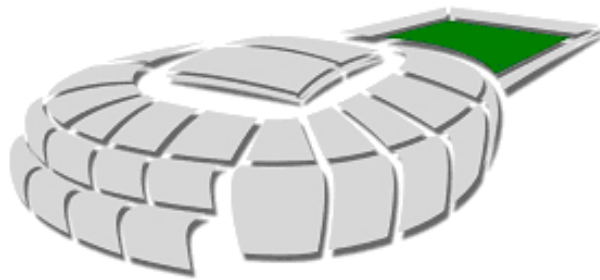


2010

**STADIUM SMACKDOWN
HELICOPTER COMPETITION**

200/400 CLASSES



**UNIVERSITY
OF PHOENIX
STADIUM**

Event Rules and Guidelines

Introduction

The 2010 Stadium Smackdown will take place on Friday, March 12th and Saturday, March 13th at the **University of Phoenix Stadium**, in Glendale, AZ.

Pilots

Pilots for the competition will be selected by the EFX Competition planning committee. We will accept applications via fax or email using the form at the end of this document.

Classes

There are three competition classes at the event; Expert Micro, Expert Mini and Sportsman. Each expert pilot may enter one or both classes (Mini and/or Micro). The Sportsman class will allow you to fly the CP heli of your choice not to exceed a main blade length of 350mm.

Micro Class (e.g. Hurricane 200, 255, Blade CP, Trex 250, etc.):

Main rotor blade length to be 255mm or less

Mini Class (e.g. T-Rex 450, Blade 400, etc.):

Main blade length to be 350mm or less

Prizes

Expert Mico and Mini Class

1st Place: \$500 Cash Prize

2nd Place \$250 Cash Prize

3rd Place \$100 RC Gift Certificate

Sportsman's Class

1st Place: \$200 RC Gift Certificate

2nd Place: \$100 RC Gift Certificate

3rd Place: \$50 RC Gift Certificate

Venue

The competition will take place on the show floor of the University of Phoenix Stadium during the Electric Flight Expo. The flying cage will be 240' L x 100' W x 100' H. Bleachers will seat up to 400 spectators and will be separated from the flying area with netting. The contest will run on Friday, March 12th and Saturday, March 13th.

Frequencies

You must fly on either a 2.4 GHz system or 72 MHz using an even numbered channel!
You must submit your requested channel on the application form below. 2.4 is preferred.

General Rules – All Classes

Overview

This year's event will be conducted with 8 pilots (subject to change) in each class with one 4 minute flight on Friday. At the conclusion of Friday's competition the judges shall tally the scores and only the top 5 pilots in each class will continue Sunday where each pilot shall receive 2 rounds of flying, not to exceed 4 minutes each flight. This year's format will consist of one required maneuver flown first, one optional maneuver flown second followed by a 2 and 1/2 minute freestyle choreographed to music.

To help ensure adequacy of music files, all music for day one must be submitted no later than 24 hours prior to the start of competition, earlier is preferred. Please email your music files to fatcatpro@gmail.com. Clearly label (or state in an email) the files to indicate day, class and round. All music will be held in confidence as not to disclose a pilot's routine to other contestants. It is encouraged to change up your freestyle to show pilot diversity should you make Friday's cut. Optional secondary music files for Saturday shall be submitted no later than the end of the day on Friday March 13th after the pilot cuts are announced.

Safety

Safety is paramount. The designated safety marshal shall have final authority on the flight line regarding matters of safety. Each pilot shall stay behind the established flight line and at no point after the helicopter's rotors are turning or while the helicopter is moving under its own inertia, may any part of the helicopter pass behind the flight line. Doing so will scratch the entire flight and result in zero points for that flight. Pilots will not be permitted to "pit" or spectate in any area that is forward of the flight line or not in a designated safe pit zone. Violations will result in one warning followed by penalties up to and including disqualification from the contest. Any out of control flying will result in the safety marshal terminating your flight. Your cooperation is appreciated.

Flight Time

Contestants shall have no more than 45 seconds from the time they are called to fly to have their helicopter in the landing area ready for flight (with some rotation of rotors). On the judges' signal, the spotter may advise the pilot that the flight may commence. Timing is critical.

Each contestant shall have 4 minutes of actual flying time to complete their flight. Each pilot will have one flight (per class) on Friday and two flights (per class) on Saturday. Contest shall begin at 1 PM each day and the pilot's meeting and roll call will be held at 12:30 PM.

Mandatory Maneuvers

Each pilot must perform the one mandatory maneuver and one of the optional maneuvers specified below. Pilots shall complete contestant data sheet during the pilot's meeting. The data sheet is to include pilot's name, age, hometown, gear being flown and team affiliation. The pilot or spotter is responsible to inform the judges of the optional maneuver selected prior to his flight.

Judging

The emphasis on this event is participation, encouragement and fun. Judging should reflect this as well as pilot ability.

Scoring & Penalties

Pilots will be scored on two scales. There are up to 70 possible points for completing mandatory maneuvers. Point awards are subjective and based on the judge's perception of whether the pilot; (a) completed the maneuver according to the rules and (b) completed the maneuver in a controlled and smooth manner. There are another 70 points possible for the freestyle routine. The optional limbo finish can score up to an additional 20 points. Judges will award points based on creativity and synchronicity as well as overall appeal to the audience. Creative use of the available airspace and existing venue obstacles will be taken into account for the scoring of each pilot's freestyle routine. Total flight time (required maneuvers, freestyle and limbo) shall not exceed 4 minutes. The spotter shall alert the pilot at 3:00 and 3:30 and the pilot shall plan to land prior to the 4 minute mark. Pilots going beyond the 4 minute mark will receive a 10 point deduction.

If a pilot crashes during a flight, he may immediately switch to a back-up helicopter. The pilot's time will continue to run and he will receive a 10 point deduction.

Expert Micro Class Event Rules

Mandatory Maneuver

Backward Inverted Figure of Eight - (35 points)

- Starting from an inverted tail in hover, the pilot will start the helicopter flying towards him and complete a reverse 360 to the right (counterclockwise).
- After the completion of the first 360, the tail should be pointing to and in line with the pilot. The pilot should then transition to a reverse 360 to his left (clockwise). The maneuver is complete at the end of the second 360 when the helicopter is again inverted, tail in pointing at and in line with the pilot.

- This maneuver should be executed at a constant altitude and constant speed. Start and finish should be stable and in line with the pilot.

Expert Optional Maneuver (select one)

Sustained Pirouetting flips (aka- chaos) (35 points)

1. Out of an upright hover model begins to pirouette to the right or left, and begins stationary flips for at least 10 seconds. Model stops upright pirouetting to the left or right then after stopping the pirouette, models pauses in a hover.
 - a. Start and stop should be at the same altitude, position and same direction of the nose started in.
 - b. Flips should be centered, symmetrical, and consistent.
 - c. Pirouette rate should be consistent and appear to flow smoothly.

4 Consecutive Tail-Down Tic-Tocs (aka- metronomes) (35 points)

1. Four tail down "arcs". There is no hesitation between arcs.
 - a. Stops should be at a consistent height.
 - b. No pauses or hesitation.
 - c. Arcs are symmetrical.
 - d. The high point of the arc is centered.

Snake (35 points)

1. Backwards horizontal arcs. Looking from the top of the maneuver it should resemble a snake figure. At least 4 arcs.
 - a. Enter/exit should be the same height as well at the center portion.
 - b. Arcs are same size/speed
 - c. Maneuver is symmetrical to the pilot's center.

Expert Mini Class Event Rules

Mandatory Maneuver

Collective Control & Flips (35 points)

Use Collective control to maintain as constant altitude as possible during these maneuvers.

1. Flips Forward (pick one of the 2 variations)

- With the helicopter hovering Tail-In, add forward cyclic and flip the helicopter to an inverted Nose-In hover, hold for five (5) seconds. From this inverted Nose-In hover add forward cyclic and flip the helicopter back to an upright Tail-In hover, hold for five (5) seconds.
- With the helicopter hovering Nose-In, add forward cyclic and flip the helicopter to an inverted Tail-In hover, hold for five (5) seconds. From this inverted Tail-In hover add forward cyclic and flip the helicopter back to an upright Nose-In hover, hold for five (5) seconds.

2. Flips Backward (pick one of the 2 variations)

- With the helicopter hovering Tail-In, add backward cyclic and flip the helicopter to an inverted Nose-In hover, hold for five (5) seconds. From this inverted Nose-In hover add backward cyclic and flip the helicopter back to an upright Tail-In hover, hold for five (5) seconds. With the helicopter hovering Nose-In, add backward cyclic and flip the helicopter to an inverted Tail-In hover, hold for five (5) seconds. From this inverted Tail-In hover add backward cyclic and flip the helicopter back to an upright Nose-In hover, hold for five (5) seconds.

Expert Optional Maneuver (choose one)

4 Point Tic-Toc (35 points)

1. Starting nose vertical in tic-tocs the heli turns with the tail rotor 90 degrees to the right or left into an aileron tic-tocs, 90 degree turn to nose down tic-tocs, 90 to opposite aileron tic-tocs, 90 degree to starting position.
 - a. Model stays stationary.
 - b. Consistent Height.
 - c. Stops 90 degrees to each other.
 - d. Holding position at each stop for tic-tocs.
 - e. Pauses same time between 90 degree turns.
 - f. Maneuver is symmetrical to the pilot's center.

3 backwards rolls continuing to 3 forward rolls (35 points)

1. Starting at right of left side model starts 3 backwards rolls. After 3 complete rolls, without hesitation go into 3 forward rolls.

- a. Model starts/stops in the same position.
- b. Consistent height/speed.
- c. No hesitation between rolls.
- d. No hesitation between reverse travel directions.
- e. Maneuver is symmetrical to the pilot's center.

Inverted Autorotation (30 points)

1. Starting the height of the ceiling throttle hold is shut off and on the descent one half forward flip is completed.
 - a. Half flip is centered on descent.
 - b. Landing is within 10 foot of the pilot's center.
 - c. No bounces/blades touch the ground.

Freestyle Routine

The freestyle routine is to be 2 and ½ minutes in length. It will be judged on creativity, synchronicity, use of space and venue as well as difficulty of maneuvers. Music should not be offensive in nature as this is generally a family function. Pilot's having made day one cuts are allowed to submit different music if they so choose for day 2. There will be 2 rounds of freestyle on day two and the pilot shall designate and submit track(s) to be used for each of the two freestyle rounds for day 2 no later than the end of day one (after cuts are announced).

Sportsman's Class Event Rules

Mandatory Maneuver

Upright Figure of Eight - (35 points)

- Starting from a tail in hover, the pilot will start the helicopter flying away from him and turn either left or right into forward flight then turn a complete 360 to the right (if beginning forward flight to the left).
- After the completion of the first 360, the nose should be pointing toward the pilot and in line with the pilot. The pilot should then transition to a 360 in the opposite direction and execute a 360 turn in the opposite direction from the first. The maneuver is complete at the end of the second 360 when the helicopter is pointed tail in and in line with the pilot.
- All turns at the far ends of the flight line are made AWAY from the flight line.

- This maneuver should be executed at a constant altitude and constant speed. Start and finish should be stable and in line with the pilot.

Optional Maneuver (select one)

Inside Loop (35 points)

- Pilot begins from an eye level hover and turns left or right 90 degrees and flies out to the end of the flight line then turns away from the flight line to a 180 heading into level flight. The pilot then executes a 360 degree inside loop.
- This maneuver should be executed beginning at a constant altitude directly in front of the pilot with the loop being round with no hesitation at the top of the loop and the helicopter must exit the loop into level forward flight at the same altitude as it began in front of the pilot.

1 roll (35 points)

- Pilot begins from an eye level hover and turns left or right 90 degrees and flies out to the end of the flight line then turns away from the flight line to a 180 heading into level flight. The pilot then executes a 360 degree roll to the left or right.
- The roll must begin and end at the same altitude as it crosses in front of the pilot. It must be axial with no hesitation and constant forward speed.

Stall Turn (35 points)

- Pilot begins from an eye level hover and turns left or right 90 degrees and flies out to the end of the flight line then turns away from the flight line to a 180 heading into level flight.
- As the helicopter reaches the other end of the flight line, the pilot pulls up to a 90 degree vertical climb until the helicopter stops forward flight or climb.
- Then the pilot executes a 180 pirouette left or right with the nose of the helicopter pointed straight down towards the ground. The helicopter must travel 90 degrees to the floor and pull out to level flight at the same altitude as it began the climb and crossing in front of the pilot.

Sportsman Freestyle Routine

The freestyle routine is to be 2 and ½ minutes in length. It will be judged on creativity, synchronicity, use of space and venue as well as difficulty of maneuvers. Music should not be offensive in nature as this is generally a family function. Pilot's having made day one cuts are allowed to submit different music if they so choose for day 2. There will be 2 rounds of freestyle on day two and the pilot shall designate and submit track(s) to be used for each of the two freestyle rounds for day 2 no later than the end of day one (after cuts are announced).

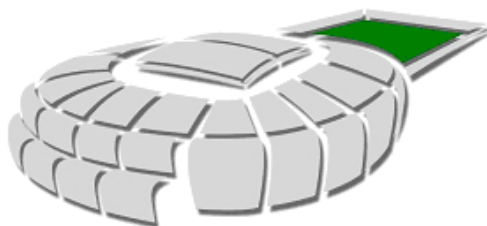
Thanks for you interest in entering the 2010 Stadium Smackdown.

This event is designed to showcase some of this sport's most amazing talent as well as to get our new competitors out there competing and gaining experience to take their game to the next level! Our number one goal is to make it fun for you and the audience. So if you have ever thought of competing, **now** is your chance! We look forward to seeing you at the best indoor flying facility in North America, the University of Phoenix Stadium, only at EFX!

www.efexpo.com

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**UNIVERSITY
OF PHOENIX
STADIUM**

2010 PILOT APPLICATION (HELI)

Pilot Name _____

Address _____

City, State/Province (ZIP) _____

Country _____

Home PH _____

Mobile PH _____

EMAIL _____

Heli(s) to be flown _____

Frequency Requested if 72 mHz _____

Team Affiliation _____

I intend to compete in (please circle one):

Expert Micro Expert Mini Both Expert Sportsman

**PLEASE FAX TO 480.456.1113
EMAIL TO: EFEXPO@AOL.COM**