

The

FLYING ACES CLUB

RULE BOOK 2012-2013

Effective 1/1/12-12/31/13

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The Flying Aces Club is a society of unique individuals with a common interest that at times borders on a passion. It is our intent to preserve and promote the traditional building and flying of free flight stick and tissue model aircraft. Although competitive at times, the sharing of innovations, assistance and camaraderie is second nature to all who believe in the unique spirit of
The FLYING ACES CLUB.

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FAC RULES - OBJECTIVE

The ideals of the FAC are founded in friendly competition that promotes improvements to the appearance and flights of our models. The following rules are designed to help the competitor prepare for and participate in events of the Flying Aces Club. Proof of eligibility and compliance with the text and intent of these rules is the total responsibility of the contestant. The final decision on rules compliance for ALL EVENTS rests with the C.D. and designated assistants.

I. OFFICIAL FAC CONTEST EVENTS / EVENT NUMBER

FAC Scale judged / timed events:

- #1 FAC Peanut Scale
- #2 FAC Rubber Scale
- #3 FAC Jumbo Scale
- #4 FAC Pioneer Scale
- #5 FAC Power Scale

TOTF Scale events:

- #6 Low-Wing Military Trainer (LWMT)
- #7 Golden Age Combined
- #8 Modern Civilian
- #9 Modern Military

TOTF Non-Scale events:

- #10 Old Time Rubber Stick
- #11 Old Time Rubber Fuselage **
- #12 2-Bit +1 O.T.R. Fuselage**
- #13 Jimmy Allen **
- #14 Old Time Gas Replica

Miscellaneous Timed Events:

- #15 Simplified Scale
- #16 Dime Scale
- #17 No-Cal Profile
- #18 Phantom Flash **
- #19 Embryo Endurance **
- #20 Jet Catapult
- #21 Fiction Flyer

Mass Launch Events:

- #22 Thompson Race*
- #23 Greve Race *
- #24 Goodyear / Formula Race *
- #25 WWI Combat *
- #26 WWII Combat *

Special-Misc

- #27 B.L.U.R.
- #28 S.L.O.W***
- #29 1/2 Wakefield***

* Denotes Mandatory Mass Launch Event.

** Denotes Mandatory ROG Event.

*** Denotes Unofficial Event at this time

II. PRIMARY RULES: All events

PRIMARY RULES apply to ALL MODELS in ALL FAC events, unless specified otherwise in the rules for a specific event.

- A. Wing span is PROJECTED, i.e. physically measured wingtip to wingtip on the model.
- B. All models must be constructed primarily of balsa wood, and covered with Japanese tissue or equivalent. Condenser paper and modern lightweight tissues such as Gampi are prohibited.
- C. Foam and other non-balsa materials may be used to construct:
 - 1. "Add on" parts such as air scoops, radiators, guns, tail cones and the like.
 - 2. Engine cowls up to the firewall.
- D. All windscreens, canopies, and windows must be of a clear material.
- E. Aircraft with retractable landing gear may be modeled gear up or down, unless specified otherwise.
- F. All events are for rubber powered models except:
 - 1. FAC Power Scale
 - 2. Jet Catapult
 - 3. Old Time Gas Replica
- G. Props that fold or feather before the model lands are prohibited in ALL FAC EVENTS. Unless otherwise specified for a given event, there are no other prop size or type restrictions.
- H. Entrant must be the builder of the model they enter. Proxy entries allowed at the CD's discretion.
- I. Number of model considerations:
 - 1. Each builder is permitted only one example of a specific design for a specific event.
 - 2. No "back-up" models permitted unless allowed by a specific event rule.
 - 3. A contestant may enter two different models in any FAC event.
 - a. The higher scoring model will be used to determine the contestant's standing.
 - b. The lower scoring model does not qualify (DNQ) for inclusion in the standings.
- J. All events are hand launched unless a specific event rule states otherwise.
- K. All timed flights are in seconds and rounded down to the last full second, including "averaged" times.
- L. An official timed flight shall be (unless a specific event rule states otherwise):
 - 1. 20 seconds MINIMUM.
 - 2. 120 seconds MAXIMUM.
- M. Three different contestants must each make an official flight for the winner to receive a "Kanone".
- N. A official timed flight score recorded in one event cannot be used as an official time score for another event.
- O. Binoculars may be used in all events to track models in the air.
- P. Contestants are solely responsible for **promptly** turning in their timing slips after a flight for posting, and for keeping track of his or her qualifying models and flights. Holding time slips until the end of the contest places an undue burden on the CD, and is **STRONGLY DISCOURAGED**.
- Q. The CD is solely responsible for posting flight times promptly.
- R. The use of any R/C device during FAC competition is forbidden.

III. FAC SCALE EVENTS (Scale Judged / Timed)

FAC SCALE events offer the scale modeler the opportunity to exercise his / her skill in producing a good flying model...a model that retains the appearance of the full scale aircraft without being burdened by excessive requirements such as scale rib spacing, scale stab area and the like. The FAC Scale class is broadly divided into two groups: **FAC Rubber Power Scale (RPS)** and **FAC Power Scale** (models powered by means other than rubber motors).

All FAC SCALE event models are **scale-judged**: *scale points* are awarded for a variety of qualities as outlined below. *Bonus points* are given according to an airplane's configuration and complexity. Scale points and bonus points are then added together to form the *judge's score* for a given model.

FAC SCALE event models' flights are timed, and the times are then factored. For most events, this *Factored Flight Score* is then added to the *Judge's Score* to come up with a *Total Score*. However, note that methods of tallying points may vary according to the event. Be sure to read and understand the rules for your particular event!

1.0 FAC RUBBER POWERED SCALE (RPS)

Competition for scale-judged / timed rubber powered models, which includes the following events:

#1 FAC Peanut Scale
#2 FAC Rubber Scale

#3 FAC Jumbo Scale
#4 FAC Pioneer Scale

- A. FAC Rubber Powered Scale Events #1-3 are classified by wing span, as follows:
 - 1. FAC Peanut Scale: 13 inches maximum.
 - 2. FAC Rubber Scale:
 - a. Multi-wing: Greater than 13 inches, up to a maximum of 30 inches.
 - b. Monoplane: Greater than 13 inches, up to a maximum of 36 inches.
 - 3. FAC Jumbo Scale:
 - a. Multi-wing: Greater than 30 inches
 - b. Monoplane: Greater than 36 inches
 - 4. FAC Pioneer Scale (Event #4) has no wing span restriction. Limited to models of aircraft that were produced before 1914.
 - a. When no Pioneer Scale event is listed, Pioneer models will compete according to wingspan in FAC Rubber Scale events #1-3.
- B. A single FAC RPS model can't be entered into more than one FAC RPS event #1-4.
- C. Models built for a specific FAC RPS event may not be entered into an alternate, yet qualified FAC RPS event if the original event is an official event in that contest. Examples:
 - 1. A Peanut may not be entered into Rubber Scale if there is a Peanut event in the contest.
 - 2. A Jumbo may not be entered into Rubber Scale if there is a Jumbo event in the contest.
- D. An FAC RPS model (events #1-4) may also be entered into a TOTF Scale event (# 6-9), Mass Launch event (#22-26) or Simplified Scale (# 15) if it qualifies by wing span and other event specific criteria.

Example: A 24" span Fokker Dr1 may be entered in FAC Rubber Scale and the WW I Combat event.
- E. Models may be built from original plans, published plans or kit plans of any heavier than air, full size prop driven aircraft, jet, or manned rocket, built or proposed.
- F. Models must closely resemble the full-scale aircraft with respect to outline and proportions. The general outline of all surfaces and fuselage cross sections must be retained. The opinion of the judges in this matter is final!
- G. Model plans, kit or published, may be embellished and / or improved upon to make the model more closely resemble the full-scale aircraft.
- H. If a model is built from original plans, the builder must present a 3-view, photos, and any other material used in creating the plan.
- I. When a model is designed and built of a proposed aircraft and the full scale prototype was never built, documentation and execution of its details, colors and markings should reflect the prototype's likely mechanical details, designed purpose and era of its creation. Examples:
 - 1. A proposed piston engined aircraft must have appropriate exhaust outlets, even if none are visible on concept drawings.
 - 2. A proposed WWII Italian aircraft must carry markings appropriate to that nation, era and purpose.
- J. PROOF OF SCALE:
 - 1. Documentation must include a Three-View. Building plan is optional.
 - 2. Documentation should aid the judges in verifying:
 - a. Color
 - b. Markings
 - c. Details
 - 3. Photos are optional, but will supersede any 3-view detail if they show a difference of any particular detail.
 - 4. The location of documentation material in publications MUST be clearly indicated.
- K. Rubber powered props will not be considered for any scale points.
- L. Motor sticks may be used on multi-engine models without penalty, but props must be in their scale location.
- M. No extra points will be awarded for exact rib spacing, tail area or the like.
- N. Dihedral may be increased to a maximum of 1" per tip, per foot of wingspan, or in the case of low wingers, to the bottom of the canopy--whichever is higher. Models built from kits may be built to plan even if the specified dihedral exceeds these standards (**See Appendix F: Pilot's Pre Launch Checklist**).
- O. Tail surface area may be increased moderately, but not to the point that the scale appearance of the model is destroyed.
- P. Under-cambered airfoils are not permitted unless found on the full size aircraft.

- Q. All surfaces must be doubled covered except where the full size craft used a single covering.
- R. Mechanical prop-gearing considerations:
 1. Gearing may be used when thrust lines from prop shaft to rear motor peg are blocked by structure.
 2. ONLY gear arrangements with a 1:1 ratio may be used.
 3. Gear driven props may not be powered by more than one motor.

1.1 SCALE POINTS: FAC Rubber Powered Scale

NOTE WELL! Scale judges, especially at large meets, have a vast amount of material to consider. The use of color or B&W copies of individual pictures or pages from your scale source material, well-organized and securely bound in a folder, is highly recommended and APPRECIATED.

A. CONSTRUCTION AND DETAILS

A maximum of 30 points will be given for general accuracy and the extent of detail such as struts, rigging, engine cowl, exhausts, armament, etc. No cockpit or cabin interiors will be considered, except for windscreen and instrument panel, unless a full panel is impossible due to a high thrust line.

NOT MUCH... 0 TO 10

SOME OF IT... 11 TO 20

MOST OF IT... 21 TO 29

ALL THERE! 30

B. COLORING AND MARKINGS

A maximum of 20 points will be given for accuracy and extent of coloring and markings. Judging will consider items such as insignia, numbering, large, wide stripes, major panel lines, etc., for a particular subject modeled. Where a model is built of a proposed design, the full scale prototype never having been built, then its color and markings should reflect its designed purpose and era of its creation. Silver colored tissue may be used to represent polished aluminum. There will not be any difference in scoring between the proper colored tissue and painted surfaces.

C. WORKMANSHIP

A maximum of 12.5 points will be given for workmanship, such as good covering, alignment, neatness, etc. Wear and tear should not be a negative factor in determining workmanship points. Models do not have to be in pristine condition to get maximum workmanship points.

1.2 BONUS POINTS: FAC Rubber Powered Scale

The following bonus points will be awarded according to complexity of configuration. Total bonus points are the sum of all applicable characteristics and prop combinations listed below.

A. BASIC BONUS POINTS: GENERAL CONFIGURATION

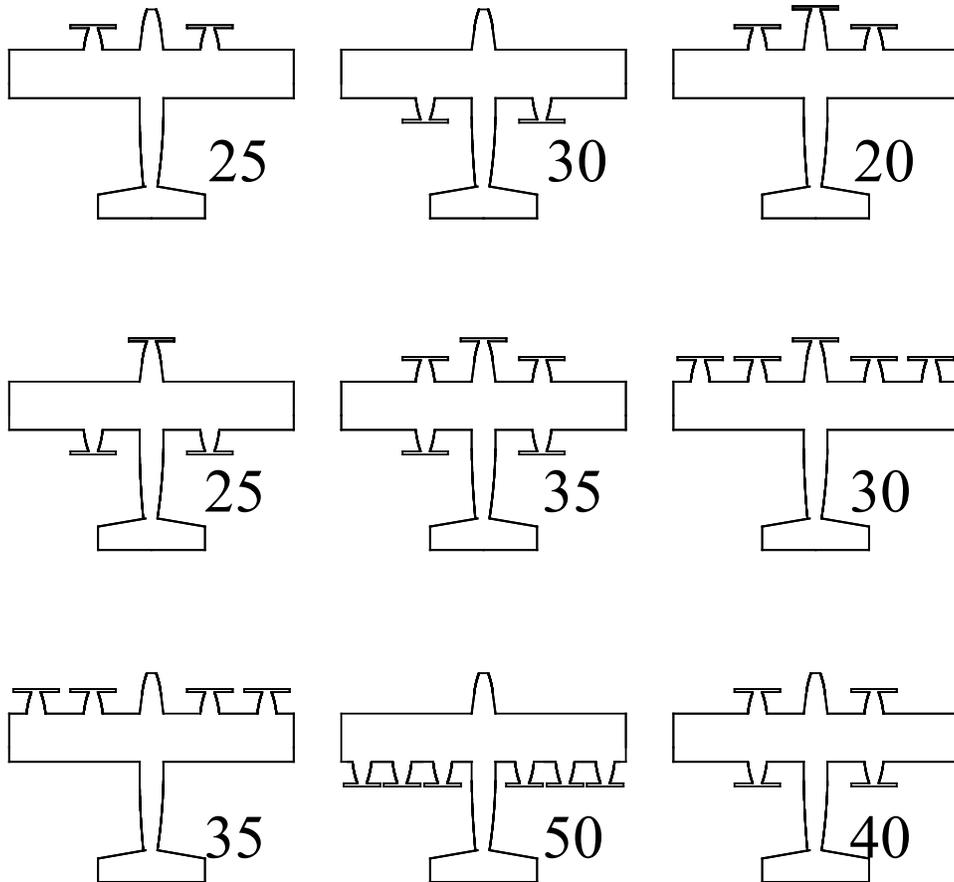
- 0 High-Wing Cabin and Shoulder-Wing Monoplanes
- 3 Parasol Wing
- 5 Mid-Wing (see Appendix A: Determining Mid-Wing Status)
- 5 Canard or Tandem Wing
- 10 Low Wing
- 15 Biplane or Sesquiplane
- 20 More than two wings
- 10 Seaplane with multiple floats of proportional scale dimensions
- 10 Flying boat or Amphibian
- 15 Unorthodox design (whatever is NOT listed above i.e. flying wing, autogyro, etc.)
- 3 Skis of scale width and length
- 2 Each non-powered scale size / diameter prop
- 1 Each housing for a "static" jet engine(s) attached to a wing or the fuselage via an appendage.
- 5 EACH powered contra-prop unit* in scale location that free wheels
- 7 EACH powered contra-prop unit* in scale location that does not free wheel.

* Props must turn in opposite directions and at the same speed when the prop shaft is turned.

B. ADDITIONAL BONUS POINTS: NUMBER and LOCATION OF “POWERED PROPS”

number	pts	location
Single Prop	5	If the prop is a pusher prop in scale location
Two Props	10	Center line tandem props, if both props are powered in such a way as to contribute generously to the thrust and duration of motor run needed for flight---i.e. Fokker D-XXIII
	25	Off center line twin...
	+5	...If ANY prop is a pusher in a scale location (excluding the above tandem)
Three Props	20	Trimotor models provided the off-center props contribute significant power...
	+5	...if ANY prop is a pusher in a scale location (excluding the above tandem)
Additional Pairs	10	EACH additional pair provided all props are equally powered...
	+5If ANY prop is a pusher in a scale location.
Ducted Fans	15	Ducted fan propulsion model (5 pts for pusher, 10 pts for complexity...
	+7	...EACH additional ducted fan unit

PROP CONFIGURATION CHART



- C. RUBBER POWERED JETS / MANNED ROCKETS: Special Considerations
1. A single-jet or manned rocket propelled aircraft may have a rubber powered prop located on the nose OR tail section of the fuselage.
 - a. "Pusher" bonus points awarded if prop is on the tail.
 - b. Tandem props are prohibited.
 - 1) Exception: If the full scale aircraft had a prop on the nose and a jet engine in the rear of the fuselage, then tandem rubber powered props are allowed with "pusher" bonus points awarded. Example: Ryan Fireball FR-1.
 2. Jets with multiple engines will be considered for bonus point purposes as multi-engine aircraft.
 - a. Aircraft with multiple jet engines on wing nacelles:
 - 1) May have powered props located in the front OR rear of each nacelle.
 - 2) Powered props on the rear of each nacelle qualify the model for the "pusher" bonus points.
 - b. Aircraft with more than one jet engine "buried within the fuselage" will be considered for bonus point purposes as a "single engine aircraft." Example: McDonnell F-4 Phantom.

1.3 FLIGHT POINTS: FAC Rubber Powered Scale

All FAC RPS Flight Times are factored (See Appendix B: FAC RPS Flight Point Factoring Chart).

- A. A maximum of 82.5 flight points will be awarded for each flight as follows:
- | | |
|--------------------|----------------------------------|
| 20 to 60 seconds: | each second = one point |
| 61 to 90 seconds: | each second = one half point |
| 91 to 120 seconds: | each second = one quarter point |
| Over 120 seconds: | no points--boasting rights only! |
- B. Three official flights are allowed per FAC Scale event.
- C. STANDARD FLIGHT SCORING: "BEST OF THREE"
1. Highest single official flight out of three determines the flight points.
 2. An official flight must be made before scale points can be awarded.
 3. In the case of a large number of entries in any one event, the C.D. may require that an official flight be recorded before the model is judged for scale points.
- D. OPTIONAL FLIGHT SCORING: "THREE FLIGHT AVERAGE SYSTEM"
1. May be used at the discretion of the C.D. for FAC rubber scale events; must be pre-publicized.
 2. Each official flight time is factored; flights are then totaled and divided by 3 for the final average time.
 3. When only one or two official flights are made, total flight times will still be divided by 3 for the final average time.

1.4 TOTAL SCORE: FAC Rubber Powered Scale

- A. FAC Peanut Scale, FAC Rubber Scale, FAC Jumbo Scale:
1. Scale points + Bonus Points + Factored Flight Points = Total Score
- B. FAC Pioneer Scale:
1. Flight points: as per FAC Rubber Power Scale, except bonus points are added as seconds to the highest flight time BEFORE factoring is done. Bonus points + highest flight time cannot exceed 82.5 points.
Example: An FAC Pioneer Scale model given 50 bonus points with a best flight of 80 seconds will have a flight score of 130 seconds which factors to 82.5 flight points.
 2. Scale Points + Factored Flight Points = Total Score

2.0 FAC POWER SCALE

Competition for "motorized" scale models.

- A. Power must be other than rubber i.e., glo, diesel, gas, CO2, electric, Rapier or Jetex, etc.
- B. Different modes of power may not be mixed unless the full scale ship had mixed power modes.
- C. Wing span: No limitations.
- D. Official flight: 20 second minimum with 120 second maximum.

2.1 SCALE POINTS: FAC Power Scale

As per FAC Rubber Power Scale.

2.2 BONUS POINTS: FAC Power Scale

Total bonus points are the sum of all applicable characteristics and prop combinations listed below:

A. BASIC BONUS POINTS: General Configuration

- 0 High-Wing Cabin and Shoulder-Wing Monoplanes
- 3 Parasol Wing
- 5 Mid-Wing (see Appendix A: Determining Mid-Wing Status)
- 5 Canard or Tandem Wing
- 10 Low Wing
- 15 Biplane or Sesquiplane
- 20 More than two wings
- 10 Seaplane with multiple floats of proportional scale dimensions
- 10 Flying boat or Amphibian
- 15 Unorthodox design (whatever is NOT listed above i.e. flying wing, autogyro, etc.)
- 3 Skis of scale width and length
- 2 Each non-powered scale size / diameter prop
- 1 Each housing for a "static" jet engine or multiple jet engines attached to a wing or the fuselage via an appendage

B. ROCKET / JET: Special considerations:

1. Bonus Points as per FAC Power Scale EXCEPT:
 - a. When multiple rocket / jet units are intended for use at flight time, each housing or pod intended for such a power unit will receive the appropriate bonus points as a "motor" unit when the model is judged. HOWEVER.....
 - b. If at time of the official flight the contestant believes using all units would be detrimental to the model's integrity, not all motors need to be ignited; HOWEVER, the contestant must notify C.D. of the change in the number of motors used so the bonus points can be adjusted. The unused pods or housings will still receive a single point as "housing for a static" unit.

C. ADDITIONAL BONUS POINTS: TYPE and LOCATION

type	pts	location
Electric driven props / fans	0	First driven tractor prop
	5	First driven pusher prop
	5	EACH additional driven prop, regardless of how driven or where located
Non-Electric driven props / fans	15	First driven tractor prop
	20	First driven pusher prop
	25	EACH additional driven prop, regardless of how driven or where located
Contra-Rotating Props (CR props count as "prop #1" and "prop #2")	5	Tractor Contra-prop (0 + 5)
	10	Pusher Contra-prop (5 + 5)
	15	Twin Tractor Contra-prop (0 + 5 + 5 + 5)
	20	Twin Pusher Contra-prop (5 + 5 + 5 + 5)
Ducted Fan Models	10	Single Ducted Fan (5 for pusher + 5 for complexity)
	5	EACH additional ducted fan unit

2.3 FLIGHT POINTS: FAC Power Scale

- A. Flight times will be 1 point per second with NO FACTORING.
- B. Maximum flight time may be reduced at the discretion of the C.D.
- C. Three official flights are allowed per scale event.
- D. STANDARD FLIGHT SCORING: “BEST OF THREE”
 - 1. Highest single official flight determines the flight points.
 - 2. An official flight must be made before scale points can be awarded.
 - 3. In the case of a large number of entries in any one event, the C.D. may require that an official flight be recorded before the model is judged for scale points.
- E. OPTIONAL FLIGHT SCORING: “THREE FLIGHT AVERAGE SYSTEM”
 - 1. May be used at the discretion of the CD for FAC Power Scale events.
 - 2. Use of the Three Flight Average system must be pre-publicized to the contestants.
 - 3. Three official flights are totaled then divided by 3 for the final average time.
 - 4. If only one or two official flights are made, the total flight times will still be divided by 3 for the final average time.

2.4 TOTAL POINTS: FAC Power Scale Scale points + Bonus points + Flight Points = Total Score

IV. Total Of Three Flight (TOTF) SCALE

Four scale events which involve no formal judging, applied bonus points or factored flight scores, but do require that a model meet the basic scale standards outlined in the Pilot's Pre-Launch Checklist (PPLC). Models may be field reviewed for compliance; builder should be prepared with a three view in case of questions.

1.0 COMMON RULES

- A. All models must be in period correct colors and markings
- B. Models must meet basic scale standards outlined in the PPLC (See Appendix F).
- C. Wing Span: No limitations
- D. Flight Score: Combined Total of three official flights.
 - 1. Events may be flown as mass-launch if advance notice is provided.

2.0 LOW-WING MILITARY TRAINER (LWMT)

For low-wing military training aircraft of any nation or era, including “one off” experimental types and dual-control fighter conversion aircraft.

- A. These models are NOT ELIGIBLE for Golden Age Combined or Modern Military events when there is a LWMT event at the contest.

3.0 GOLDEN AGE COMBINED

For military aircraft produced 1920-1939; civilian aircraft produced 1920-1945; and military high-wing cabin aircraft produced 1920-1945

- A. Retractable gear MUST be in the down position for both civilian and military aircraft.
- B. Golden Age LWMTs may compete in Golden Age Combined if there is no LWMT event at the contest.

4.0 MODERN CIVILIAN

For civil aircraft produced post-WWII, and post-WWII military high-wing cabin aircraft. Pre-war designs with post-WWII “upgrades” are excluded.

5.0 MODERN MILITARY For military combat aircraft produced post-WWII to the present.

- A. Aircraft that were produced during late WWII but primarily served post-WWII are eligible for Modern Military Scale IF their mark and markings are appropriate to the period.
- B. High-wing cabin types are excluded. Modern Military high wing cabin aircraft compete in Modern Civilian.
- C. Modern LWMTs may compete in Modern Military if there is no LWMT event at the contest.

V. Total Of Three Flight (TOTF) NON-SCALE

Five events that celebrate non-scale designs from the Golden Age of Free-Flight modeling.

1.0 COMMON RULES

- A. Construction:
1. Fuselages must be built up maintaining original cross sections.
 2. Structure changes may be made to incorporate a dethermalizer.
 3. Changes to incorporate a removable wing, tail, or landing gear are permitted.
 4. Original structure may be “beefed up” but not lightened. This includes adding wing spars, but original spars must remain in correct position.
 5. Dihedral as per plan.
 6. Airfoils as per plan.
 7. Laminated or sheet balsa may be used where plan shows bamboo for wing or tail tips.
 8. Rear motor anchor may be moved and aluminum tube used.
 9. Front thrust bearing, wire size, and free wheeler may be changed.
 10. If plan shows a spinner, it must be on model in proper position and spin with the prop.
 11. Original rolled-tube fuselages are permitted.
 12. Take off/Landing Gear: as per plan, **if applicable**.
 - a. Folding or retractable gear must be in the down position during flight.
 - b. Model must have at least one wheel; wheel(s) must be diameter and thickness on plan, and must rotate freely.
- B. Prop diameter:
1. MAXIMUM diameter as per plan or one-third of flat wingspan, whichever is greater.
 2. Props that fold or feather during flight are not permitted.
 3. Two-bladed prop may be substituted if a one-bladed prop is shown on plan.
 4. Plastic props are permitted.
- C. There is no limit on rubber motor size or model weight.
- D. Launch Technique: See specific events.
- E. Scoring: Combined total of three flights.
1. Exception: see FAC Old Time Gas Replica

NOTE WELL! These rules and the following rules for the individual events are for FAC only. Society of Antique Modelers (SAM) and the National Free Flight Society (NFFS) rules may be different for similarly named events. It's the contestant's responsibility to ensure their model complies with the rules for the FAC event being flown.

2.0 OLD TIME RUBBER STICK

FAC style competition for Old Time Rubber Stick endurance models designed, kitted, or plan published before January 1, 1946. Model design must NOT show takeoff or landing gear (including retractable or drop-off-gear) and motor must be enclosed within the fuselage. Proof of eligibility rests with contestant.

- A. Wing span:
1. Maximum wingspan is 36” projected.
 2. If original model had a span greater than 36 inches, the entire model may be reduced to fit this requirement, HOWEVER, the structure must stay the same, but wood sizes may be reduced PROPORTIONALLY to fit the new structure.
- B. Launch technique: Hand

3.0 OLD TIME RUBBER FUSELAGE

FAC style competition for Old Time Rubber Fuselage endurance and sport models designed, kitted, or plan published before January 1, 1946. Model design MUST show takeoff or landing gear, and motor must be enclosed within the fuselage. Proof of eligibility rests with contestant.

- A. Wing span:
1. Maximum wingspan is 36” projected.
 2. If original model had a span greater than 36 inches, the entire model may be reduced to fit this requirement, HOWEVER, the structure must stay the same, but wood sizes may be reduced PROPORTIONALLY to fit the new structure.
- B. Launch technique: Unassisted ROG--no pushing or “springing” the model from the table.

4.0 2 BIT +1 OLD TIME RUBBER FUSELAGE

Event for OT Rubber Fuselage models originally designed, kitted, or published with a wingspan not exceeding 26 inches.

- A. Rules as per FAC OT Rubber Fuselage, with these two differences:
 - 1. Maximum wingspan is 26 inches, THUS:
 - 2. FAC OT Rubber Fuselage rule A-2 is not applicable to this event. No scaling permitted.
- B. Launch technique: Unassisted ROG--no pushing or “springing” the model from the table.

NOTE WELL! If a contest has both FAC 2 Bit +1 OT Rubber events and FAC OT Fuselage, and you have a model that qualifies for both, you must declare in advance in which event you are entering it. The model cannot compete in both.

5.0 JIMMY ALLEN

- A. Entry must be a recognized Jimmy Allen Design
- B. Construction:
 - 1. Must be built to original size; no scaling.
 - 2. Covering must be tissue paper, silk or silkspan--no plastic coverings
- C. Launch technique: Unassisted ROG--no pushing or “springing” the model from the table.

NOTE WELL! If a contest has both Jimmy Allen and 2-Bit +1 Fuselage events and you have a model that qualifies for both, you must declare in advance in which event you are entering it. The model cannot compete in both.

6.0 OLD TIME GAS REPLICA

For non-scale gas powered models built from a kit or plan published before January 1, 1946.

- A. Any power source other than rubber may be used.
- B. Profile fuselages allowed if on original plan.
- C. Wing span:
 - 1. Span shall not exceed 36 inches.
 - 2. Original published plans may be enlarged to 36 inches.
 - 3. Original published plans may be reduced to 36 inches or less.
- D. Launch technique: Hand.
- E. Scoring: Three rounds of flights must be made; each round will have a posted target time. Deviation from the target time (plus or minus) for each flight will be recorded. Lowest total deviation for three flights wins.
- F. Determining target times:
 - 1. Method “A”: Before the event begins, the CD or event director will designate a target time not to exceed 120 seconds. The target time will take into consideration the field and weather conditions. This target time will be used for three official flights and any tie breaking fly offs.
 - 2. Method “B”: Before the event begins, the CD or event director will designate a target time for the first flight. At specified times during the day, target times for the second and third flights will be designated. If fly offs are needed, a new target time will be designated. In no case will the target time exceed 120 seconds, and field and weather conditions will be considered.

VI. SIMPLIFIED SCALE

A new FAC class that includes traditional **FAC Old Time Plan/Kit Scale** models, as well as **Modern Plan / Kit Scale** models which can be designed and built WITHOUT structural limitations. In concept, Simplified Scale is similar to Dime Scale, but with longer wingspan. The objective to provide an opportunity for modelers to build recognizable, “everyday flying” scale models that are essentially true to a three view of the aircraft, but are not **intended** to compete at the FAC Scale level nor to have to pass the requirements of the Pilot’s Pre-Launch Checklist (PPLC). The emphasis is on FUN, and FLYABILITY! HOWEVER....nothing prevents a modeler from entering a Simplified Scale model of either type into an FAC Scale event or an event subject to the PPLC.

1.0 BASIC RULES-Simplified Scale

- A. Wing span: greater than 16” minimum; no maximum.
- B. Simplified Scale models will fall into one of two broad categories, which compete together:
 - 1. Old Time Plan / Kit Scale (OTPKS)
 - 2. Modern Plan / Kit Scale (MPKS).
- C. Model and plan must be presented to the CD prior to first flight for static pass/fail judging and awarding of bonus points as described below.
- D. Simplified Scale models of either type may be entered into FAC Scale or TOTF Scale events if desired, but must meet the full qualifications required for those events (scale judging, PLLC, etc.)

2.0 DESIGN AND CONSTRUCTION

- A. Old Time Plan Kit Scale (OTPKS):
 - 1. Constructed from plans published or the plans of kits produced before January 1, 1946.
 - 2. An OTPKS model entered in Simplified Scale will be declared “OTPKS-Worthy” and will be eligible for 10 bonus points in a Simplified Scale contest IF and ONLY IF the modeler can show his model has been built as per the original plan in ALL RESPECTS, allowing for the following exceptions. Models that deviate from the plan outside of these exceptions will be treated as MPKS models, and will not qualify for the 10 point bonus. The burden of proof is solely on the modeler.
 - a. Nose may be altered to accommodate thrust bearing and removable nose plug.
 - b. Prop type and diameter may differ from plan.
 - c. Rear motor peg may be located anywhere within fuselage or nacelles.
 - d. Markings should be appropriate to the era of the aircraft and its purpose, but need not represent any particular actual aircraft nor follow the markings shown on the plan.
 - e. The model plan serves as your documentation if you are attempting to qualify for the 10 point bonus. **No plan---no bonus.**
- B. Modern Plan / Kit Scale (MPKS):
 - 1. Constructed from a modern plan / kit that is essentially true to a simple three-view of the aircraft modeled.
 - 2. May be of any aircraft of any era.
 - 3. No construction restrictions, except as outlined in the FAC PRIMARY RULES.
 - 4. Markings should be appropriate to the era of the aircraft and its purpose, but need not represent any particular actual aircraft.
 - 5. The model plans and /or a simple three view shall serve as your documentation.

3.0 STATIC PASS-FAIL JUDGING / BONUS POINTS / SCORING

- A. Simplified Scale models are not to be held to the same standards of scale fidelity or craftsmanship as FAC Scale models. No scale points are awarded. “Judging” is strictly pass/fail, in accord with the event rules.
- B. Bonus points are NOT cumulative. Only the highest value criteria will be added to your score.
 - 1. Exception: “OTPKS-worthy” models that meet the criteria of the event rule 2.0-A-2 above will be awarded 10 additional bonus points.

POINTS	CRITERIA
0	High-Wing Cabin and Shoulder-Wing Monoplanes
1	Landing Gear Down and Dirty
2	Compound curved / bubble canopy from clear flat sheet material, i.e. P-51D
3	Parasol
5	Mid-Wing (see Appendix A: Determining Mid-Wing Status)
5	Canard or Tandem wing
10	OTPKS-worthy
10	Low-Wing
10	Float Plane
15	Biplane
20	Triplane
20	Multiengine

- D. Flight score: Total of three flights.
- E. Total Score: bonus points added once to total flight score.

VII. DIME SCALE

Dime Scale models come in two flavors: **Traditional**, and **Pseudo**. Both compete under the same rules. Traditional Dimers are built from plans produced during the “golden age” of modeling; Pseudo Dimers are built from contemporary designs that honor the methods, structural simplicity, and details typical of those early plans.

1.0 BASIC RULES

- A. Dime Scale models are to be of simple design and easy construction such as those built from 10 cent kits or plans representing full scale airplanes built prior to December 31, 1949.
- B. Wing span: 16 inches maximum.
- C. When a Pseudo plan is created, the plan size is limited to one sheet of 11 X 17 inch paper plus one 8.5 X 11 inch parts page with engineering and details in the spirit of the original era.
- D. Props must be one piece wood or molded plastic.
- E. Model and plan must be presented to the CD prior to first flight for static pass/fail judging and awarding of bonus points as described below.

2.0 DESIGN AND CONSTRUCTION

Combining Traditional and Pseudo dimers involves some unique considerations. “Traditional” Dimers must be built as per plan; however, contemporary construction modifications as listed below are permitted to ease construction and increase the model's fun factor.

- A. General construction:
 - 1. Minimum wood size:
 - a. Greater than 14” wingspan: 1/16" thick sheet or square sticks.
 - b. 14" or less wingspan: 1/32" thick sheet and 1/20" square sticks.
 - c. Stiff paper called for on some plans may be replaced by 1/32" sheet or stringers with tissue.
 - 2. Butt joints on plans, and landing gear struts may be reinforced with wire, sheet balsa or 1/32" ply.
 - 3. No use of foam.
 - 4. No vacuum formed or plunge molded parts EXCEPT canopies; SEE item 3.0-C "Dime Scale Bonus Points" below.
- B. Fuselage:
 - 1. Pseudo Dimers must be engineered with box girder fuselage with formers.
 - 2. The nose on Traditional dimers may be altered to accommodate improved thrust bearings and removable nose plugs.
 - 3. Rear motor peg may be located anywhere within fuselage or nacelles.
- C. Wings and tailfeathers:
 - 1. Wings may be one piece with spars added or moved. One piece stabs and rudders are permitted.
 - 2. Stab and rudder may be reduced or enlarged moderately.
 - 3. No laminated, wet / hot bent square **balsa** strip or otherwise "formed" curved **balsa** tips.
 - 4. Wet / hot bent or “formed” **bamboo** tips are O.K.
 - 5. Sheet wood may be substituted for bamboo tips called for on some traditional dimer plans.
 - 6. No sliced or cracked ribs.
 - 7. No under cambered wings unless shown on original era plan.
- D. Dihedral (Traditional and Pseudo):
 - 1. 1" max per side for models with less than 14" W/S.
 - 2. 1.5" max per side for models with 14" to 16" W/S.
- E. Coverings:
 - 1. Double covering required unless original era plan specifically states "single covering."
 - 2. Single covering OK if original era kit supplied just one set of wing insignias or markings.
- F. Any color and markings on an original era plan may be changed to another era-appropriate combination.

3.0 STATIC JUDGING / BONUS POINTS / SCORING

- A. Models will be “judged” solely for fidelity to plan, both in construction and scale detail. If a detail is on the plan, it must be on the model. “Judging” is strictly pass/fail, in accord with the event rules.
- B. Dimers are not to be held to the same standards of scale fidelity or craftsmanship as FAC Scale models. No scale points are awarded.

C. Dime Scale Bonus points: cumulative when model meets multiple criteria.

POINTS	CRITERIA
0	High-Wing Cabin and Shoulder-Wing Monoplanes
1	Landing Gear Down and Dirty
2	Compound curved / bubble canopy from clear flat sheet material, i.e. P-51D
3	Parasol
5	Mid-Wing (see Appendix A: Determining Mid-Wing Status)
5	Canard or Tandem wing
10	Low-Wing
10	Float Plane
15	Biplane
20	Triplane
20	Multiengine

D. Flight Score: Combined total of 3 official flights.

E. Total Score: bonus points added once to total flight score.

VIII. MISCELLANEOUS TIMED EVENTS

1.0 NO-CAL PROFILE

Competition for recognizable profile scale models.

A. Design considerations:

1. Wing span: 16 inches maximum.
2. Aircraft with fixed landing gear must have each landing gear represented as per the original subject.
3. All wing struts must be on the model.
4. Motor sticks shall not exceed fuselage length, however, the prop may be positioned at the tip of a scale profile spinner if the real aircraft featured one.
5. Surfaces may be single covered.
6. Model must be in correct color scheme, and have control outlines, registration numbers, etc.
7. Have proof of scale. Judges decisions are final.

B. Official flight: 20 second minimum; NO MAX!

C. Scoring: Total of three flights.

2.0 PHANTOM FLASH

Competition fun with a classic 1930s "sport rubber model."

A. Build as per kit or plan; color and decorate as you wish!

B. Landing gear as per kit or plan. Wheels must turn freely.

C. Wingspan: 16 inches as per plan.

D. Prop:

1. Diameter as per kit or plan.
2. Prop MUST be one-piece molded plastic.
3. Prop may be scraped, shaved or painted.

E. Launch technique:

1. INDOOR: ROG unassisted from floor.
2. OUTDOOR: ROG unassisted from official Embryo table.

F. Official flight: NO minimum! All flights are official; 120 second MAX.

G. Scoring:

1. Total of best three of six flights.
2. Back-up models are permitted if needed to obtain six flights.
3. May be flown as a mass launch if advertised in advance.

3.0 EMBRYO ENDURANCE

Competition for non-scale FAC endurance type sport models.

- A. Design considerations:
 - 1. Wing Area (WA) is measured off of the flat plan.
 - 2. MONOPLANES not to exceed 50 sq. inches of wing area.
 - 3. BIPLANES not to exceed 70 sq. inches of WA, with 45 sq. inches WA maximum for the larger wing.
 - 4. Stab area not to exceed 50% of the wing area.
 - 5. Any part of any wing that sits on top of or passes through the fuselage is considered wing area.
 - 6. Fuselage volume to enclose a space 1.25 x 1.50 x 3.00 inches or larger.
 - 7. The wing and tail must be built up and covered on both sides with Japanese tissue or equivalent.
- B. Wing span: Not applicable, but refer to wing area rules above.
- C. Landing gear:
 - 1. Landing gear legs must be in conventional configuration. For example, two wheels on a single landing gear leg are prohibited.
 - 2. Wheels must be 3/4 inches or larger in diameter, and must rotate freely on their axles.
- D. Launch technique: Model must R.O.G. UNASSISTED from a three-point rest off a card table or other suitable "runway." **No "bouncing," pushing, etc., during ROG!**
- E. Bonus points: Cumulative; added just once to the total flight points.

POINTS	CRITERIA
1	3-dimensional exhaust pipes
3	3-dimensional wheel pants
5	Open cockpit with windscreen and headrest
5	Full bubble canopy containing head rest and (at a minimum) a pilot's head silhouette.
5	Raised cabin with no less than a 30-degree windshield slant, measured from the thrust line.
- F. Flight scoring: Total of three flights
- G. Official flight: As per standard FAC Primary Rules. **Min. 20 sec., Max 120 sec.**
- H. Total Score: Flight score + bonus points

4.0 JET CATAPULT SCALE

For glider models of any man carrying jet or rocket propelled aircraft.

- A. Profile fuselages are permitted.
- B. Wing span: Not applicable.
- C. Launch technique: Stretched rubber catapult.
 - 1. Catapult dowel may be of any diameter.
 - 2. Dowel may not exceed six inches in length.
 - 3. Rubber not to exceed 1/2" total cross section. Example: Two strands of 1/4" or four strands of 1/8".
 - 4. Finished rubber loops may not exceed nine inches.
- D. Scale points:

1.	Coloring and markings	0 - 8 points
2.	Details	0 - 8 points
3.	Workmanship	0 - 4 points
- E. Bonus points: Cumulative; added just once to the total flight points.

POINTS	CRITERIA
5	Flying wing or Canard
1	Each scale engine, pod or tank in profile not contained within the contours of the airframe.
- F. Official flight: No minimum, no maximum
- G. Flight scoring: Total, best 3 of 6 flights
- H. Total score: Scale points + bonus points + Flight Points = Total Score

5.0 FICTION FLYER

For models of fictional aircraft depicted by original artwork on covers and in stories of magazines such as Flying Aces, as well as in children's books and fantasy novels.

- A. These models may not compete in any other FAC events.
- B. Minimum documentation shall be a published illustration of the aircraft. Color and markings may be changed, but should reflect the era and spirit of the original illustration.
- C. Scoring: Total of three flights.

IX. TIE BREAKING (All Timed Events)

Tie breaking rules should be published in advance based on field size and history. The announced tie breaking procedure may be changed at the CD's discretion due to changing weather and field conditions. Contestants should assist the CD in bringing ties to his attention. Fly-off timing slips **MUST** be marked "FLY-OFF" to assist the score keepers. The CD may post a deadline for turning in fly-off times.

1.0 ALL EVENTS (except FAC Pioneer Scale, FAC Power Scale, and TOTF Non Scale)

- A. Methods 1 or 2 (see 1.3 below).
 - 1. Note--Phantom Flash only:
 - a. INDOOR: Single fly off, ROG from floor.
 - b. OUTDOOR: Single fly off, hand launch.

1.1 FAC PIONEER SCALE, FAC POWER SCALE

- A. The model with the highest scale points (exclusive of bonus points) wins.
- B. If scale points are identical, highest flight time determines the winner.
- C. When scale points and flight times are the same, multiple awards will be given.

1.2 TOTF NON-SCALE

- A. Methods 1, 2, 3 or 4 (see 1.3 below).

1.3 TIE BREAKING METHODS

- A. METHOD 1: Single Fly-Off
 - 1. Single fly-off as per normal event rules. If applicable, scale points and /or bonus points are added.
 - 2. If still tied, a second fly-off flight may be made or multiple awards may be awarded.
- B. METHOD 2: Target Time
 - 1. A "target time" will be announced; closest to the target time wins.
 - 2. If still tied, a second target time may be announced or multiple awards may be awarded.
- C. METHOD 3: Multi-Round Fly-Off. (Suggested for fields where a regular FAC Max of 120 seconds does not send the models off the field.)
 - 1. Fly-offs will be flown until a tied model fails to achieve a regular Max; that flight then becomes the final tie breaking time for that model. All other tied models will continue until they also fail to Max.
 - 2. If after three fly-off flights have been made a tie remains, multiple awards will be given.
- D. METHOD #4: Auto Fly-Off (Suggested for larger sites and contests)
 - 1. The CD may at his discretion limit the events qualifying for AUTO FLY-OFF.
 - 2. When TWO OR MORE models achieve three regular FAC Maxes they automatically qualify for a fly-off. There is no need to check with the CD.
 - 3. Max flight time adjustments are adjusted upwards, as follows:
 - a. First fly-off: 135 seconds. (150 secs. for very largest sites.)
 - b. Second fly-off: 150 seconds. (180 secs. for very largest sites.)
 - c. Third fly-off: 165 seconds. (210 secs. for very largest sites.)
 - 4. Fly-off flights:
 - a. First fly-off flight should be made ASAP after qualifying.
 - b. With each max fly-off flight, the next fly-off flight should be made ASAP.
 - c. If a tie remains after three fly-off flights, multiple awards will be presented.
 - 5. Fly-off Timing Slips:
 - a. **MUST** be clearly marked "FLY-OFF".
 - b. **MUST** include the flight sequence number. Flight sequence number **MUST** be circled on the timing slip.
 - 1) The first fly-off flight is event flight # 4; the second fly-off is #5; the third fly-off is #6
 - c. **MUST** be turned in immediately after the flight for all to process.
 - d. **MUST** be in proper sequence.
 - e. **MUST** be turned in before the official close of the contest to be valid.

X. MASS LAUNCH EVENTS

1.0 COMMON MASS LAUNCH MODEL RULES

- A. Scale Considerations: Mass Launch models must meet the scale standards outlined in the Pilot's Pre-Launch Checklist (PPLC) (**See Appendix F**).
- B. Construction:
 - 1. Non-scale airfoils may be used.
 - 2. Under cambered airfoil permitted if original had such.
 - 3. Dihedral may be increased in compliance with the Pilot's Pre-Launch Checklist (PPLC).
- C. Only one model may be entered into any mass launch event.
- D. With the command to “start winding”, tying, gluing or replacing broken motors is **PROHIBITED**.
- E. With the command to “start winding”, absolutely **NO** repairs to the model of any sort are permitted.
- F. Ballast or shims may be added or moved once the rounds start, but test flights, glided or powered, after such an adjustment are prohibited.
- G. At the CD's discretion:
 - 1. Minor rule modifications (“ground rules”) may be implemented to fit local conditions.
 - 2. Any mass launch event may require one or more qualifying flights. The CD will determine in advance how many models will qualify for the finals using total flight scores of those qualifying flights.
 - 3. The C.D. may set a maximum time limit between rounds, which would include time for winding, and time for retrieval.
- H. Number of rounds to be flown where there are:
 - 1. Three contestants: Two (2) rounds must be flown.
 - 2. Four or more contestants: A minimum of three (3) rounds must be flown.

CONTEST DIRECTORS: Please consider the weather and the contestant's well-being when setting conditions of mass launch events.

2.0 THOMPSON TROPHY and GREVE Events

- A. The Thompson Trophy Event is for models of aircraft with radial engines that were entered in the Thompson, Greve, Bendix, or other domestic races held from 1929 through 1939.
- B. The Greve Event is for models of aircraft with in-line engines that were entered in the Thompson, Greve, Bendix, or other domestic races held from 1929 through 1939.
- C. Maximum wing span for Thompson and Greve racers is 24 inches.
- D. At the CD's discretion, the Thompson and Greve Races may be combined (Combined Racers).

3.0 GOODYEAR / FORMULA RACES

For models of Goodyear and Formula Racers that actually competed.

- A. Maximum wingspan: 13 inches

4.0 WWI and WWII COMBAT Events

- A. **WWI**: For multi-wing aircraft that experienced combat during the WWI years 1914 through 1918.
 - 1. At the CD's discretion, monoplanes may compete when publicized in advance.
- B. **WWII**: For aircraft that experienced combat during the WWII years 1939 through 1945.
- C. No wing span restrictions in either WWI or WWII.
- D. High wing cabin and parasol types are excluded in both classes.
- E. Combat means “dog fight” in aircraft that were purpose built to engage the enemy and return to fight another day. Remote controlled flying bombs, “one-way suicide rockets” and the like are prohibited.

XI. B.L.U.R. EVENT (Bee Line Unlimited Race)

Competition for rubber powered scale race planes to complete a defined race course consistently faster than the competition, as determined by heat elimination rounds.

1.0 BASIC RULES

- A. Aircraft eligibility:
 - 1. Any racer, any genre, any nationality.
 - 2. Models must meet the standards of the PPLC (See Appendix F). Be prepared with documentation.
- B. Wings:
 - 1. Minimum span shall be 13 inches. Maximum span shall be 36 inches.
 - 2. Wings must be balsa, built up to a scale appearance. Scale appearing sheet balsa wings are permitted.
- C. Launch technique: Hand launch.
 - 1. The contestant may not step on or over the starting line.
 - 2. Model must exhibit sustained powered flight.
- D. Official "successful" flight:
 - 1. The model must fly over the finish line between the finish line pylons to complete the course.
- E. Course Layout (See Appendix D: BLUR Race Course Layout)
 - 1. Start to finish line: 88 feet.
 - 2. Starting line width: 24 feet.
 - 3. Finish line width: 120 feet.
 - 4. Orientation of flights: Down wind.
 - 5. Course adjustments allowed at CD's discretion.
- F. Miscellaneous:
 - 1. Models may be repaired between heats, AND
 - 2. ...between heats, motors may be changed or modified, as well as rear peg location, BUT...
 - 3. ...with the command to "start winding", absolutely NO further repairs to the model are permitted of any sort, including gluing, tying or changing motors, and you MUST BE PRESENT FOR LAUNCH WHEN CALLED. Failure to present for launch will result in a zero score for that round.
 - 4. Trim adjustments may be made after any flight; however, no test flights are permitted.
- G. Safety Considerations:

As the BLUR event is intended to be viewed by hordes of spectators, safety issues must be kept in mind by all participants and spectators. The heat / starting line judge shall be the lead CD of the event, and has final say on all matters. If at any time the CD determines that a particular model is a hazard of any type, the model will be disqualified from further competition. The CD's decision is final.

2.0 HEAT STRUCTURE: THE FIBONACCI FORMULA (See Appendix E: Fibonacci Formula)

- A. Each pilot is assigned a number, in accord with the sign-up sheet.
- B. Number of racers per heat: Three.
- C. The total number of heats is based upon the number of pilots signed up for the race.
- D. When more than ten sign-up, the formula may be expanded.

3.0 SCORING (See Appendix C: BLUR Race Scoring Chart)

- A. The flyer with the most cumulative points at the end of all the heats is the winner.
- B. Tie breaking:
 - 1. The names of all pilots locked in a tie will be placed on a list in alphabetical order.
 - 2. That list will create a new number for each pilot.
 - 3. A new Fibonacci Formula will be created, and the tie breaking heats will start.

XII. REPORTING CONTEST RESULTS

A. Contest reports must be made using the official Contest Report Form, available here:

1. JAN / FEB. 2012 FLYING ACES CLUB NEWS, ISSUE # 263.
2. "Forms" page of the FAC website: www.flyingacesclub.com/FACforms.html

Please print clearly. Do not change the form in any way.

B. Results must be reported within 30 days of the contest. NO EXCEPTIONS----NO EXCUSES!

C. When reporting "Mass Launch Events," list total number of contestants in the event and the total number of "heats" flown. NOTE WELL! Refer to Sec. VI, Common Mass Launch Rule 1.0-H. A single heat does NOT qualify for a Kanone!

D. Send contest results via mail to:

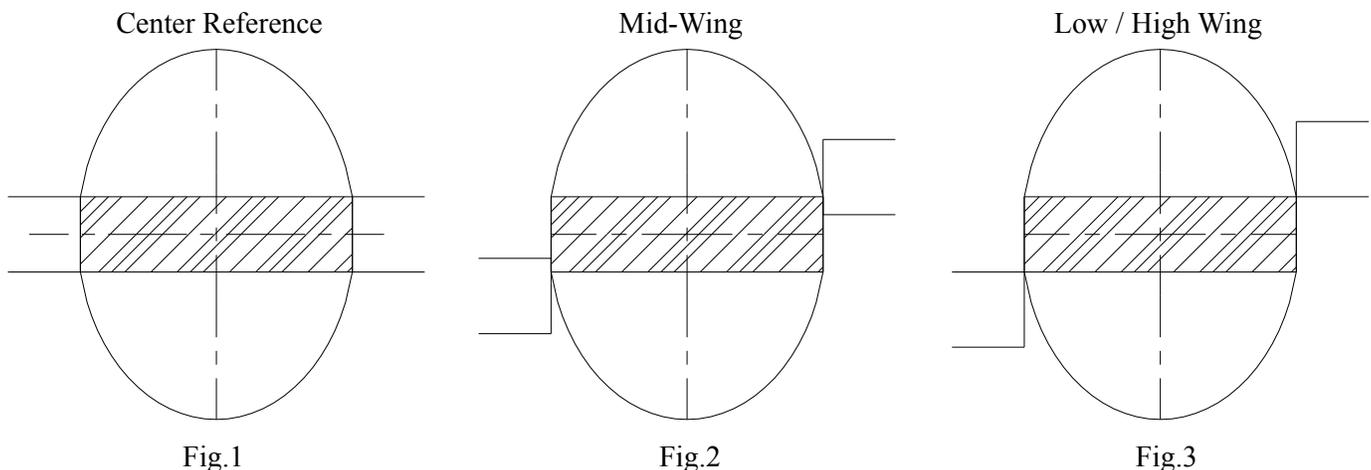
MIKE WELSHANS
Keeper of Kanones
976 Pearson
Ferndale, MI 48220

PLEASE NOTE: Email reports are NOT acceptable!

XIII. APPENDICES

APPENDIX A: DETERMINING MID-WING STATUS

"To be used as a guide where common sense fails."



1. Establish a horizontal center datum line through the fuselage, using a three view of the actual aircraft. Include the canopy if one exists as part of the front view silhouette.
2. Center the scale wing root rib thickness on this center datum line. The top and bottom of the root rib in this position establishes the upper and lower vertical limits of the mid-wing "range" (Fig. 1).
3. If the bottom or the top of the wing falls within this zone, it's a mid-wing (Fig. 2).
4. If the bottom of the wing falls on or above the top reference line, it's a high or shoulder-wing (Fig.3).
5. If the top of the wing falls on or below the bottom reference line, it's a low-wing (Fig. 3)
6. Judges's decisions are final.

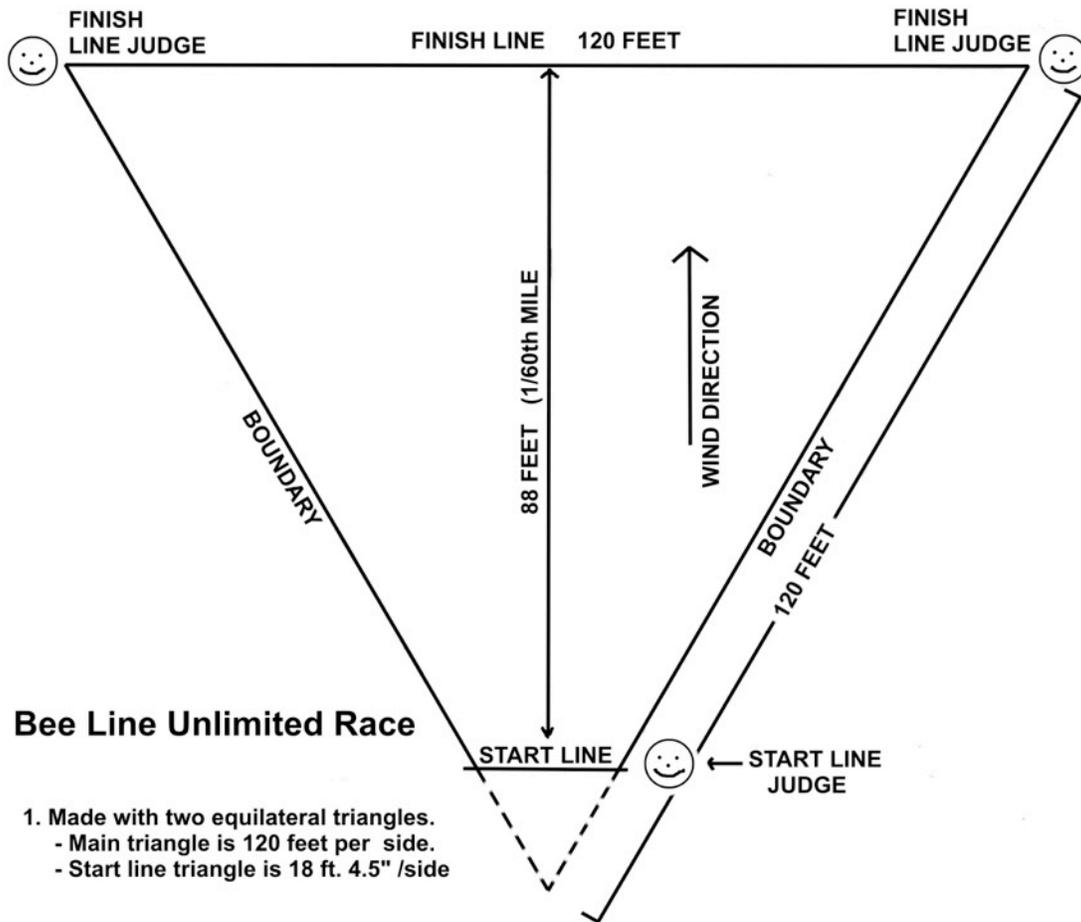
APPENDIX B: FAC SCALE FLIGHT POINT FACTORING TABLE

secs	points	secs	points	secs	points
60	60	80	70	100	77.5
61	60.5	81	70.5	101	77.75
62	61	82	71	102	78
63	61.5	83	71.5	103	78.25
64	62	84	72	104	78.5
65	62.5	85	72.5	105	78.75
66	63	86	73	106	79
67	63.5	87	73.5	107	79.25
68	64	88	74	108	79.5
69	64.5	89	74.5	109	79.75
70	65	90	75	110	80
71	65.5	91	75.25	111	80.25
72	66	92	75.5	112	80.5
73	66.5	93	75.75	113	80.75
74	67	94	76	114	81
75	67.5	95	76.25	115	81.25
76	68	96	76.5	116	81.5
77	68.5	97	76.75	117	81.75
78	69	98	77	118	82
79	69.5	99	77.25	119	82.25
				120	82.5 MAX

APPENDIX C: BLUR RACE SCORING CHART

Status	Points	Comments
Finish 1st	2	Continue to next scheduled heat.
Finish 2nd or 3rd	1	Continue to next scheduled heat.
Dork	0	Landing on course before crossing finish line. Continue to next scheduled heat.
Rules violation / DNF (Did Not Finish)	0	Late arrival, cross start line, etc. = DNF. Continue to next scheduled heat.
Drop Out	0	Heat slot remains empty; Fibonacci Formula rotation remains intact.

APPENDIX D: BLUR RACE COURSE LAYOUT



APPENDIX E: FIBONACCI FORMULA (BLUR RACE)

When more than ten contestants sign up, formula can be expanded as needed.

Number of Pilots	4	5	6	7	8	9	10	etc.
1st heat group	1-2-3	1-3-5	1-3-6	1-3-7	1-3-8	1-3-9	1-3-10	
2nd heat group	2-3-4	2-4-1	2-4-1	2-4-1	2-4-1	2-4-1	2-4-1	
3rd heat group	3-4-1	3-5-2	3-5-2	3-5-2	3-5-2	3-5-2	3-5-2	
etc.	4-1-2	4-1-3	4-6-3	4-6-3	4-6-3	4-6-3	4-6-3	
		5-2-4	5-1-4	5-7-4	5-7-4	5-7-4	5-7-4	
			6-2-5	6-1-5	6-8-5	6-8-5	6-8-5	
				7-2-6	7-1-6	7-9-6	7-9-6	
					8-2-7	8-1-7	8-10-7	
						9-2-8	9-1-8	
							10-2-9	

APPENDIX F: Pilot's Pre Launch Checklist (PPLC)

For MASS LAUNCH and TOTF SCALE Events

FAC Mass Launch and TOTF (Total of Three Flight) Scale events are designed for maximum fun with scale models. These models do NOT need to be museum pieces, but fliers should remember that they are SCALE models in the stick and tissue tradition of the Flying Aces Club, and must meet the standards outlined below.

Be prepared with documentation to avoid being DQ'd after the event in case of questions.

ALL MASS-LAUNCH & TOTF MODELS MUST HAVE THE FOLLOWING:

- ___ National insignia and side / wing registration letters / numbers appropriate to the era, event or conflict.
- ___ Colors appropriate to the era, event or conflict. Aluminum finish must be represented by gray or silver tissue / paint; white tissue alone is not acceptable.
- ___ No unfinished balsa or foam on the exterior.
- ___ All principal load / stress bearing struts and wires, exclusive of control horns and control wires.
- ___ Control surfaces outlined.
- ___ Scale landing gear, or if retracted, gear panel outlined
- ___ If radial engined, at least a paper engine if visible from the front.
- ___ 3-D exhausts, if they protrude above the skin of the original aircraft.
- ___ Cowl bumps if applicable.
- ___ Wing fillets if they are shown on the three view. May be small, flat triangular pieces when fillet amounts to a small, mostly flat fairing used only to blend the trailing edge of the wing into the fuselage.
- ___ Approximate scale outlines, allowing for modifications as specified in FAC rules (e.g. enlarged stab). Side stringers required to represent approximate scale cross sections on oval fuselages.
- ___ Military combat aircraft: all visible gun troughs and forward-firing guns must be 3-D; non-protruding gun ports must be appropriately marked.
- ___ Dihedral: a maximum of 1" per tip per foot of wingspan **or**, in the case of low wingers, no higher than the bottom of the canopy-**whichever is higher**. Models built from kits may be built to plan even if the specified dihedral exceeds these standards. Bring your plans.

