

2011 Michigan Musciano Fun Fly Rules

27 August 2011

General Information

- Pilot check-in at 0900 (9:00 AM)
- Flying starts at 1000 (10:00 AM)
- All events will be conducted in accordance with AMA regulations regarding control line models and the particular event being flown, except as is otherwise specified in these rules
- All AMA Safety rules will be strictly enforced
- Parts of aircraft that fall off during takeoff or during flight shall result in an attempt in Speed or Stunt and in forfeiture of the heat or final in Rat Race
- Parts of aircraft that fall off during landing (or crashing) must be securely repaired/reattached before proceeding
- Failure to do so shall result in an attempt in Speed or Stunt and in forfeiture of the heat or final in Rat race
- Such attempts and forfeited heats do not qualify for participation points
- Other heats and attempts may still qualify the entrant for participation points (Per AMA rules)

Events

- Craftsmanship and Appearance
- Semi Scale
- Proto Speed
- Slow Rat Race
- Stunt (Modified)
- Biplane Speed

Entry Fee

- \$20 first event, \$5 for each additional event to a maximum of \$30

Acceptable Designs

- Must be 1/2A (.049) control line planes designed by Walt Musciano and kitted by Scientific (See list below)
- Plane does not need to be built from an original Scientific kit - Scratch-built and currently produced replica kits are acceptable
- Regardless of source, the plane must meet all of the requirements listed in these rules
- Either single or twin-engine models are permissible
- Only carved fuselage, solid wing planes are permissible - No profiles - No fuselages built up from sheeting and bulkheads
- Only planes with exposed controls - No embedded or enclosed controls

Acceptable Design List

Aeronca Sedan	* Little Bipe
Air Champ	* Little Devil
Aircoupe	* Little Mercury
* Army Racer	Little Mustang
Atomic X	Little Sabre
Beechcraft T-34	* Little Stinker (Pitts Special)
Beechcraft Bonanza	Lucky Racer
Beechcraft 17	Messerschmitt (109)
Boeing F4b-4	Monocoupe 90a
Boeing P-26a	Mr. Mulligan
* British S.E. 5	North American At-6 Texan
Bullet	P-40 Flying Tiger
Cessna 170	P-47 Thunderbolt
Cessna 172	Piper Comanche
Cessna 180	Piper Cub (Ambulance/Rescue)
Cessna 182 Tricycle	Piper Cub Cruiser
Cessna Bird Dog	Piper Cub Seaplane/Scout
* Combat Master	Piper Cub Special
Curtis Hawk P6-E	Piper Cub Trainer
Curtiss Helldiver	Piper Tri-Pacer
Cyclone	Red Devil
Douglas B-66 Jet Bomber	* Red Flash
F-100 Super Sabre	Ryan Pt-16 Trainer
F-51 Mustang	Snark Guided Missile
F7u Cutlass	Spirit Of St. Louis
F-82 Twin Mustang	Stinson Reliant
F-94c Starfire	Stinson Voyager
* Flight Master	* Stitts Playboy
* Fokker Triplane	Stuka Dive Bomber
Ford Flivver	* Stunt Master
Gee Bee Sportster	Supersonic Missile
* Golden Hawk	* TBM Avenger (PDG Design)
* Grumman Avenger	Thunderbird
* Kellet Autogiro	Waco Cabin
Little Mustang	Yellow Bird
Little Ace	* Zig Zag

Construction Requirements

In addition to the General specifications:

- Planes are to be built per the plans except as permitted otherwise in these rules

- The size, outline, placement, and areas of the original design are to be maintained - This includes the Wing, Stab, Elevator, Rudder, Fin, Fuselage Side and Top views, etc.
- Cowls (or landing gear) if included on the plans, may be left off; but will be not be scored as high in the Appearance and Craftsmanship event as the same plane with a cowl (or landing gear) that is otherwise equal
- Cowls (and landing gear) may be made removable and left off in the flying events and doing so will not forfeit Appearance and Craftsmanship placement awarded if they were in place for Appearance and Craftsmanship judging
- The fuselage must be carved from a block, or constructed of glued and carved slabs — no sheet and bulkhead or stick and tissue substitutions
- Rounding and shaping of the fuselage must match original
- Wing must be of *solid wood construction* - Lightning holes are not permitted - Original outlines maintained - An airfoil is permissible at the builder's discretion
- Modern control systems, hinges, and adjustable leadouts are permitted
- Finish and markings are at the builder's discretion - Colorful, elaborate, multi-color, finishes are encouraged

Entry Requirements/Restrictions

- A maximum of 1 different model may be entered for each event
- Participants can practice with as many Planes as time allows, however once a plane is used for an attempt, an official, or in a heat, it is the entry for that event
- Backup entries (planes) are not permitted
- Repairs, if safe in the opinion of the Event Director, are permissible
- To qualify for the Craftsmanship/Appearance event, the plane must be entered and successfully flown in one of the "flying" events or complete a 10 lap demonstration flight (See 'Participation Requirements' for the definition of "Successfully flown")

Engine Requirements/Restrictions

The limited engine rule is intended to maintain the nostalgic spirit of the event, keep the performance comparable to vintage power plants, provide for current availability, and provide a level field for competition

- Engines must be .049's or smaller
- Only engines from the ELIGIBLE ENGINES list are allowed.
- Only stock parts (as delivered on the engine) are allowed except as otherwise permitted in the ELIGIBLE ENGINES list
- Simple fitting of the stock engine parts is permitted, but hop ups are not - Hop up examples include (but are not limited to) boring out the venturi,

thinning the spray bar, opening up the bypasses, stuffing the crankcase, and so on

- Only suction, non-pressurized fuel systems are allowed
- Engines may be freely substituted on the plane between attempts, heats, officials, finals, etc.

Eligible Engines

- **Atwood:** Wasp .049 and all the .049 Atwoods - This includes the Original/Cadet and those Atwoods with colored heads, integral heads; and the Signature, Atwood Shriek, and Atwood Shriek Signature engines - The Cadet (clear) or earlier Signature (colored) heads may be used on the Shriek, if desired, so as to use standard ¼ x 32 short glow plugs
- **Fox:** Fox Sport.049 (not the large case/intake F.A.I. model). Glow heads are unrestricted
- **Cox:** Pee Wee .020, Space Bug Jr., Babe Bee, Golden Bee, Black Widow, and product engines sometimes called the Cox 290. Engines may be 2005 or earlier manufacture. Excluded are the Space Bug, Thermal Hopper, Space Hopper, RR1, TD, Venom, Killer Bee, and Texaco. Parts that fit may be freely interchanged, if desired, between the permitted Cox Engines. Not permitted are any engines, stock or otherwise, that have Killer Bee backplates, or that have TD, Texaco, Killer Bee, or Venom piston sleeve combinations, or other parts from anything other than the permitted engines. Glow heads are unrestricted
- **Holland:** Wasp .049 only, not the Hornet
- **K&B:** K&B Infant, Torpedo .035, Torpedo .049, and SkyFury .049
- **McCoy:** Any McCoy .049, either Glow or Diesel. Also includes the plastic case Testors/McCoy engines
- **OK Cub:** Any OK Cub .049 (or smaller), either Glow or Diesel
- **Spitfire:** Baby Spitfire .045, Spitzzy .045, and Royal Baby Spitfire .049
- **Testors:** Copy of Wen Mac Hotshot/AMF Thunderbolt
- **Wen Mac:** Any Wen Mac .049, including AMF copies

Fuel

- Participants will supply their own fuel

Lines

- Two lines required
- Recommended size: Steel stranded cable, minimum diameter “.008” for single engine aircraft

- Steel stranded cable, minimum diameter “.012” for multiple engine aircraft with total displacement exceeding .049 cubic inches
- Dacron lines are also acceptable
- Line type is at the flyers discretion
- All lines must pass pull test
- Line Length: 35 ft. from bellcrank to handle, + 6”, - 0” tolerance

Pull Test

- Pull test will be 5 lbs for aircraft of .049 or less total displacement
- Pull test will be 10 lbs for multiple engine models with a total displacement greater than .049
- The Pull test is required for every model entered in an event
- At the Event Directors discretion a pull test may be required after crash repairs before being allowed to continue

Participation Requirements

- No participation points are awarded in the flying events without meeting the minimum participation requirements
- The minimum participation requirements for the flying events require the entrant to successfully fly at least one lap and additionally, in the opinion of the Event Director, at least tried to successfully fly the event. The opinion of the Event Director (ED) is final and is not subject to appeal
- Participants who fly aircraft built by others will be awarded any and all prizes
- No proxy flying will be allowed. This is to encourage on-site participation

Scoring

- See *Event Descriptions* for information about specific events
- Placement points are awarded for each event as follows:
 - 1st place - 10 points
 - 2nd place - 7 pts
 - 3rd place - 5 points
- Participation points (3 points) are awarded to each participant who does not place 1st, 2nd, or 3rd in an event but who meets the minimum participation requirements for that event
- Overall placement is the sum of the above points
- Kids (flyers under age 12) will participate in all events along with everyone else, however, their scores will be tallied separately from adult participants and will be awarded special awards

Event Descriptions

Craftsmanship & Appearance

- Entries will be judged based on appearance and workmanship prior to the start of the flying events
- Judging will be by the CD or his designee
- Each modeler will put his name on a tag/card with his entry
- Entry must be a completed plane, with engine, ready to fly
- Entry must be successfully flown in one of the flying events or complete a 10 lap demonstration flight. Failure to successfully fly will result in forfeiture of points and prizes which will then be awarded to the next best placing entry

Semi Scale

- Entries will be judged based on appearance and workmanship prior to the start of the flying events
- Judging will be by the CD or his designee
- Each modeler will put his name on a tag/card with his entry
- Entry must be a completed plane, with engine, ready to fly
- Entry must be one of the semi scale hollow log designs
- Entry must be successfully flown in one of the flying events or complete a 10 lap demonstration flight. Failure to successfully fly will result in forfeiture of SEMI SCALE points and prizes which will then be awarded to the next best placing entry

Proto Speed

- Four attempts (total) will be allowed for two official flights. Note: this is not the same as four attempts for each of two officials. Be sure you understand the difference
- Score will be based on the best speed/lowest time of the two official flights
- The slower of the two official flights will be used as the first tiebreaker. The most laps completed in an attempt is the next tiebreaker
- A fly off will be used as the final tiebreaker
- The contestant has three minutes to enter the circle, start the engine, and launch
- Models may be hand launched or ROG from prepared surface at the competitor's discretion
- Models will be timed from the first pass over the start line until completion of 12 laps (1/2) mile
- Maximum flying height is 20 ft
- Electric starters may be used
- AMA CL Speed and CL general attempt definitions apply except as listed here. Failure to launch in 3 minutes is an attempt
- Failure to complete required laps is an attempt

- Failure to get or remain airborne after launch is an attempt regardless of how little distance traversed/flown and/or regardless of whether or not the 3 minutes is up
- Successful launching and completing the 12 laps constitutes an official flight
- Flying high may, at the discretion of the Event Director, constitute a no-score official
- Note: a no-score official is not as severe as disqualification. Disqualification, as a minimum, throws you out of the event as commonly interpreted by AMA CDs, and a literal reading of the AMA rulebook requires throwing the entrant out of the contest
- Deliberate crashing, in the opinion of the event director, to avoid an official flight, will constitute a no-score official

Rat Race

- Models will be flown in a series of heat races leading to a final race
- Races will consist of two or three models
- Each contestant will fly two heat races. The best (lowest) time from the two heat races will determine each contestant's score
- The three entrants with the best heat scores will fly a final race. If there are eight or more entrants, the four with the best heat scores will go into the finals
- Ties will be broken, if necessary to get into the finals, by using the other heat scores, else most laps completed for the other heat, else a flyoff heat
- Final standing will be determined by the time required to complete the main event final race, then laps completed if not everyone completes the final
- Finals ties will be broken by best heat scores
- Best heat score ties will be resolved as described above
- Races will begin with all engines stopped. At the starting signal, engines will be started, and the models may be launched as soon as the models/pit crew/pilots are ready
- Timing will begin at the starting signal and continue until the model has completed the required number of laps, and pit stops, for the race being flown
- In the heat races, 30 laps (1.25 miles) and one pit stop is required. In the final race, 60 laps (2.5 miles) and two pit stops are required
- Landings, or crashes, with the engine running will not be counted as a pit stop
- At each pit stop, the model will land, be refueled, the engine restarted, and the model launched to continue the race
- Models may be hand launched or ROG
- If the required pit stops have not been accomplished before the required number of laps is completed, timing will continue until the model has completed one full lap following the last required pit stop

- Each pilot/pit crew team will be awarded prizes
- Specific requirements for conduct of pilot and pit crew will be discussed on the day of the race. All requirements are as specified in the CL Racing Unified Rules in the AMA rulebook except as otherwise modified here
- A person who causes a line tangle/midair/crash of someone else's plane is to forfeit the heat or final. The CD or ED is to determine to the best of their ability the responsible person. The remaining persons in the heat or final get to re-fly the heat or final. If it was a final, the next best person from the heats gets to advance to the final for the re-fly. If it was a heat the CD or ED may replace the person who forfeited the heat and reschedule the heat. A forfeited heat has no score, counts as a heat, and does not qualify for participation points
- The CD's or ED's opinion is final and is not subject to appeal. (Per the AMA rules)
- The ED may require any entrant to prove he is capable of flying in a multi flyer event before being permitted to do so
- The ED is expected to require such demonstrations to ensure the safety of all when he suspects such inability
- An ED should not allow persons who have demonstrated (either in a requested demonstration or in an actual heat) that they are incapable of flying in a multi person event to do so. Such persons may still serve as the pit crew for their entry
- The ED's opinion is final and is not subject to appeal (Per the AMA rules)
- Fast fills, hot gloves, hot fingers, pressurized refueling systems, and similar devices intended to decrease pit stop times are prohibited
- Electric starters and 1/2A spring starters, mounted on the engine, are permitted
- Two timers/lap counters will be used for each plane flown in a race unless the CD determines there are only enough people available for one each
- Attempts, in the usual sense, do not apply to racing events. Each contestant gets one chance to complete each heat or the finals. If completed a time will be recorded, else a "DNF" and the number of laps will be recorded. "DNF - 0 laps" is a possible score
- If an entry is not started and launched within 2 minutes after the race starts for the heats, and within 4 minutes after the race starts for the finals, a "DNF - 0 laps" is scored for that entry

Modified Stunt

- Scoring, attempts, conduct, rules, responsibilities, everything, will be exactly like AMA precision aerobatics except as is otherwise defined here. As these planes are old designs, the maneuvers are somewhat like old time stunt. There are also a couple of optional "tiebreaker" maneuvers
- One level lap will be flown between maneuvers
- There is no penalty for running out of fuel once. Simply refuel and continue where you left off. The CD may, at his discretion, allow running out of fuel

twice or three times provided that time permits. This decision will be made and announced prior to the start of the event

- Launch will be ROG from prepared takeoff area, or hand launched, at the competitor's discretion
- Electric starters may be used
- Three attempts (total) will be allowed for two official flights. Note: this is not the same as three attempts for each of two officials. Be sure you understand the difference
- Stunt scoring is by maneuver. Higher is better. Your score for each official flight is based on the sum of your points for each maneuver
- Your placing for the stunt event is based on your best official flight
- The maneuvers and their point ranges are listed below:
 - Starting and launch within three minutes - 0 or 5 points
 - Launch and level flight (2 laps) - 10 - 40 points
 - Wingover (not reverse) - 10 - 40 points
 - Climb and dive (Like old time stunt - steep climb, one lap high, dive back to level at same place climb was initiated) - 10 - 40 points
 - Two inside loops - 10 - 40 points
 - Approach and landing - 10 - 40 points
 - Optional Maneuvers - If modeler wants to attempt to gain additional points, tell the judges before you fly and include these after the inside loops
 - One outside loop - 10 - 40 points
 - Two lazy 8's - 10 - 40 points

Biplane Speed

- This event is designed to encourage the contestants to get the most out of Walt's many biplane designs
- Eligible Designs - Any Walt Musciano designed Scientific hollow log biplane is eligible:
 - Air Champ
 - Beechcraft 17
 - Boeing F4b-4
 - British S.E. 5*
 - Curtis Hawk P6-E
 - Fokker DR-1 Triplane*
 - Little Bipe*
 - Little Stinker (Pitts Special)*
 - Thunderbird *
 - Waco Cabin *

* = available as a Black Hawk Models kit

- Four attempts (total) will be allowed for two official flights. Note: this is not the same as four attempts for each of two officials. Be sure you understand the difference
- Score will be based on the best speed/lowest time of the two official flights
- The slower of the two official flights will be used as the first tiebreaker. The most laps completed in an attempt is the next tiebreaker. A fly off will be used as the final tiebreaker
- The contestant has three minutes to enter the circle, start the engine, and launch
- Models may be hand launched or ROG from prepared surface at the competitor's discretion
- Models will be timed from the first pass over the start line until completion of 12 laps (1/2) mile
- Maximum flying height is 20 ft
- Electric starters may be used
- AMA CL Speed and CL general attempt definitions apply except as listed here. Failure to launch in 3 minutes is an attempt. Failure to complete required laps is an attempt
- Failure to get or remain airborne after launch is an attempt regardless of how little distance traversed/flown and/or regardless of whether or not the 3 minutes is up
- Successful launching and completing the 12 laps constitutes an official flight
- Flying high may, at the discretion of the Event Director, constitute a no-score official
- Note: a no-score official is not as severe as disqualification. Disqualification, as a minimum, throws you out of the event as commonly interpreted by AMA CDs, and a literal reading of the AMA rulebook requires throwing the entrant out of the contest
- Deliberate crashing, in the opinion of the event director, to avoid an official flight, will constitute a no-score official

(These rules were created by the Northern Virginia Control Line club and are presented here in a slightly modified version. A big thank you to this great group for creating this idea and bringing it to reality – RJK)