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The following rules apply to SAM free flight competition events and are complimented by AMA rules for sanctioned events General and Free Flight.

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A. Society of Antique Modelers (SAM) free flight models are divided into two categories: Gas Powered and Non-Gas Powered including Rubber and Glider.

B. Gas Powered designs are divided into two categories: Antique and Old Timer.

C. Non-Gas Powered designs are categorized as Old Timer only.

D. Antique models were designed, kitted or published by December 31, 1938. Old Timer models were designed, kitted or published by December 31, 1942.

E. Authentication of design is the responsibility of the contestant. Claims made to authenticate a model's date or design require documented proof (dated photographs, affidavits, etc.) They shall be submitted to the SAM Design Review Committee. Authenticated designs are published in two supplements to The SAM Rule Book entitled:

SAM Approved Designs List 2004 – Gas Models
- and -
SAM Approved Designs List 2004 – Rubber, HL Glider and Towline Glider

F. Unless otherwise stated, the "Builder Of The Model Rule" is in effect for all SAM free flight events. The contestant is expected to have built the model they are entering. Kits and pre-carved props were common in the era we are enjoying and are acceptable to aid construction.

The models of deceased builders shall have a "D" placed after the AMA number on the model and the entry will state the builder's name first, followed by the competitor's name. The competitor's AMA number will be displayed on the right upper wing near the deceased builder's AMA number.

G. Thermal detection devices such as thermal sniffers, electronic thermal devices, bubble machines and Mylar ribbons shall not be used to assist the contestant in determining the optimum time of a launch of his model.

H. Free Flight Grand Champion Awards will be made at each SAM Champs in two categories: Power and Non-Power. Champions shall be determined by awarding 5 pts. for each first place, 4 pts. for seconds, 3 pts. for thirds, 2 pts. for fourths and 1 pt. for fifth places.

I. Only those events listed herein as Basic Events qualify for Championship points.

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A. Competition Categories:- Basic Events:-

1. Antique:- Antique models are typically fuselage designs with the wing mounted directly to the fuselage. Some exceptions do exist; i.e. Pylon designs

that were designed kitted or published by December 31, 1938. A Pylon model is defined as a design having a sheet or built up structure holding the wing above the fuselage proper. Parasol models, with the wing mounted on cabanes, are considered fuselage models. See the Antiques listings in: ' SAM Approved Designs List-Gas Models'.

Antique Category models shall be powered with original ignition engines only and be divided into two events:

Fuel Allotment Antique (6 foot minimum plan form wingspan).
Diesel engines are not permitted in this event.

30 Second Antique (no size limitation) but the models must weigh 8 ounces per square foot of projected wing area. This event is limited to Non-Pylon designs only. Diesel engines are not permitted in this event.

2. Old Timer:- Old Timer designs are either Fuselage type or Pylon type. Fuselage designs typically have cabin windows, but not necessarily. Parasol models, with the wing mounted on cabanes, are considered fuselage designs. The majority of Old Timers were designed to the pre-December 31, 1942 AMA rules and have bodies (both fuselage and pylon) that meet the length squared divided by 100 cross section rule (L2/100). 'L' is the body's overall length from the back of the propeller to the end of the body, not including any overhanging vertical rudder. An exception occurred in 1942 when the AMA eliminated the cross section rule and ushered in the 'Pencil Bomber Era'. These designs are legal to fly in Old Timer Gas competition.

B. Power and Classes:- Old Timer Gas designs may be powered by:-

1. Original Ignition Engines:- converted glow engines or pre-1950 Diesels.

Ignition engines are defined as those engines using cam operated points, spark plug(s), batteries, coil and condenser (or magneto) to ignite the fuel. Transistor ignition units, in concert with breaker points, are allowed.

Ignition Engines manufactured by January 1, 1950, converted to glow by the original manufacturer, with minor modification, will be considered to be an original ignition engine when converted back to ignition.

Replicas of original ignition engines and bearing the same name shall be considered an original ignition engine. Custom and production ignition engines designed and manufactured after December 31, 1949 shall be limited by the same rules applied to approve glow conversion engines. The SAM Engine Committee decides which engines should be classified as 'original' for competition purposes. This list of ignition engines will be posted on the SAM Website or a printed copy is available from the SAM Librarian.

2. Diesels:- Only Pre-1950 Diesels are allowed. A complete list of pre-1950 diesels will be posted on the SAM Website and/or a printed copy is available from the SAM Librarian.

3. Glow Engines:- Approved glow engine conversions to ignition shall be non-Schnuerle ported only.

4. Classes of Old Timers:- Shall be established by engine displacement (cubic inches) as follows:

Class	Original Ignition Engine Displacement cu.in.	Converted Glow Engine Displacement cu.in.
A	.000 to .200	.000 to .150
B	.201 to .300	.151 to .250
C	.301 to 1.20	.251 to .400

Engines above .65 displacement must be spark ignition and have been manufactured prior to 1950.

C. Gas Powered Competition:- ~ Basic Events:-

The following basic events shall be flown in all SAM Championship meets.

1	Class A Fuselage
2	Class A Pylon
3	Class B Fuselage
4	Class B Pylon
5	Class C Fuselage
6	Class C Pylon
7	Fuel Allotment (1/8 ounce fuel per pound)
8	30 Second Antique

Antique designs may compete in applicable Old Timer events, if the wing loading is met. All Old Timer designs must meet a wing loading of 8 ounces per square foot of projected area.

D. Gas Powered Competition Rules:-

1. Any fuel may be used in ignition engines with the exception of nitromethane, nitropropane or nitrobenzene. Ignition engine shut-off must be accomplished by the use of an ignition circuit breaker. No other method of stopping an ignition engine will be allowed. Diesel engines may use a fuel cut-off for stopping.

2. An Old Timer or Antique design may be modified only in the following ways: Minor changes to thrust lines, i.e., upright instead of inverted engines; strengthening of structures and provision for dethermalizing. Area and moments may not be changed. All changes must be in the character of the original model, i.e., substitution of sheet balsa fuselage for original built up structure is not approved. Beef up the built-ups! Airfoil sections must be the same as on the original model or plans.

3. No modifications may be made which would prevent the model from making normal, unassisted ROG takeoffs. Therefore: no dropping landing gears, no VTO (Vertical Take Off) and no catapult devices are approved. Two wheels may be substituted for single wheel landing gears, but one wheel may not be substituted for a two-wheel landing gear. A three-point stance is not required because some approved designs had only a single wheel and sub-rudder.

4. 30-Second Antique models are allowed a 30-second engine run and must ROG (Rise Off Ground)...flying site permitting.

5. Where practical, engine runs for Old Timers shall be:-

A	Hand launched 20 seconds
B	Rise off ground 25 seconds

6. Fuel Allotment Antique models are allowed 1/8 ounce of fuel per pound of model weight up to a maximum allotment of 7/8 ounce. Model must ROG and it may be guided during take-off by one wing tip. The best one of two flights count. The timer goes with the contestant. Flight time is terminated when the model lands or flies out of sight of the timer. A flight of less than 4 minutes is considered an attempt. Each contestant gets four attempts to make two official flights.

7. Unless otherwise stated, each contestant shall be allowed two models in an event to complete three official flights.

8. In Old Timer Gas events and 30-second Antique, each contestant is allowed 6 attempts, per event, to make 3 official flights in that event.

9. An official flight in an Old Timer Gas event or 30-second Antique is where the model remains airborne for 40 seconds or more after launching.

10.If any 2.4 Ghz R/C frequency equipment is used in FF to initiate a dethermalizer action, the frequency must be registered with the R/C officiating table at the contest to obtain frequency clearance. R/C initiated functions are limited to one D/T action per flight and are restricted to the 2.4 Ghz frequency. If an R/C D/T action is initiated, the 40 sec. attempt rule per Par.9, above, will not apply and the flier must accept the actual time recorded to the ground.

11.If any 2.4 Ghz R/C frequency equipment is used in FF to initiate a dethermalizer action, the frequency must be registered with the R/C officiating table at the contest to obtain frequency clearance. R/C initiated functions are limited to one D/T action per flight and are restricted to the 2.4 Ghz frequency. If an R/C D/T action is initiated, the 40 sec. attempt rule per Par.9, above, will not apply and the flier must accept the actual time recorded to the ground.

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In alphabetical order

Provisions are made for the flying of special Antique, Old Timer or Vintage type events. Any event which deviates from the requirements of the Basic Events shall be termed a Special

Event and shall be in keeping with the intent of the SAM Preamble. The following events are frequently regional and are included here as a guideline. Unless specifically defined in these Special Events, all basic rules such as construction, scale, etc. apply

1. 1/2A Texaco:- Model must have been designed by December 31,1938 and shall be powered by a glow ignition engine of .051 maximum displacement. Engines may be reed or rotary valve induction. Diesel and diesel conversions shall not be allowed. No size or weight limitations. Model may be scaled up or down from the original. Construction shall follow the form of the original. Wood sizes may be scaled to agree with the model's scale. Only alcohol based fuel may be used. A maximum of 1/2 ounce of fuel is allowed. The contest director may specify a smaller amount of fuel if conditions indicate engine runs should be limited. There will be no maximum flight times. The use of a dethermalizer is at the discretion of the flyer. Timer goes with the contestant. Releases may be ROG or Hand Launch as declared by the contest director. Three official flights are allowed with total accumulated time used to determine placement. Three unofficial flights (attempts) will be allowed. A flight of two minutes or less is an unofficial flight unless declared official, by the contestant, at the time the flight terminates. Timing starts at the moment of release and ends when the model touches down or can no longer be seen by the timer.

2. Gas Scale:- A casual event. Scale model of any full size aircraft designed or built by December 31, 1942. Plans may come from any source. No scale points are awarded. Construction must be built up (no sheet balsa, etc. and no profile type models). Any internal combustion engine may be used. Unlimited flight time. Timer goes with the contestant Timing starts at the moment of release and ends when the model touches down or can no longer be seen by the timer. Models may be hand launched or rise off ground. Longest of three flights wins. A flight is official when 40 seconds has elapsed after release.

3. Old Ruler:- Any model that meets the requirements of the 1941 AMA Rules is eligible for this event. Minimum cross section is L2/100. Wing loading is 8 ounces per square foot projected and power loading is 80 ounces per cubic inch displacement. Contestants are encouraged to design original models for this event. As an example, a Playboy Sr. Old Timer, a scaled up or down Playboy Sr. or an original design using a Playboy Sr. wing and tail group are eligible for this event as are the Post '42 designs that meet the cross section and loadings. Engine runs and flight times are the same as Old Timer events.

4. Post 1942 Event:- This event allows any model designed kitted or published after December 31, 1942 which shows ignition installation on the original plans. The cut-off date is December 31, 1956.The SAM Library has a list available of the 165 designs that fall into this category. Engine runs and flight times are the same as Old Timer events

5. Replica .020 Power:- Model of any gas model kitted or plans published by December 31, 1942. Gas Type rubber models like Comet's rubber powered Clipper, Scientific's Flea, etc., are allowed. Model may be a scaled version of a larger design of the era. Two-wheel landing gear may be substituted for a single wheel. Construction is at the discretion of the builder. Airfoils may be modified, but must retain the characteristic shape of the original, i.e., RAF 32 Type, 6409 type, Single Surface type, Clark Y type etc. Engine run is 20 seconds, ROG, or 15 seconds, hand launched. Maximum engine displacement is .020 cubic inch. An official flight is 40 seconds or more.

6. Texaco:- Model must have been designed by December 31, 1938 and must be powered with an Original Ignition Engine. No diesels allowed. Fuel allocation is 1/4 ounce of fuel per pound of model weight to a maximum allotment of 1-3/4 ounces. Model must ROG and

may be guided by one wing tip during take-off. Timing starts at the moment of release and ends when the model touches down or can no longer be seen by the timer. The longest of two official flights is counted. Timer goes with the contestant. A flight of less than 4 minutes is considered an attempt. Each contestant gets four attempts to make two official flights.

7. Compressed Air:- Any model (may be original design) powered by a compressed air motor. Maximum air pressure of 150 lb. per sq. in. Models must ROG. Score the best three of six flights.

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Competitive rules for these events are based on the original AMA (NAA) Competition Rules, and on the FAI Wakefield International Rules and Sport Competition rules that were in effect up to December 31, 1942. The designs were divided into two categories: Fuselage (the model's minimum cross section is L2/100) and Stick (the model's maximum cross section is L2/200 maximum). “L” is defined as the distance from the front of the nose block to the end of the body, not including any overhanging vertical rudder. Fuselage designs have landing gears to facilitate ROG (Rise Off Ground) take-offs. A cabin is not required on a fuselage design. Stick models may have landing gears or cabins, and are hand launched.

A. Classes:- The Fuselage and Stick models are divided into Small and Large events based on wing area, as follows:-

1. Large Rubber models have projected wing areas greater than 150 square inches.

2. Small Rubber models have wing areas of 150 square inches or less.

3. Wakefield designs are based on the FAI rules in effect at the time of the design, and are divided into two events: 4-ounce Wakefield and 8-ounce Wakefield.

All Wakefield designs can be found listed under the Wakefield category in the: 'SAM Approved Designs List ~ Rubber Models, HL Glider and Towline Glider'.

4 Ounce Wakefield Models must have a minimum weight of 4 ounces, a cross section of L2/100 square inches and a wing plan form area of 190-210 square inches.

The 4 ounce era is defined as models designed, published or kitted from January 1, 1934 to December 31, 1936. These models must ROG in competition

8 Ounce Wakefield models must have a minimum weight of 8 ounces, a cross section of L2/100 square inches and a wing plan form area of 190-210 square inches. In addition, the maximum stabilizer area is 33% of the wing plan form area maximum.

The 8 ounce era is defined as models designed, published or kitted from January 1, 1937 to December 31, 1942. These models must ROG in competition.

5. Commercial Rubber models were kitted, published or authenticated By December 31, 1942. Max wingspan is 36" projected. Model may not be scaled and with original dihedral. The motor must be enclosed and the plan must not show a folding prop. No cross-section rule applies. If the prop is shown fixed to the shaft, a free-wheeler may be added. (cont.)

The prop diameter shown on the plan or 1/3 of the wingspan, whichever is the greater is the maximum allowed. The prop may be any pitch and must be wood, except that plastic may be used if plastic was shown on the original plans.

B. Propeller and Power and Wing Loading:- The propeller(s) must be the same design as the original model (folding, single blade, two blade, free-wheeling etc.) Maximum diameter shall be as shown on the plan or 1/3 the plan form wingspan, whichever is greater. He prop block design must be the same as shown on the plan. No wire hubs are permitted.

For clarification: The Gollywock may use a 13.5-inch diameter two bladed folder per Wally Simmers' (original designer) recommendation. Propeller blade turbulators are not permitted.

There is no limit on the amount of rubber power that may be used. Geared motors are allowed if shown on the original plan. A single motor may be substituted for multiple motors, but not vice-versa.

There are no wing loading requirements in any Old Timer Rubber events, except Wakefield models must meet the min. weight requirements of their class.

1. Modifications – Old Timer Rubber models may be modified only in the following ways: strengthening of structures and provision for dethermalizing. Adding additional spars within the wing and stab airfoil upper and lower cambers is permitted. This was a common practice in the Old Timer Era and is called Multi-Spars. The use of Turbulators, outside the wing and stab upper and lower ambers is prohibited. Multi-Spars may not be substituted for sheeted surfaces. Two-wheel fixed landing gears may be substituted for single fixed or retracting landing gears but not vice-versa.

C. Rubber Powered Competition - Basic Events:-

The following basic events shall be flown in all SAM Championship meets:-

1. Small Rubber Stick

2. Small Rubber Fuselage

3. Large Rubber Stick

4. Large Rubber Fuselage

5. 4 Ounce Wakefield

6. 8 Ounce Wakefield

7. Commercial Rubber

4 Ounce and 8 Ounce Wakefield designs may compete in Large Rubber Fuselage events. Small and Large Rubber Fuselage models must ROG, the same as Wakefield models.

1.All Rubber Basic Events allow six attempts to make three official flights per event. Any flight of 40 sec. or greater is considered an official flight.

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1. Hand Launch Glider:- Hand Launch Glider models that were designed kitted or published prior to December 31, 1942 are allowed:-

a. Finger grips may be added.

b. Dethermalizers may be added as long as outlines remain the same.

c. Modern type wing airfoils are prohibited.

d. Wing airfoil under camber is optional

e. The material and thickness of the body may be changed, but not the height or length.

f. Three gliders may be used to make nine official flights. The total of the three best flights will determine the winner.

g. Maximum time per flight is 120 seconds.

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In alphabetical order

Provisions are made for the flying of Special Antique, Old Timer or Vintage type events. Any event that deviates from the requirements of the basic Rubber Events shall be termed a special event and shall be in keeping with the intent of the SAM Preamble. The following events are frequently regional and are included here as a guideline. Unless specifically defined in these Special Events, all basic rules such as construction, scale, etc. apply

1. Classic Wakefield:- This Special Event was approved by the SAM Board of Directors in 2003. The event is modeled after the NFFS National Cup.

a. Eligible models are from the 4-ounce and 8-ounce era

b. The 4 Ounce era is defined as models designed, published or kitted from January 1, 1934 to December 31, 1936.

c. The 8 Ounce era is defined as models designed, published or kitted from January 1, 1937 to December 31, 1942.

d. Models must be built to the rules of the era they were designed in.

e. The 4 Ounce era wing area to be between 190 and 200 square inches Total weight, including motor, to be 4 ounces minimum. The minimum value of the maximum cross-sectional area of each design shall be fuselage length squared/ 100

f. The 8 Ounce era wing area to be between 190 and 210 square inches Stabilizer area to be no larger than 33% of the wing area. Total weight, including the motor, to be 8 ounces minimum. The minimum value of the maximum cross-sectional area of each design shall be fuselage length squared/ 100.

g. Points shall be accumulated throughout the year from the ending day of the SAM Champs, to the ending day of the SAM Champs next year. This point total will be used to declare a Classic Wakefield World Champion on an annual basis.

h. The event will be flown at the SAM Champs but will not count toward the Rubber high point Championship

i. This event may be added to the regular menu of basic events flown at local contests conducted under SAM rules such as, Small Stick, Small Fuselage, Large Stick and Large Fuselage. The addition of the Classic Wakefield event shall be at the Contest Director's discretion.

j. This event will be international in scope; the results that are reported by any CD (Contest Director) will be included in the accumulative point total regardless of where the event was flown.

k. Flight times for the first three flights shall be 2-minutes, 2 1/2-minutes, and 3-minutes, with subsequent flight times to increase in 1-minute increments until a winner is declared. Total time in the air shall be used to determine placement.

l. ROG is required on all flights.

m. Points allocation: Event winners must make at least 3 official flights to receive Classic Wakefield points.

n. During the points accumulation period, only two scores may be used from the same field.

o. Placing Points are based on event entries completing 3 official flights

Entries	1-2	3-4	5	6-8	9-11	12-14	15-17	18+
First	21	13	25	27	29	31	33	35
Second	16	18	20	22	24	26	28	30
Third	0	13	15	17	19	21	23	25
Fourth	0	8	10	12	14	16	18	20
Fifth	0	0	5	7	9	11	13	15

p. Resolving Tied event scores on the field
Tie scores at contests should be settled by further flying (a fly off), under the direction of the CD. If ties remain unbroken, each of the competitors will receive points at the position at which the tie occurred.

q. The administrator of this event will tabulate and publish results in SAM Speaks or on the SAM Web site on a bimonthly basis.

2. Jimmie Allen:-

a. Entry must be a recognized Jimmie Allen design. These designs are listed within: 'SAM Approved Designs List – Rubber, HL Glider and Towline Glider'

b. Entrant must be the builder of the model. If necessary, one reserve model is allowed to complete official flights.

c. Model must be flown in its original size (no scaling) with original outlines, including airfoils, dihedral, wheel diameter and width.

d. Propeller diameter will be no bigger than shown on the original plan or provided in the original kit from the 1930's. If no kit is available and the plan does not show it, the propeller diameter shall not exceed 33% of the plan form wingspan.

e. No plastic or folding propellers. Free-wheeling propellers are permitted.

f. No limit on rubber motor size, or model weight, but reducing structure, wood sizes or covering material is not permitted.

g. Structure to be per original plan except minor changes to strengthen the structure or to accommodate a winding tube or dethermalizer.

h. Wing mounting rails or dowels may be substituted for wire hold-down fittings as long as the wing/body spacing is maintained.

i. Each entrant is allowed 6 attempts to make 3 official flights. An official flight is 20 seconds or greater. The maximum flight is 120 seconds.

3. Rubber Scale:- Models are defined as any model that represents a full-size aircraft that was designed by Dec. 31, 1942. Plans may come from any source. There is no limit on the amount of rubber in the motor(s) or the type of propeller (free-wheeling or folding).

The maximum propeller size is 1/3 of the plan form wingspan.

Models may be hand-launched or ROG'd into flight per Contest Director decision. The length of the max. will be determined by the Contest Director.

The number of flights will be three and will be totaled for the score. There will be no scale judging.

There is no minimum weight nor maximum wing area.

4. Twin Pusher:- This event is for original Twin Pusher designs meeting the December 31, 1942 requirement. All models entered in this event are launched at the same time and last model down wins. There are no attempts. Free- wheeling props may be substituted for fixed shaft props.

All Twin Pusher designs for this event are listed under the Twin Pusher category in the: 'SAM Approved Designs List ~ Rubber Models, HL Glider and Towline Glider'

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1. Catapult Launch Glider:- Hand launch and catapult glider designs which were designed kitted or published by December 31, 1942 are allowed. The models are to be faithfully reproduced except as follows:-

a. The rear of the body may be extended past the stabilizer trailing edge to provide a grip for the launch. In lieu of, a small vertical tab of no more than 1 square inch size may be added to provide a rear grip. A launching pin and fairing may be added forward to facilitate rubber launch.

b. Dethermalizers may be employed as long as outlines remain the same.

c. Modern type airfoils are prohibited.

d. The glider shall have a rigid wing. Wing under camber is optional.

e. The material and thickness of the body may be changed but not the height or length except for an additional rear grip extension and rubber catch.

f. Three gliders may be used to make nine official flights.

g. The total time of the three best flights will determine the winner.

h. The maximum time for each flight shall be 120 seconds.

i. The hand held catapult is composed of a dowel not exceeding six (6) inches in length and a 9-inch loop of ¼ in. flat model airplane rubber. One end of the rubber loop shall be attached to the dowel.

j. During launching, the contestant must hold the catapult in one hand and release the model from the other hand.

2. Towline Glider:- Generally covers pre-Nordic designs built to the L2/100 cross-section rule. There are exceptions to this rule if the model was designed by December 31, 1942 and cross section rules were not in effect. Auto rudders are allowed but no circle tow devices. A maximum of a 200-foot towline or a high start of 50 feet of rubber and 150 feet of towline is allowed to tow the model to release height (this comes from Frank Zaic's 1938 Yearbook).

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A. No official records will be established in any of the FF Old Timer or Antique events. SAM is not in competition with the designers of old who have provided us with a great supply of designs to build.

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A. All pertinent AMA Safety Rules shall be in effect covering the model, modeler and equipment. Fly using the Buddy system and use common sense. Fly within your physical limitations. As a reminder, each model must bear the builder's identification tag and AMA Number. Snuffer tubes are required to prevent fires.

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A. The use of binoculars or other timing aids by the timekeeper(s) for an official flight is permissible, but not required.

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