



# Kitsap Aircraft Radio Control Society 2017 Park Flier Racing Rules

Version 1.4

## Schedule

1. The 2017 racing season begins on the first Saturday in April, and runs through the first Saturday in October 2017. Races occur on the 1st Saturday of each included month starting at 10:00.
2. On the first Saturday of March there will be a clinic held at 10:00 at the field. The rules, aircraft specifications and other aspects of the racing season will be discussed. (This is a great time to get your questions answered.) Anyone requiring a racing number will have one assigned at that time.

## Equipment Requirements

1. All competitors will fly identical ParkZone/eFlite 1.1m T-28 Trojan park fliers with stock landing gear and stock propeller.
2. Use of landing gear is required. Landing gear must be the original gear supplied with the aircraft and must be attached to the bottom of the fuselage producing drag.
3. Aircraft must weigh a minimum of 30oz. ready to fly with battery installed.
4. The battery must be a Lithium Polymer (LiPo), 3S1P (11.1 volts nominal) with a maximum voltage of 4.21v per cell at start. All maximum and continuous discharge rates are allowed.
5. RPM must not exceed 8500 rpm on a bench after continuous max throttle for 5 seconds with a fresh racing battery and stock prop.
6. External airframe components must remain stock with no planform dimensional changes.
7. Alteration of colors is both permissible and recommended. Re-coloring the wing tips and/or the vertical tail to assist in identification by the spotter and pilot is encouraged as it makes identification during the contest easier for the line judges.
8. Weight and RPM may be spot checked at the discretion of the Racing Coordinator.

## Teams and Aircraft Numbering

1. Before their first race of the season, participants must indicate whether they are competing as individuals or as a team.
2. Each individual or team will be assigned a unique number which they will use for the entire season. When racing as a team, any competition awards will be awarded to the team as identified by the aircraft number, not to the individual pilots.

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- Each aircraft will be identified with the pilot/team's number. The wing number will be six or more inches in height and affixed on the top of the left wing and on the bottom of the right wing in a manner in which to be read from the sideline as the aircraft passes. The number **must** be in a color contrasting with the airframe surface, and in a stroke weight heavy enough to allow for easy identification by judges during the event.



Figure 1: Illustration of how the race numbers should be applied to the wings and fuselage.

- Individual/Team numbers will be assigned in the following order:
  - Teams/individuals that are competing in their rookie year will be awarded the next available number as a permanent number.
  - Team/individual numbers will be issued no less than two (2) weeks prior to the first race to provide teams sufficient time to apply numbers to their aircraft.
  - Once assigned a number, the pilot/team will continue to use that number each season until they retire from racing.
  - The Pilots/Teams completing the previous season in the top three (3) positions have the *option* of using their previous season standing as their racing number.
  - If a top three team uses their previous year's standing as their race number, the following season they will resume competing under their previous number, excepting as is covered by (d) above.
- All teams/individuals have the option of placing their official standing from the previous season on the left side of the fuselage, *provided* a fuselage racing number has been applied. **This number shall not exceed 1/3 of the height of the fuselage racing number**, in order to avoid confusion with the aircraft racing number.

### Race Operations

- Two poles will be spaced in alignment with the ends of the fabric runway, near the middle of the race course (the grassy area.) The poles are to be placed in a location to the west of the runway between the tree line and a safe distance beyond the runway.
- Each race day there will be three (3) Heats
- Each Heat will consist of seven (7) laps around the course.
- Number of planes per Section.
  - No more than six (6) aircraft may participate in any given Section.
  - If more than one Section per Heat is required (see (a) above), the number of Sections per Heat will be established to maintain the most equal number of planes possible per Section, while complying with rule (a). For instance:
    - 7 aircraft: one Section of four (4), and another of three (3) aircraft.

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- 8 aircraft: two Sections of four (4) aircraft each.  
etc.
  - c. Each aircraft will participate in only one Section per Heat.
  - d. Aircraft will be lined up in their starting boxes as instructed by the CD, and I.A.W. Illustration 2 or 3: Illustrations of correct aircraft positioning within the box, found in **Appendix A: Starting Grid Layout**.
5. The starting positions for the first heat of the first race of the season will be chosen by lot. The entire grid for all required sections will be established by the order in which aircraft numbers are drawn or show-up order at the field. Beginning with the May races starting grid positions will be determined by the current overall standings of the pilots. This should help those less skilled pilots earn more points. Each new month the starting positions for the first heat of the day will be according to your current overall standing. i.e. first place standing will be pole position first section, first heat, second place standing will be #2 position first heat and so-on. Remaining heats will be as described in 6 below.
6. Heats 2-3: The participants of each successive Heat/Section will form up in the order in which they completed the previous heat.

## Race Starting Procedure

1. Kitsap ARCS Park Flier Racing start will follow the Formula One Auto Racing model. The aircraft will be lined up on the runway in a starting grid, with the "pole" position (the aircraft which won the lottery or the last heat/section) in the front row, on the far side from the pilots stations (the west side of the runway.)
2. There will be a 3 second countdown for the start of each Section. Racers leaving the starting position before the CD shouts "GO!" must perform a penalty orbit of the first pole they encounter after being called on the penalty. Failure to comply will result in forfeiture of any points for that Section.
3. Each pilot shall call off the completed lap number as they pass the start/finish line, where the CD will be located. On the 7<sup>th</sup> lap you must call out "7" and your name. The CD must hear your lap calls, and your name on the 7<sup>th</sup> and final lap, be loud.

## Northbound Start

1. A northbound start involves the aircraft starting in the direction of the race circuit.
  - a. The race begins when the CD completes the 3 second countdown and shouts "Go!" All racers shall take off and commence the race in a counter clockwise direction around the poles.
  - b. Race timing shall start at the moment the CD completes the countdown and shouts "Go!"
  - c. As each pilot passes the start/finish line the next time, he/she will call out "ONE", indicating that they have finished the first lap of racing.
2. The race is complete and race timing stops when the first pilot crosses the start/finish line after completing their 7th lap.

## Southbound Start

1. A southbound start involves the aircraft starting in the opposite direction of the race circuit.
  - a. The CD will complete the 3 second countdown and shout "Go!" At that time, all racers shall take off and bear right to perform a counter-clockwise turn around the south pole (on the left wing of the aircraft.) This is the only time that your aircraft must actually go around the pole.
  - b. Upon completing the turn around the south pole, the racers will head for the north pole.
  - c. As each pilot passes the start/finish line, he/she will call out "ZERO", indicating that they have passed the start/finish line and are now racing.
  - d. Race timing shall start at the moment the first pilot crosses the start/finish line.
2. The race is complete and race timing stops when the first pilot crosses the start/finish line after completing their 7th lap.

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## Pit Lane Start

1. Deleted

## Disqualifications

1. Any pilot who flies between the runway and the pilots' stations at any time will be immediately disqualified.
2. Failure to orbit a pylon after a cut will result in disqualification from the heat with no points awarded.

## Collisions

1. Any aircraft involved in a collision with another aircraft, the ground, or any other object are subject to disqualification by the CD. The CD will query the pilots as to the controllability of their aircraft, and will observe the aircraft for indications of distress. If, in the opinion of the CD the aircraft's controllability has been compromised, the flier will be DQ'd and will be required to land.
2. After a collision, all aircraft involved, whether disqualified or not, will be subject to a safety check, and may require a test flight at the discretion of the CD before resuming racing.

## Race Officials

1. Duane Barrett shall serve as Kitsap ARCS Park Flier Racing Contest Coordinator (CD) in 2017.
2. If the 2017 Park Flier Racing Contest Coordinator is unavailable on race day, one club member will be selected as Substitute Contest Coordinator for that day.
  - a. In the event of a possible rule infraction or a pilots' dispute, the decision of the Contest Coordinator shall be final.
  - b. If the Contest Coordinator is a party to a dispute, a vote of the pilots present shall determine the dispute's resolution.
  - c. Pilots who have previously held the position of Substitute Contest Coordinator may elect not to repeat in the role.
3. There will be a pylon judge for each pylon, stationed safely on the east side of the runway. Planes cutting a pylon must perform a penalty orbit of one pylon before completion of the race. Failure to comply will result in forfeiture of any points for that Heat.
4. Planes cutting the LAST pylon must return to and orbit that pylon. Failure to do so will result in disqualification for that heat.

## Test/Certification Flights

1. Any aircraft suffering damage requiring repair to wings, fuselage or flight controls will be required to make a test flight under the observation of the Contest Director before they will be allowed to participate in any further races.
2. The Contest Director may waive the test flight requirement if in his/her opinion the repair does not pose risk to flight worthiness.

## Points System

1. Points are awarded on a per Heat basis. The following values shall be used:
  - a. 1<sup>st</sup> Place – 25 points
  - b. 2<sup>nd</sup> Place – 18 points
  - c. 3<sup>rd</sup> Place – 15 points
  - d. 4<sup>th</sup> Place – 12 points
  - e. 5<sup>th</sup> Place – 10 points
  - f. 6<sup>th</sup> Place – 8 points
2. Points will not be awarded under the following conditions:
3. Any racer that fails to land on or near the runway.
4. Any racer who flies outside the approved field flight area. The offending racer must remain clear the race area until the race finishes.

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5. Any racer who damages the runway will have 50 **penalty** points deducted from their score. Damaging a pylon will result in 10 **penalty** points being deducted from the pilot's score..
6. The racer/team with the most accumulated points for the season will be declared champion and will receive an award at the annual Club Banquet.
7. All racers/teams who participate will be assigned their end of year standing at the annual Club Banquet.

### **Rules Changes**

1. Any rule other than the points rule can be changed by a 2/3 majority of participating pilots.
2. Rules changes arrived at in this manner are only in force for that race day.

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## Appendix A: Starting Grid Layout

The Kitsap ARCS Park Flier Racing grid is set up to allow both northbound and southbound starts using (largely) the same set of grid makers. The grid is composed of four rows of two grid places each, with side by side positions staggered a bit for safety.

### The Northbound Grid

The following illustration shows the active grid boxes when performing a northbound start:

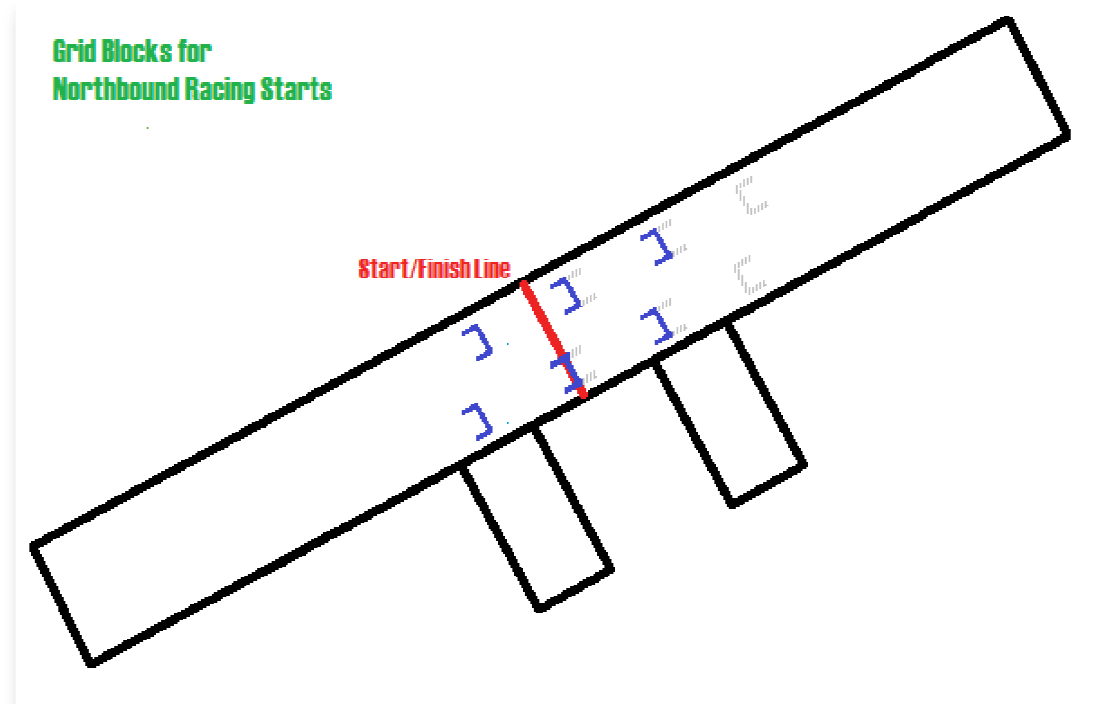


Figure 2: Northbound Starting Grid

Note that the westernmost, or southernmost three rows of grid positions (depending on your point of view) are the ones in use. The contestants are lined up approximately centered on the runway. The northernmost pair of grid boxes is not used.

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## The Southbound Grid

The following illustration shows the active grid boxes when performing a southbound start:

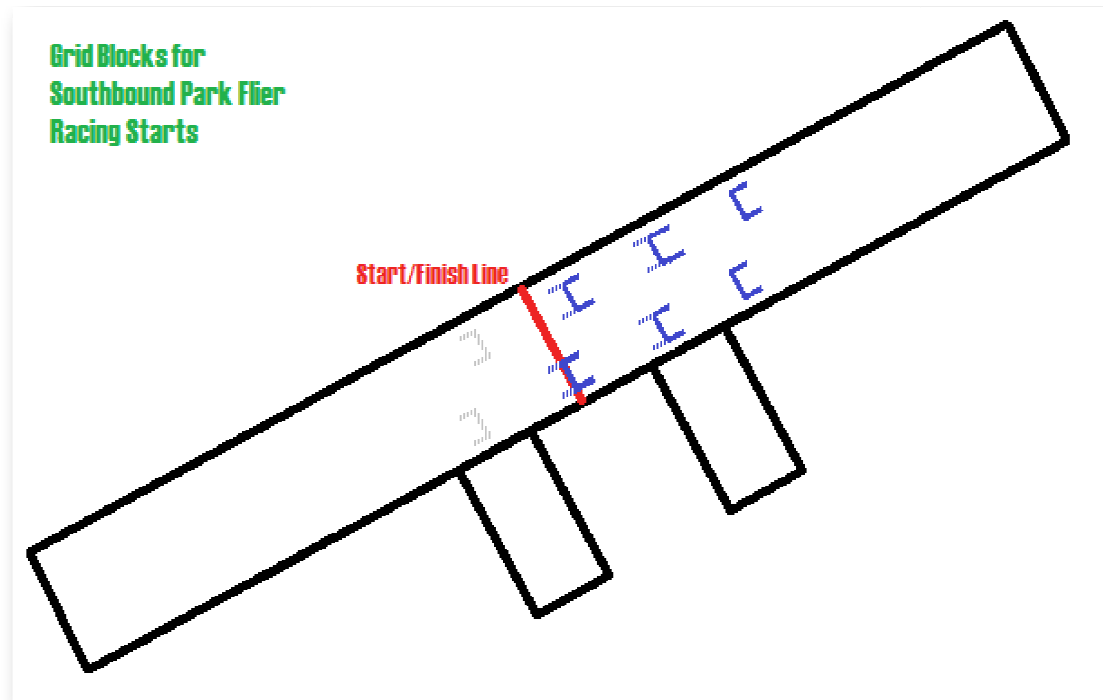


Figure 3: Southbound Starting Grid

Note that the easternmost, or northernmost three rows of grid positions (depending on your point of view) are the ones in use. The southernmost pair of grid boxes is not used.

Also note that the contestants are lined up on the North end of the runway. This is intentional, as the racers need to negotiate a right turn prior to rounding the pole in a counterclockwise direction after takeoff, but prior to the actual start of the race, which is defined as the moment the first aircraft makes the aforementioned turn around the pole.

### Positioning aircraft within the grid

Aircraft will be positioned with the nose wheel inside the position box or circle.

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## Appendix B: Pylon Judges Instructions

Park Flier Racing requires judges on each pylon to insure that all racers complete the course for each lap. The following instructions shall be read to the selected judges for the event prior to the start of the first heat.

### Pylon Judges Setup Instructions:

1. Judges must wear safety helmets.
2. Position yourself so that the end of the runway lines up exactly with the pylon.
3. Position yourself as far to the east side of the runway as is practical. In line with or next to the fence is ideal
4. Notify the CD when you are in position and ready to start by sounding two (2) short blasts on the air horn.

### Pylon Judges Race Operations Instructions:

1. Watch that each contestant flies **PAST** the pylon. Going **around** the pylon is not required. Failure to fly PAST the pylon constitutes a "cut."
2. When a contestant cuts a pylon,
  - a. Immediately sound a short blast on the air horn, then
  - b. **YELL** the color or number of the offending airplane. It is critical that the airplane ID be loud and understandable.

If you have any questions ask now.



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### List of Changes

Date	Version	Section	Change
01/21/2015	1	Disqualifications	Added rule outlines pilots' responsibility when cutting the last pylon.
03/07/2015	1.1	Airframe and DQs	Clarified battery maximum voltage and DQ for flying over the grass and pilot's stations.
Ditto	Ditto	Appendix A	Removed illustration and corrected grid layout description to specify square or circle.
Ditto	Ditto	Appendix B	Added pylon judges' instructions.
01/12/2017	1.2	Race operations	Changed #17 to use current standings after the first month for the starting grid positions each following month.
01/15/2017	1.3	Numerous	Updated to 2017, Added E-Flite T-28 which replaced the discontinued Parkzone model. Changed Contest Director to Contest Coordinator, and other minor clerical changes.
05/06/17	1.4	All	Made a complete re-numbering of all sections (editorial only). Made changes to Equipment Requirements based on racer input. Delete Pit Lane Start section.