

# **MIDDLESEX COUNTY R/C FLIERS** **FIFTEENTH ANNUAL** **CONSTRUCTION DERBY**

TEST YOUR CONSTRUCTION ABILITY OF A FLYABLE RC AIRPLANE.

The Middlesex County R/C Fliers are having a Construction Derby on June 14, 2009 (Rain Date June 28, 2009). **The event will be made up of two to three person teams chosen randomly the day of the event.** The teams will be provided building materials and given up to 90 minutes to construct a flyable RC airplane. Upon completion of the airplane, the team will be required to demonstrate its flyability by performing a variety of in-flight maneuvers. Awards for top three teams will be provided. **IF YOU DID NOT ATTEND LAST YEAR'S EVENT YOU MISSED THE MOST FUN YOU CAN HAVE IN THE RC HOBBY.**

If you do not want to participate, come join the fun anyway and be amazed at the planes that are constructed. A barbecue, complementary to all participants, will be held after the construction, prior to flying.

The event will be held:

**JUNE 14, 2009**  
**(RAIN DATE JUNE 28<sup>th</sup>)**

**AT**

**MIDDLESEX COUNTY R/C FLIERS FIELD**  
**BILLERICA, MA**

**(From Rt. 3 to exit 28 turn right on Treble Cove Rd.**

**The field is ¼ mile on the left, across from the House of Corrections)**

**STARTING TIME**

**9:30 AM**

**(Contestants should arrive by 9:00 AM to pick up their instruction packs.)**

Each entry is required to include two to three derby contestants. Teams will be randomly created by the derby coordinator on the day of the event.

- **Entries are limited to ten teams**
- **Prizes will be given to the top three place teams (1<sup>st</sup> place \$100, 2<sup>nd</sup> place \$75, 3<sup>rd</sup> place \$50)**
- **Entry fees will be \$5 for MCRCF Club Members and \$10 for non-members.**
- **See the back side of this notice for event rules.**
- **Barbecue and refreshments will be available free of charge to all participants!**

For more information contact the event coordinators:

**Raymond Capobianco**  
[Raymond@capobiancofamily.com](mailto:Raymond@capobiancofamily.com)  
**(781) 944-6056**

**James Osborn**  
[jto@mitre.org](mailto:jto@mitre.org)  
**(617) 893-9668**

# **CONSTRUCTION DERBY RULES**

The purpose of the Construction Derby is to have fun. To make the event fun and fair for everyone we must have some basic rules.

1. All team members must be a current AMA member. Proof will be required at the start of the contest.
2. All current AMA rules will be observed.
3. A qualified aircraft must stay airborne for a minimum of ten seconds and must include the following components:
  - 32 ±2" Wing width
  - Working rudder
  - Working throttle
  - 25 ±2" Model length including motor
  - Touch and go skids can not be longer than 12" total
4. No pre-drawn plans can be used.
5. All teams are required to use only the resources resident within the team itself. No outside assistance of any kind will be permitted.
6. Competing Teams must supply the following items:
  - Computerized Radio (with Elevon and Flaperon functions and programmable mixes meeting 1991 Gold standard) with receiver, 4 servos with control horn (maximum) and battery pack. No foam will be allowed; the kit of parts supplied will include material for this use.
  - RC Engine - glow fuel 15 to 32 size 2 stroke with prop, safety spinner.
  - 6 oz. Fuel tank (assembled) - with 1 foot of fuel tubing.

**Tools:**

  - Xacto Knife with (2) #11 blade
  - Straight edge razor blade (2)
  - 1/8" Small flat blade screw driver
  - Drill (battery operated) with drill bit to fit engine mounting screws
  - (1) Pliers & 2 Drill Bits (1/16 & 5/64)
  - (1) Heavy gauge wire cutters
  - #0 Philips Screw Driver
  - (1) 3/32" Allen Wrench (used for motor mount)
7. Teams will consist of a minimum of two and a maximum of three members.
8. Each team will be given a parts bag at the start of the contest. The team will be given a 15 minute observation period to look at the building materials before the construction time will start. No construction can be performed during this period. This period will be used by the team, to determine the type of plane to construct.
9. Following the observation period, each team will be given a period of 90 minutes to construct a flyable plane. The teams will be timed and will be given 1 point for each minute of construction time. A penalty period will follow to allow those teams to finish their planes, if needed. During the penalty period the teams still building will receive 2 points per minute. Total building time will be a maximum of 2 ½ hours. Teams not completed at the end of 2 ½ hour period will be disqualified. Teams spending the least amount of time building the plane will be charged the fewest points.
10. Following the construction period, a safety check of the plane will be conducted. A team plane failing the safety check will be allowed to fix the faults, but will be charged at 3 points per minute used for construction. The Safety Officer from the Middlesex County R/C Fliers will conduct the safety inspection and will brief each team of the items to be inspected prior to the start of the event.
11. Each team will demonstrate the flyability of their plane. The flying team must have a single pilot and a spotter when conducting the flying events. Each team will earn points for each of the maneuvers listed and will receive up to the maximum points allowed for that event. No maneuver can be duplicated for points. Each maneuver must be performed to the specification described in the AMA Competition Regulations, which will be provided to each team at the contest. The maneuvers listed do not need to be done in sequence nor do all need to be completed. Only those maneuvers that can be done safely should be performed. The team flying must call out each maneuver before the maneuver and call out the start and end of the maneuver, to be able to score any points. If no maneuvers are performed, except hand launch airborne for ten seconds, the team can land the plane and correct the defect (ex. engine running, control surfaces, etc.), but will be charged 3 points per minute while correcting the defect. This can only be done once. The second flight will be the scoring flight.

<u>Maneuver</u>	<u>Max. Points</u>	<u>Maneuver</u>	<u>Max. Points</u>
Take-Off Hand Launch	5	Straight and level flight the length of the runway	5
Procedure Turn	5	Two Consecutive Inside Loops	10
Two Consecutive Horizontal Rolls	10	Immelmann Turn	10
Stall Turn	5	Touch and Go Landing	10
Horizontal Figure Eight	5	Outside Loop	10
Split S	10	Spot Landing	5

12. Final scoring will be the total points scored during construction minus the points scored during the flying events. The team with the lowest score will win the event. If a team has recorded fewer points on construction than recorded on flying, a negative score will be given.