible score per flight is 260.

9.2.8. Fly-off. To break a tie for first place a fly-off to an 8 minute maximum will be held. Further fly-offs may be held if scores are still tied. Tied competitors may agree to remain tied.

9.3 NOSTALGIA RC 1/2A TEXACO

9.3.1. Minimum wing loading shall be 8 ozs per square foot of wing area.

9.3.2. Motor must be stock Cox reed valve 0.049 cu. in. Motors may only be modified as follows

a. Fuel pick-up moved to bottom of tank.
b. Tank vents changed or replaced.
c. Improved needle valve assembly.
d. Addition of muffler.

9.3.3. 3 flights, 8 minute maximum scored at one point per second to 480, no points deducted for flights exceeding 480 seconds.

9.3.4. Launch optional (HL or ROG).

9.3.5. Tank size to be Cox Baby Bee or Texaco Jnr.

9.3.6. Bonus. Landing bonus to be added to each flight

9.3.7. Maximum possible flight score is 500.

9.3.8. Fuel may comprise only Oil, Methanol and Nitromethane.

9.3.9. No-flight time is 120 seconds or less.

9.3.10. Fly-off. No maximum. Landing bonus applies.

9.4. NOSTALGIA RC 1/2A TEXACO SCALE

9.4.1. Model must be a replica of a reciprocating engined aeroplane postdating 1st Jan.1951 and predating 1st Jan. 1961.

9.4.2. Model must have a functioning undercarriage. ROG not obligatory.

9.4.3. Loading Minimum wing loading:-
Monoplane 8 oz per square foot.
Multiplane 6 oz per square foot.

9.4.4. Motor must be a stock Cox reed-valve 0.049 cu.in. Motor may only be modified as follows:-

a. Fuel pick-up moved to bottom of tank.
b. Tank vents changed or replaced.
c. Improved needle-valve assembly fitted.
d. Addition of muffler.

9.4.5. Tank size to be Cox Baby Bee or Texaco Jnr.

9.4.6. Although models are not judged for scale, a reasonable effort must be made to replicate the original with realistic colouring and markings.

9.4.7. Model must be of predominantly balsa/plywood construction. Foam may be used for detail only (no foam ARF). A plan or three-view must be provided for confirmation that the model resemble the original aircraft.

9.4.8. Fuel may only comprise Oil, Methanol and Nitromethane.

9.4.9. 3 flights of 480 second maximum. A flight of 40 seconds or less shall be an automatic no-flight. A flight of 120 seconds or less may be optionally declared a no-flight.

9.4.10. Landing bonus applies.

9.4.11. Maximum possible flight score is 500.

9.4.12. Fly-off No maximum. Landing bonus applies.

OLD TIME AGE BONUS CHART

1950	0	1943	7	1936	14
1949	1	1942	8	1935	15
1948	2	1941	9	1934	16
1947	3	1940	10	1933	17
1946	4	1939	11	1932	18
1945	5	1938	12	1931	19
1944	6	1937	13	1930	20

Endnotes : (Amendment Record)

[i] *1 Dec 99. Builder of Model rule removed for FF classes.*
[ii] *1 Dec 99. ROG Bonus removed for Nos FF Power models*
[iii] *1 Dec 99. Electric Power removed from FF Nos Power and engine runs shortened.*