2015 TDM RULES

The Tour d'Michigan is the collaborative effort of the West Michigan Smoke Rings, the Lansing Area Flying Aces, the Broome Park Circle Burners, and the Jackson Radio Control Club. The purpose is to have fun while promoting the hobby/sport of Control Line flying. The format offers something for every skill level. Each event will consist of 4-5 events selected from a pool of possible events by that club. Craftsmanship will also be judged at each event. The events scheduled at each site will be posted on the TDM web site no later than 15 March 2014 to allow participants ample time to build suitable aircraft for each event.

Four contests are scheduled for 2015:

- **Lansing on Saturday, 30 May 2015**
- **Jackson on Saturday, 13 June 2015**
- **Flint on Saturday, 1 August 2015**
- **Kalamazoo on Saturday, 26 September 2015**
- **Rain Dates are the next day (Sunday)**

General Rules for All Events

- **All contestants must have current AMA card or be a guest flyer per AMA rules**
- Plane, control surfaces, and flight lines will be subjected to an inspection and pull test
- Control line length for 1/2A engines will be 35 feet +/- 6 inches
- Control line length for .15 to .19 engines will be 52 feet +/- 6 inches
- Control line length for .35 engines will be 60 feet +/- 6 inches Length is measured handle to aircraft centerline and is a MINIMUM LENGTH for all events except stunt
- Longer lines may be used but may not be compatible with the concrete circle at Kalamazoo
- Safety thong must be attached to flight handle and flier's wrist during flights except for racing events (to allow clearing tangled lines)
- Eye protection is STRONGLY ENCOURAGED at all events)
- Electric starters are permitted for all events
- 1st, 2nd, and 3rd places will be awarded for each event at each venue
- 1st, 2nd, and 3rd places will be awarded for Craftsmanship at each venue
- Pilots will have one minute to start engine after arrival in the circle or pilot is moved to end of event line
- **Pilot meeting at 0845, flying starts at 0900 for all events**

Events

The following events are scheduled for the 2015 TDM contests:

- **Lansing**
  - Fun Stunt
  - .35 Rat Race
  - Beginners Stunt
  - .15 Speed Run
- **Jackson**
  - Beginner's Stunt
  - .35 Rat Race
  - Balloon Bust
  - Counted Lap Event
- **Flint**
  - Fun Stunt
  - Slalom
  - .15 Rat Race
  - 1/2A Race
- **Kalamazoo**
  - Fun Stunt
  - Slalom
  - .15 Rat Race
  - 1/2A Race
  - Balloon Bust (time permitting)

Event Rules

Fun Stunt

- Fliers will be required to fly the complete stunt pattern in one flight
  - Take Off and Level Flight - 4 Laps (0 - 10 Points)
    - 2 Level Laps
  - Climb and Dive - 2 Consecutive (0 - 10 Points)
    - 2 Level Laps
  - Wingovers - 2 Consecutive (0 - 10 Points)
    - 2 Level Laps
  - High and Level - 4 Full Laps (0 - 10 Points)
    - 2 Level Laps
  - One Inside Loop (0 - 10 Points)
    - 2 Level Laps
  - Roller Coaster - 2 Laps (0 - 10 Points)
    - 2 Level Laps
  - Optional - Loop, Figure 8, or Inverted Flight (0 - 10 Points)
    - 2 Level Laps
  - Landing (0 - 10 Points)

35 Rat Race (Foxacoy Racing)

- Each flier will designate a person to time their run
- Pit crew allowed to start/re-start flier's engine
- All engines will be running and aircraft released simultaneously to begin each race
- Winner is the flier having the shortest time for flying 100 full laps
- In the event of a tie, a fly-off will be used to break the tie
- Races will consist of 2 to 3 aircraft depending on the number of entries - no solo flights
- Aircraft will maintain a racing altitude of 10 - 15 feet
- A temporary altitude of 25 feet is permitted for passing
- One warning will be given for the first altitude violation
- Second altitude violation will result in disqualification
- Aircraft can be hand launched or ROG
- Engines limited to STOCK Fox.35 Stunt or STOCK McCoy 35 Redhead
- Plain bearings
- UNMODIFIED except for any stock Fox or McCoy parts
- Suction fuel systems only
- Mufflers are optional but encouraged
- One pit stop is required per race
- Start window is 30 seconds ~ first horn begins prop flipping ~ second horn (30 seconds later) signals plane launch
- Late starters can still launch when engine fires
- Aircraft must have at least one wheel and wheel strut and be ROG capable
- Wing area must ne 300 square inches minimum and 1 inch wing thickness
- Fuel must be 10% nitro ONLY
- Props – 9/6 or 9/7 commercially available wood or plastic –balancing is only allowable modification

Balloon Bust

- Targets will consist of **5 balloons** (no replacements) supported on 1/4 inch square balsa sticks placed at equal intervals around the flight circle – helium inflation is optional
- No tower or other obstruction is used
- Points are awarded for broken balloons only. Cutting the balloon free from the supporting stick without breaking the balloon does not score any points
- Balloon must be broken by aircraft impact – ground pops do not count
- Fliers have three minutes to break as many balloons as possible. Aircraft can be re-fueled and re-launched within the 5-minute window.
- Timing stops when 5th balloon is busted. Pilot can terminate flight before the 3-minute time limit and without breaking all 5 balloons at his/her discretion
- 20 Points awarded for each balloon busted within 3 minute time limit
- 25-point bonus for cutting balloon free on first pass and then breaking it on the next pass (Pilot must remain in pilot's circle – no chasing! - helium balloons only)
- In the event of a tie, a fly-off will be used to break the tie
- Elapsed time for breaking all balloons (in seconds) subtracted from balloon points equals final score

Counted Lap Event

- Any size plane allowed
- Club can designate any number of laps
- One point awarded for each lap up to designated lap number

- One point deducted for each lap over designated lap number
- Pit stops allowed but not required
- 5 minute maximum for pit stops
- Runs can only be terminated by running out of fuel (no dorking, no speed controls)
- Pilot can terminate run at any point within above rules without completing designated lap number
- Ex: A pilot can complete any number of laps with or without a pit stop if he thinks his points total will be the highest score)
- In the event of a tie, a fly-off will be required to break the tie

Slalom

- Four upright poles, each with a three foot section painted with caution orange, will be located around the flight circle
- The poles will be placed outside the 60 foot flying circle
- The orange section on each pole will be at a different height
- A 1/4 inch breakable balsa stick will mark the upper and lower boundaries of the orange area and will extend toward the center of the circle. The sticks will be long enough to reach to the center of the fuselage
- The sticks are a visual reference for the scorer at each pole to make sure the plane flies at the correct level (between the sticks)
- Each pilot is allowed two minutes to pass through as many gates as possible by flying between the balsa sticks marking the orange section of the pipe.
- One point is scored for each gate successfully flown
- Hitting and breaking a stick eliminates that gate from the rest of the flight and will not longer score any points
- The challenge is the ability to precisely control your airplane in level flight

.15 Racing - Speed Run Division

- **Awards:** award will be presented for top speed
- **Event Purpose:** This event is a FUN event intended to encourage craftsmanship in the construction of, and airmanship in the piloting of the aircraft entered in this event. The skill requirements to participate are minimal and the intention is to increase each participant's skill as the season progresses
- **Aircraft Type:** Aircraft participating in this event must be representations of actual race planes (Goodyear, Formula 1, Thompson, Golden Age, etc.). Planes built from the Sig Buster or Shoestring kits or built to plans from those kits or provided by the organizers require no documentation. Planes built from other sources require documentation proving that the airplane is a model of an actual racer. The judge/ CD Must be able to recognize that the model looks like the full size airplane. A picture or a three-view would suffice for documentation
- **Construction:** Solid fuselage. Enclosed bell crank allowed – wing must be all wood – not fabric , tissue, or shrink plastic covered. Cheek cowls, prototype paint schemes, and other scale enhancements are encouraged but not required
- **Landing Gear:** Two wheels 1 ½ to 2 inches diameter required - no position restriction
- **Engine:** Any stock .15 plain bearing engine. Needle valve and back plate replacement are the only allowable modifications
- **Wing Span:** Between 24 - 29 inches (Tip to tip)
- **Fuselage Length:** Between 25 – 27 inches (Spinner to tail)

- **Wing Area:** 140 square inches minimum
- **Fuel:** Maximum 10% Nitro content
- **Fuel Tank:** No size restriction, but remember that runs over 3 minutes are disqualified!
- **Propeller:** No restriction
- **Lines:** Handle to aircraft midline 52.5 feet +/- 6 inches, any diameter
- **Speed Runs:** 16 laps from a running start. Pilot signals start of run. Two timers time each run with the time/speed being the average of the two. Two attempts per plane per meet, on a rotating basis. Maximum run time is 3 minutes starting from initial release of aircraft. Runs over 3 minutes are disallowed. Lowest time / fastest speed wins
- **Safety:** Safety glasses are mandatory for all personnel starting engines and launching aircraft. Ear protection is optional but encouraged. The Contest Director may disqualify any contestant or aircraft representing a hazard to themselves or others
- **Dispute Resolution:** The Contest Director is the final judge for any and all disputes

.15 Racing - Rat Race Division

- **Event Purpose:** This event is a FUN event intended to provide a step up for pilots who have mastered the Speed Run Division and demonstrate the skill to participate in multi-plane events
- **Aircraft Type:** Aircraft participating in this event must be representations of actual race planes (Goodyear, Formula 1, Thompson, Golden Age, etc.). Planes built from the Sig Buster or Shoestring kits or built to plans from those kits or provided by the organizers require no documentation. Planes built from other sources require documentation proving that the airplane is a model of an actual racer. The judge/ CD Must be able to recognize that the model looks like the full size airplane. A picture or a three-view would suffice for documentation
- **Construction:** Solid fuselage. Enclosed bell crank allowed – wing must be all wood – not fabric , tissue, or shrink plastic covered. Cheek cowls, prototype paint schemes, and other scale enhancements are encouraged but not required
- **Landing Gear:** Two wheels 1 ½ to 2 inches diameter required - no restriction on position
- **Engine:** Any stock .15 plain bearing engine. Needle valve and back plate replacement are the only allowable modifications
- **Wing Span:** Between 24 - 29 inches (Tip to tip)
- **Fuselage Length:** Between 25 – 27 inches (Spinner to tail)
- **Wing Area:** 140 square inches minimum
- **Fuel:** Maximum 10% Nitro content
- **Fuel Tank:** No size restriction
- **Propeller:** No restriction
- **Lines:** Handle to aircraft midline 52.5 feet +/- 6 inches, any diameter
- **Race procedure:** 2 to 3 flyers per race depending on number of entries. Heats consist of 40 laps with 1 required pit stop. Final consists of 80 laps with 2 required pit stops. First plane to complete the required laps and pit stops wins.
- **Altitude:** Aircraft will maintain a 12-15 foot altitude except for passing. Aircraft will return to 12-15 foot altitude immediately after pass. One warning will be given, DQ with second infraction.
- **Flying Technique:** No whipping or back stepping except briefly for aircraft control
- **Safety:** Safety glasses are mandatory for all personnel starting engines and launching aircraft. Ear protection is optional but encouraged. Safety thongs are optional. The

Contest Director may disqualify any contestant or aircraft representing a hazard to themselves or others
- **Dispute Resolution:** The Contest Director is the final judge for any and all disputes

1/2A Racing

- **Event Purpose:** This is a FUN event intended to provide a venue for racing small displacement engines
- **Aircraft Type:**Any
- **Construction:**Any
- **Landing Gear:**Optional
- **Engine:**STOCK Engines: Cox Baby Bee - Cox Golden Bee - Cox Black Widow - Cox Texaco - OK Cub - Any Production Reed Valve Integral Tank Engine - Cox standard or high compression heads allowed - MECOA (or similar) glo plug heads allowed
- **Wing Span:**Any
- **Fuselage Length:**Any
- **Wing Area:**Any
- **Fuel:**Any
- **Fuel Tank:**Integral Tank Engine Required
- **Propeller:**Any
- **Lines:**Handle to aircraft midline 35 feet +/- 6 inches, any diameter, .008 Steel or Dacron
- **Race procedure:** 2 to 3 flyers per race depending on number of entries. Heats consist of 50 laps with 1 required pit stop. Final consists of 100 laps with 2 required pitstops. First plane to complete the required laps and pit stops wins
- **Altitude:** Aircraft will maintain a 12-15 foot altitude except for passing. Aircraft will return to 12-15 foot altitude immediately after pass. One warning will be given, DQ with second infraction
- **Flying Technique:** No whipping or back stepping except briefly for aircraft control
- **Safety:** Safety glasses are mandatory for all personnel starting engines and launching aircraft. Ear protection is optional but encouraged. The Contest Director may disqualify any contestant or aircraft representing a hazard to themselves or others
- **Dispute Resolution:** The Contest Director is the final judge for any and all disputes

Beginners Stunt

- The Stunt pattern will be that of the AMA Beginner Class. Please check the AMA rules (available at AMA or TDM web sites) for complete explanation.
    - Take off and level flight
    - Wingover(not reverse)
    - Three inside loops
    - Three outside loops
    - Two inside square loops
    - Two horizontal eights
    - Two overhead eights
    - Landing

Awards

- The tour will produce winners' certificates for 1st, 2nd, and 3rd places for each event at each venue. Each club can add whatever additional awards they wish.

Judging

- Judges will be designated by the CD at each event

Fees

- $20.00 per meet regardless of the number of events entered
- Junior flyers (<18 years of age) are free

Tour Officers

- Contact person for each event:
  - Kalamazoo – Al Rohrstaff - (269) 344-4571
  - Flint – John Paris - (810) 224-1133
  - Lansing – Rich Kacmarsky - (517) 323-8932
  - Jackson – Vince Bodde - (517) 783-1121

Edited by: Rich Kacmarsky – March 2015