

M.A.R.K.S. Club Pylon Racing Rules December 2004

Goal:

Our goals are:

1. To promote safe, friendly racing competition among our members and with other AMA clubs.
2. To have maximum fun while keeping costs to a minimum.
3. Standardize the aircraft so that they all have nearly equal performance, leaving the skill of the pilot and luck of the draw to determine the winners of the races.

Pilots:

1. Participants must be current AMA members and must possess an AMA or club membership card to participate.
2. We encourage pilots of all skill levels to participate, but pilots must demonstrate reasonable ability to safely control the aircraft in all phases of flight.
3. During starting and racing, each pilot must have an observer/caller

Aircraft General:

Our goal is to have fun racing, but our first priority must be safety. Therefore:

1. All aircraft must pass a safety inspection, to the satisfaction of the acting contest director, prior to racing.
2. All aircraft must have been flown prior to competition.
3. Modified aircraft and aircraft that do not meet weight and C.G. requirements will be disqualified. (See "Modifications" section for acceptable modifications.)

Aircraft:

1. We will use the World Models Aircombat series ARF. This will be the only aircraft allowed for club racing at this time. The Aircombat ARF currently comes in four different color schemes – all are acceptable.
2. As mentioned in our goals, the aircraft must be **completely stock and not modified in any way**. You should assemble your ARF as shown in the instruction booklet, using the stock parts. You must resist the desire to modify it except as outlined in the "**modifications**" section.
3. Your completed aircraft must fall within the acceptable weight range and C.G. range. This will be checked at each race. Aircraft that do not meet minimum weight will be allowed to add weight to come up to the minimum. Currently, the minimum acceptable weight is 51 ounces (3 lbs 3 ounces).

Modifications:

1. You are allowed to change the covering, color scheme, and decals of your airplane to your liking. Covering materials and paint finishes are the choice of the pilot. Keep in mind, however, that your airplane must still meet minimum weight requirements. Taping over the stock hinge lines is not allowed.
2. Absolutely no modifications to airfoils, wingtips, control surfaces, wingspan, or dihedral are allowed. Please resist the desire to sand or reshape parts! Keep it as stock as possible!
3. A steerable tail wheel may be added to replace the stock skid. Its design is the choice of the pilot.
4. The firewall and battery compartment may be fuel-proofed to the pilot's desire.
5. The steel wing bolts may be replaced with nylon bolts with appropriate wing blocks.

6. The spinner may be trimmed to accommodate the propeller. Prop nuts are acceptable.

Engine:

1. We will use the O.S. 40LA engine with stock muffler. Either the blue anodized or standard finish is acceptable.
2. Absolutely **no modifications** of **ANY PART** of the engine, carburetor, or muffler are allowed.
3. The break-in procedure must be according to the manufacturer's instructions.
4. Pressurizing the fuel tank with a standard muffler tap arrangement is acceptable. No other performance enhancing features are permitted.
5. The stock spinner provided with the kit will be used. The stock spinner will accommodate a 10X6 or 11X5 with minor trimming. Replacement spinners must **closely** match the stock spinner in weight, shape, and material. Prop nuts are acceptable.
6. The stock motor mount must be used. Mounts replaced due to crash damage must closely match the original.
7. The engine may be mounted upright, inverted, or sideways. The stock firewall must be used. The firewall may not be repositioned.
8. The stock fuel tank must be used.
9. The glow plug must be one recommended in the engine manual or an equivalent. No glow plug modifications are allowed.

Fuel:

1. Fuel will be provided by the club at each race event.
2. Engine break-in must be done with fuel specified by the engine manufacturer.

Propellers:

1. Props will be provided by the club to each pilot prior to racing. No other prop may be used during racing.
2. Propellers must not be modified in any way. Chipped or damaged props will be replaced.

Radio Gear:

1. The radio installation should be as shown in the assembly instructions. All aircraft must have four channels and use four servos. The ailerons must use a single servo with the stock horns provided in the kit.
2. The servo size and type is at the pilot's discretion, but standard servos are encouraged. Keep in mind that your aircraft must meet minimum weight requirements.
3. Receiver batteries may be of any type but must be at least 500mah. NOTE: The battery pack may not weigh less than 3 ounces (85 grams).

Replacement Parts:

1. Only original stock parts may be used with the exception of those listed in the "modifications" section. Crash-damaged or broken parts may be replaced with parts of similar shape, weight, and material.
2. Replacement wheels must be the same size and shape of the originals.
3. Replacement parts must not give your airplane any performance advantage over other aircraft. The judgment of the contest director will be used to accept or disqualify any replacement parts.

Racing Format and Procedures

In general, races will be on the first Saturday of each month. Races may be postponed or re-scheduled for weather considerations or conflicts with closed field dates and other events. Registration will begin at 8:00 am.

All general club rules and AMA safety rules will be adhered to at our pylon races, as they do at all club events.

Entries:

1. Enter as many aircraft as you like. Each entry will be considered a separate entry and will require a separate entry fee. A back-up plane can be substituted for a crashed plane at no charge.
2. Each entry may be flown by only one pilot. (Two pilots may not use the same aircraft, but one pilot may use more than one aircraft.)

Safety Inspection:

1. After registration, each aircraft will be inspected for safety and conformity to rules. Please have the wing and cowling removed to speed the inspection process.
2. Each aircraft must pass a 150 foot radio range check with the antenna collapsed.

Fueling and Run-up:

1. Fuel will be provided by the club. No other fuels will be allowed.
2. All aircraft will be completely de-fueled in a designated area, and then filled with club fuel. No fueling will be allowed in the pilot's pit area.
3. Run-up must be done with the club-provided fuel.

Engine Start and Takeoff:

1. All starting of engines will be done at the flight line. Pilots should be ready to start when their race heat is called.
2. When the race director calls "start engines" pilots will have three minutes to start and become airborne.
3. After takeoff, pilots should fly to an altitude and area that allows others to takeoff.

Race Start:

1. The races will use a flying start.
2. When 20 seconds remain in the three-minute take-off window, the starter will loudly announce "twenty seconds" signaling that the race will begin in 20 seconds.
3. A race official will count down the last five seconds prior to the start. "Five, four, three, two, one, start!" Your goal should be to cross the start line just *after* the count gets to "Start". A horn will be blown when the official counts "Start" to signal the start of the race.
4. You should fly straight and level or make a shallow dive to reach the start line *just after* the start horn sounds. Shallow dives to gain speed *outside* the left pylon are acceptable, but all pilots shall fly straight and level between the left pylon and the start line. Any loops or abrupt maneuvering near the start line will be called as a "blown start". Aircraft on the back side of the course that make a sharp U-turn to the start line will also be called for a blown start (see #6 below).
5. Aircraft that reach the start line prior to the horn will be called for a "blown start". **The penalty for a "blown start" will be the loss of one finish position.**

6. Any aircraft to the right of the start line before the “start” signal will be considered to have blown the start.

Racing!

1. Fly safely! Out of control, unsafe, and intentionally aggressive flying will result in disqualification by the contest director. Dead-line infractions will result in a zero for the heat. Stay aware of other aircraft.
2. We will fly a 10 lap race using left turns around a two-pylon course.
3. A maximum of five aircraft will be allowed to race in any one heat.
4. All aircraft must begin and end the race by crossing the start line.
5. Aircraft damaged in any mid-air contact must land (if able) immediately.
6. Keep track of your laps. After completion of ten laps, pull out of the race course and away from aircraft still racing.
7. When directed, land your aircraft normally. DEAD STICK AIRCRAFT ALWAYS HAVE PRIORITY.

Race Course:

1. We will use a two-pylon course. The pylons will be 660 feet apart and a minimum of 330 feet from the dead line.
2. Absolutely no one will be allowed to be on the course (in front of the dead line) during a race.

Judging:

1. Pylon judges will be stationed in line-of-sight with each pylon but behind the dead-line. Pylon judges will call out pylon infractions to the race director after the race. No judges or pilots will be on the race course during a race.
2. A Start Judge will judge the start and finish line and determine start penalties as well as the winner across the finish line.
3. The Contest/Race director will have authority to make final rulings and decisions on penalties.

Penalties:

1. Blown Starts: As mentioned in the “Race Start” section, blown starts will result in a loss of one finish position.
2. Gross Start Violations: Abrupt maneuvers and aerobatics near the start line will incur a “zero” for the heat. Gross violations also include reaching the start line more than two seconds prior to the start horn.
3. The idea is to fly around the pylons. Pylon cuts (not flying past the pylon) will be assessed a penalty of 1 finish position. Two or more pylon cuts in one race will result in a zero for the heat. Gross pylon cuts will be given a zero for the heat.
4. Dangerous and careless flying will result in disqualification.

Mid-Air Collisions

1. Mid-air collisions are likely and will be considered “no fault”.
2. Aircraft **damaged** in any mid-air contact at any time must land immediately so they can be inspected for safety.

Points:

1. The winner of each heat race will receive three points. The second place finisher will receive two points. The third place finisher will receive one point. Finish positions will be

determined after all penalties are assessed. Aircraft not completing all ten laps will receive zero points.

Who Really Won the Race?

1. The “winner” of each race is not necessarily the pilot who crossed the finish line first. The race winner can only be determined after all the penalties are assessed. A pilot who finishes far ahead of everyone else may give the illusion of being “fast” or “superior.” Usually, however, large margins of victory are the result of several pylon cuts! Don’t be discouraged. Keep in mind that you are not only racing against other airplanes, you are also racing against the course. Winners win by flying well AND by staying on the course (not cutting). Time after time, it is the pilot who makes the fewest mistakes that goes home with the cash!

Heat Races and Cup Races

1. The entries for each day will be organized randomly into heat races. Ideally there will be four planes in each heat race but this may not always be possible. The number of heat races and preliminary rounds is at the discretion of the contest director.

2. After the preliminary rounds, the pilots with the highest point totals will advance to the cup race to compete for the cash prizes. The contest director shall decide how many planes will participate in the cup race. Consolation races may also be held at the director’s discretion. It may be necessary to have “fly-off” races to settle ties. Ties may also be settled by allowing the pilot with the fewest penalties for the day to advance.

Prizes

1. Awarding of prizes is at the discretion of the club and contest director. In general, cash prizes will be awarded for the top three finish positions based on the amount of participation for the day. Obviously, the more pilots we have – the more we can pay out! Generally, we will pay 40% of the total purse to the winner, 20% to the second place finisher, and 10% to third. The club keeps 30% to pay for fuel, props, trophies, etc. On days when participation is very high, the club may elect to pay a fourth place prize or modify the percentage payout.

MARKS CUP

1. Point totals for the season will be recorded and the pilot with the most points at the end of the season will be recognized as the winner of the MARKS CUP. The pilot’s name will be inscribed on the MARKS CUP trophy, and the pilot will receive an individual trophy as well.