



United States Ultralight Association

Safety Through Education

Dear USUA Club,

This is your Event Kit which is designed to provide general ultralight information for those who attend your up-coming recreational flying festival.

Contents include general ultralight and USUA information, reference materials for exhibit personnel, a quantity of *Ultralight Flying!* magazines, and items to help identify your exhibit. Also enclosed is a letter from the editor of *Ultralight Flying!* magazine who offers to publicize the results of your event. Here's how to use the Kit:

- Take a few minutes to familiarize yourself, and/or those who will be running your exhibit, with the reference materials. They can provide a mini library of information to help answer questions.
- Bulk items such as the USUA member brochure and general information can be given away. Same with the *Ultralight Flying!* magazines although you may want to sell them (\$1 to \$3 per copy is customary). The proceeds can be used to boost your club treasury.
- Whenever USUA has additional promotional materials there may be a packet of goodies to give to exhibit volunteers. This small token of appreciation is one way we can acknowledge the value of those who give of their time to promote our sport.

The staff of USUA sincerely wishes you a spectacular event.

Good Flying!

PLANNING AND HOSTING AN ULTRALIGHT MEET

by Mike Brawner

(reprinted from the May 1991 *Ultralight Flying!* magazine)

To some, competing in a meet sounds intimidating and not appealing at all. USUA has developed a scoring system to recognize pilots when they participate in meets. Meets can be fun, safe, challenging and give every level of pilot avenues in which to participate. A system for scoring at meets is in place and working well from all indications from those who have participated. Great effort, time, and energy have been spent developing the present format to achieve these goals. Some events of the past favored ultralights with short takeoff and landing capabilities or those which could go great distances on little fuel. These events were, therefore, more of a testimony of the ultralight's ability than a test of a pilot's ability to fly, and predict the performance of his particular aircraft. My region, Region V, has now been utilizing this format for almost four years which meets the goals of fun, safe, challenging flying under different levels of meets for all levels of pilots. Whether you only wish to compete locally, at the state meet level, or at the regional level, there is a level that will fit your interest. The present system has undergone many evolutionary changes to arrive at the present format.

Well great you say! So how do we go about putting on an ultralight meet? First things first. Let me explain more about the various levels of competition, the recommended format, and the logic behind the system.

Getting Started - Hosting Your First Meet

To hold your first meet, gather together five of your friends and one USUA Observer to observe, participate in, or judge the event. If you can't find an Observer, then call USUA and apply for your own Observer card.

You'll also need a judge or judges. Typically the judge scores the events, keeps track of the scores, and watches the time clock to make sure all the requirements are met. This person may need assistance in watching events such as the spot landing, limbo or other fast-paced events. Quite often a non-participating pilot or pilots who are competing and not flying act as great judges.

After the meet is over, the judge totals the scores and announces the results. Events for a typical local meet at this first stage might include a bomb drop, spot landing, limbo, bomb drop and catch, or a multitude of other events. Events such as ribbon cutting or balloon chases may not be the best events to start with because participating aircraft could exceed operational parameters of normal operation. This wouldn't be in keeping with the safety aspect that competition should promote.

Keep cross-country event flights short, and conduct the flights around the field. This way, spectators and other pilots can watch the events. Cross-country events such as a timed pylon race, an estimate of time for a three-point cross-country, poker run, or any other combination of events which are on the event menu are typical candidates for this level. The whole meet may last four to six hours, depending on how many people are participating.

The first meet will expose pilots to organized meets where they can learn that organized flying events can be fun. Also, the pilot skills utilized are quite often the skills needed to become competent, safe pilots. People get a chance to meet other pilots and learn from other pilots who operate their ultralights in a mature manner. The positive images generated by a smooth, safe competition is a reflection of all of us.

When You are Ready For More

Now that you have one or more meets under your belt, let's move up the competition ladder. The basic format is the same. You again have a judge or meet director to call the shots and run the meet, and a USUA Observer. However, at this level you may have more events.

Advertising on the community bulletin boards is a good way to inform people in your area of the impending event. Call as many people as you can and let them know of the event and ask them to fly in. Quite often, many pilots just want to do some group cross-country flying and will come just to watch. Many times these pilots end up participating in the meet and find out it's fun. You now should have a good feel for how many people are going to show up from letters you or your club sent out, from personal invitation calls, and if it looks like there may be 15 or 20 ultralights you might even find a hot dog vendor willing to show up for just the concession rights. It helps to let these vendors know that you have informed the local newspapers and perhaps even the local radio station about the date and time for the meet. They are much more likely to show if they believe there might be a sizable crowd.

Back to the point, putting on a meet. Ideally, cross-country flights will be of a 30-minute duration or so. Select these events from the list based upon field conditions, participating pilots' skill levels, weather, and time considerations. Have your meet director select the events best suited for the particular situation, and ask him to mentally prepare a schedule for these events. Have him write them down and ask him to try and meet his projected time estimates for each event. Having these written down and adhered to makes things go smoother. When larger numbers participate, this scheduling becomes even more critical. As with the local meet, the judges score each event, keep score for the competitors, compute the scores and give awards accordingly.

A more advanced meet continues to develop participation in organized activities, promoting positive images of the sport of ultralight flying and assisting pilots to develop better piloting skills. How do these competition events develop better skills? Many of the cross-country events require each pilot to estimate their fuel burn for a given period of time while flying a cross-country course as well as estimate their respective flying times. Often at competition meets I have overheard, "I don't know how to do that." Well, these are basic operational skills pilots need for cross-country flying. Hopefully pilots will come away with the desire to learn to estimate these flight parameters for their daily flying activities.

Hosting a State Championships

Ah, now we arrive at the *State Championships* which will determine the state champion! Don't be surprised to run across some serious pilots at this level. The honor of being the "Best" ultralight pilot in the state is at stake here and you may run across several "competition animals." Don't be intimidated. If you know your aircraft, you will do well. The key in ranking high is to participate in all events at this meet.

At this meet you will need one meet director, and two or three other secondary judges. The meet director's function at this level is to keep things flowing. The other judges will do things such as keep score, judge events, check fuel, keep time and perform other duties. Flying clubs in your state may want to form a state competition committee to decide things such as where to hold the meet, the time of the year to hold the event, which competition events to use, how to advertise the meet, arrange hotel discounts for out-of-town pilots, and other details. Since the state meet affects all pilots in the state, this committee is an effective way for all ultralight-active areas to have a voice in deciding details and begin developing a unified approach to organized activities.

Once the meet director, location and time are chosen, you will have a balance of two local events, and two cross-country events. The state championship will be decided upon a pilot's flying skill, so events like the short/short and circuit navigation should be considered. Cross-country events can be longer, at least one hour in duration, making them more challenging. Navigational points can be selected from an aeronautical sectional to test each pilot's ability to successfully perform a cross-country flight using a sectional. Exact measurements of fuel are important to score the competing pilot's fuel estimations. Don't be surprised to see individuals returning with only one or two ounces difference in their fuel estimations and only seconds off their time estimates. The choice of local events should be selected on the event's ability to be repeated at least two or three times. By

having two or three rounds of an event and then averaging the score, the elements of luck are alleviated. At this level it is important that the meet director adhere to the schedule. It is not uncommon to have 20 or more competing ultralights at one of these meets.

An outcome of a state meet is the determination of the five top-ranking pilots within the state to progress to the regional meet. These individuals will represent the most skillful participating pilots from the state. Honing one's flying skills to enhance flying safety for a state meet enhances flying safety. Typically this level of competition can be made as big or small as desired. The title of "Championship" will almost assuredly bring out TV crews if contacted. Many media contacts can be made to promote the event. If this occurs, two or three vendors like the Lions, VFW, and numerous civic clubs enjoy this type of chance to raise money for their club and will put out snack bars at no charge. If large crowds are expected, parking spaces should be planned, as well as sanitary facilities. This is also a perfect opportunity for you or the host flying club to earn money to assist in maintaining operations. Plan on selling tickets. Gate ticket sales typically are low but your club can pre-sell tickets and do quite well. These moneys can defray the cost of trophies, prize moneys, and operational expenses which are incurred hosting such an event.

Hosting A Regional Championships

Well, we reach the *Regional Championships*. This event will be comprised of individuals who are serious about winning. This adds a whole new dimension to the competition. This is where you will see knowledgeable, skillful individuals with well-maintained equipment. You can feel the essence of competition in the air when it is time to fly. Others just as knowledgeable, with just as good equipment will also be present competing for the fun of it. Yes, even at this level the fun element has not been lost. That's one of the unique facets of these higher levels of competition.

Even though some competitors bring serious overtones to this competition arena, the enjoyment of meeting old friends, making new friends and yet competing against one another makes for special excitement for all who participate either in the air or on the ground. Each USUA Region is made up of numerous adjoining states. In my particular case, Region V is made up of Arkansas, Louisiana, Oklahoma, and my home state, Texas. As in the case of the state championship, I have found it desirable to develop a Regional Competition Committee. This committee's function is, as in the case of the State Competition Committee, to decide matters of competition in and for the respective USUA Region. The same questions are addressed, a meet director identified and secured, a location found, a date set, and a competition format mapped out.

The regional meet format again calls for a minimum of two locally based events, and two long cross-country events. The difficulty level of all events are high because at this level, it is assumed that all pilots have had prior competition experience, and that the best pilots from each representative state are there. In this regard, several pilots from each or at least one other regional state are present, and will qualify the meet as the regional championship. As with the state meet, the regional championship is to identify the three top individuals within the region who may progress to the highest form of competition in America, that being the United States National Microlight Championships.

It is essential that rules be clearly understood by all participants, judges, associate judges and all other people involved on the officiating staff. It is important that the judging staff be identified well before the meet. They can contact the meet director to make sure they know and understand all aspects of their areas of responsibility. Make no mistake, at this level of competition competitors will be knowledgeable of the rules, and will expect prompt answers to questions. They expect no favoritism to competitors, and they expect to win. Be prepared to defend all decisions. It is of the utmost importance that all rules be followed and that the rules be uniformly applied to all.

The meet director and staff will have a strict schedule of events, and all competing pilots are expected to promptly follow all directions. As is the case when dealing with men and machines, not everything goes according to plan. Having an experienced director handle

the problems which inevitably pop up during such an all encompassing meet can be a great help.

The facilities themselves ideally would have covered areas for competing pilots to perform last-minute adjustments on their equipment, even at night. Security should also be arranged, as well as food arrangements and sanitary considerations. If all this sounds too complicated, you do have the option of keeping things simple. At our last three Region V championships, we decided not to subject ourselves to the extra work required to accommodate the public and got together with an experienced meet director, knowledgeable staff, printed minimal rules, and had a good time.

The regional championships will have two local events and two or more cross-country events. Organizers should plan on having a three-day event. This allows 1/2 day for registering, 1/2 day for field preparation and competition practice. Allow for 1-1/2 days of competition, and 1/2 day for closing the event. Don't forget to clean up your mess.

The local events should be those which require the utmost pilot proficiency, and at least three rounds of each event should be planned. My favorites are the 1,000-foot engine-off spot landing, and the precision touch and roll. Both adequately test a pilot's ability to judge landing conditions and simulates forced landing circumstances. The selected cross-country events should be at least 1-1/2 to maybe 2 hours estimate time and/or fuel burn of their respective aircraft. As in the state meet, navigational points should be selected from an aeronautical sectional. Many combinations of navigational events can be selected from the current Event Menu. Select the ones which best suit the time, weather, and field conditions existing during the championships. However, remember the underlying aspect of safety. Don't map out long cross-countries over hostile terrain if it can be avoided. Try to select routes near highways or roads for retrieval of downed aircraft if needed. Above all else, plan and keep track of all competitors.

There are many other considerations when dealing with competition. What about the FAA? I have had competition experience in many parts of Texas, Louisiana and Florida. In most cases the FAA was notified and informed about the competition. In only two cases do I remember them showing up, and when they did, they were there only to observe.

In cases where the competition is near a FSS, call them and post a NOTAM concerning the flying activities expected. That is all you can do in that regard. It is suggested that everyone who operates an ultralight-type aircraft adheres to all applicable FARs. However, in hosting an ultralight meet, it is not the function for the organizers to become ultralight police. Adherence to all federal laws is the responsibility of each pilot. Remember, one of the reasons to host a meet is to get as many individuals involved as possible, to enhance pilot skills and to have a safe, organized flying event.

For those of you who want to experience the joy of organizing, hosting, judging, and competing in a meet encourage your club to organize one. Once you have completed your first meet, you might realize that competition need not be complicated or intimidating as you might have previously thought. Try one and see!



DESCRIPTIONS OF USUA RECOGNIZED EVENTS

USUA points may be awarded to placing pilots when the following events are used.

LOCALLY BASED

PRECISION LANDING

Event The competitor will climb to 1,000 feet AGL as quickly as is reasonable. When the previous competitor is clear of the landing area, the competitor will proceed upwind to fly over the scoring grid. Just prior to the scoring grid, the competitor will turn his engine off* and, overflying the scoring gate, will then execute ONE 360 degree turn to descend and land dead stick as close to the gate as possible. At the Regional Meet, after landing the aircraft will come to a complete stop within the confines of the scoring grid, otherwise the competitor will receive a zero score regardless of where he landed within the grid.

Scoring The point value of the box in which both MAIN wheels LAND AND ROLL WITHOUT BOUNCING is the competitor's score. Refer to the scoring grid.

Zero Score The competitor will receive a zero score in the event of any of the following: the competitor is not ready to take off in the designated order; the competitor crosses the scoring gate incorrectly; the competitor executes more than ONE 360 degree turn before landing, the competitor restarts his engine before landing; the aircraft runs off the side of the grid; or the aircraft cannot be taxied off the runway without assistance. At the Regional Meet, the competitor will receive a zero score if his aircraft does not come to a complete stop within the confines of the scoring grid.

CARRIER LANDING (submitted by Mike Brawner)

This is very similar to Precision Landing except that no points are awarded for landing in front of the gate (since the competitor will have landed in the "sea"). Refer to the scoring grid.

BLACK JACK (submitted by Mike Brawner)

Event The competitor will climb to 1,000 feet AGL as quickly as is reasonable. When the previous competitor is clear of the landing area, the competitor will proceed down wind to fly parallel to the scoring grid. Prior to passing the scoring gate, the competitor will turn his engine off and then execute a base turn and a final turn (ONE 180 degree turn) and then land dead stick in the box desired on the scoring grid.

Scoring The point value of the box in which both MAIN wheels LAND AND ROLL WITHOUT BOUNCING shall be the competitor's "card". Refer to the scoring grid. Most competitors will execute this event a total of 3 times to get 3 "cards". A competitor may refuse his 3rd "card" by only doing the event twice. The sum of the competitor's cards shall then be his hand. The Ace may have a



value of either 1 or 11, at the competitor's discretion. The competitor having a hand closest to 21 (but not over 21) wins. There is no scoring preference given to competitors who have made their hand with 2 cards as opposed to 3. A Black Jack (21) is worth 1,000 points, 20 is worth 950 points, 19 is worth 900 points, etc. (In the event of ties, those competitors who are tied shall compete together in a fly off with the competitor landing on the highest "card" value being the winner of the tie. Refer to 4.0 in the "Meet Director's Supplement.")

Zero Score ZERO SCORE FOR ANY OF THE FOLLOWING: the competitor is not ready to take off in the designated order; the competitor flies over the scoring gate incorrectly; the competitor executes more than ONE 180 degree turn before landing, the competitor restarts his engine before landing; the aircraft runs off the side of the grid; the aircraft cannot be taxied off the runway without assistance; or the sum of the competitor's cards is over 21.

FORCED LANDING (submitted by the Houston Area Light Flyers)

Event The object of this event is to land the aircraft as quickly as possible after clearing an obstacle. The competitor climbs to 1,000 feet AGL as quickly as is reasonable. When the previous competitor is clear of the landing area, the competitor will proceed down wind to fly parallel to the scoring grid. Prior to passing the scoring gate, the competitor will turn his engine off* and then execute a base turn and a final turn (ONE 180 degree turn) and then land dead stick after first passing over a 3 foot high barrier ribbon.

Scoring The point value of the box in which both MAIN wheels LAND AND ROLL WITHOUT BOUNCING is the competitor's score. Refer to the scoring grid below.

Zero Score The competitor will receive a zero score in the event of any of the following: the competitor is not ready to take off in his designated order; the competitor flies over the scoring grid incorrectly; the competitor executes more than ONE 180 degree turn before landing, the competitor restarts his engine before landing; the competitor breaks the 3 foot high barrier ribbon; the aircraft runs off the side of the grid; or the aircraft cannot be taxied off the runway without assistance.

PRECISION TOUCH AND ROLL (submitted by Mike Brawner)

Event The competitor will fly the standard circuit pattern for the airfield. He will then land on the runway AT ANY POINT ELECTED BY THE COMPETITOR after first stopping his engine so that when his main wheels touch the ground, the propeller has stopped*. The competitor will then roll through the scoring grid and stop his aircraft as close to the gate as possible for the highest score. The competitor is NOT ALLOWED TO USE BRAKES or any other mechanical means to stop his aircraft (the use of feet to stop the aircraft is also PROHIBITED).

Scoring The competitor's score will be the point value of the box in which the aircraft's MAIN wheels have stopped. In the event the main wheels are in 2 different point boxes, the competitor is given the score from the higher box. Refer to the scoring grid.

Zero Score The competitor will receive a zero score in the event of any of the following: the competitor is not ready to take off in the designated order; the competitor does not fly the standard circuit pattern for that field; the competitor uses mechanical means or his feet to stop his aircraft;



either of the aircraft's main wheels runs off the side of the grid at any time; or the aircraft cannot be taxied off the runway without assistance.

SHORT/SHORT (taken from the 1988 FAI Taskbook)

Event At midfield, 2 parallel barrier ribbons are placed 3 feet above the ground and 300 feet apart. The competitor will select a starting position on the take off side of the scoring grid that will allow him to power up and then take off and travel a minimum distance prior to clearing the first ribbon. The competitor will then pass over the second ribbon and land as close in front of the ribbon as possible. The aircraft's main landing gear will not pass outside the side boundaries of the take off and landing grids or the side boundaries of the 300 foot center section.

Scoring The take off and landing segments are scored separately. The score for the take off segment shall be the point value of the box from which the aircraft's MAIN wheels begin the take off roll. The score for the landing segment shall be the point value of the box in which the aircraft's MAIN wheels come to a complete stop. In the event the main wheels are in 2 different point boxes, the competitor is given the score from the higher value box. Refer to the scoring grid.

Zero Score The competitor will receive a zero score in the event of any of the following: the competitor is not ready to take off in the designated order; the competitor breaks either ribbon (will result in a zero score for the take off or landing segment, as the case may be); the aircraft's main landing gear passes outside the side boundaries of the grids and the center section; or the aircraft cannot be taxied off the runway without assistance.

COMBINATION LOCAL (submitted by the Houston Area Light Flyers)

Event At midfield, 2 parallel barrier ribbons are placed 3 feet above the ground and 300 feet apart. The competitor may start his take off roll at any position on the take off side of the scoring grid and then will take off as close in front of the first ribbon as possible while still clearing the ribbon. The competitor will then climb to 1,000 feet AGL as quickly as is reasonable. When the previous competitor is clear of the landing area, the competitor will proceed upwind to fly over the scoring gate and then shall execute ONE 360 degree turn to descend and pass over the 3 foot high barrier ribbon and land, with power available, as close in front of the ribbon as possible.

Scoring The take off and landing segments are scored separately. The score for the take off segment shall be the point value of the box from which the aircraft's MAIN wheels leave the ground. The score for the landing segment shall be the point value of the box in which both MAIN wheels LAND AND ROLL WITHOUT BOUNCING. See scoring grid diagram.

Zero Score The competitor will receive a zero score for any of the following: the competitor is not ready to take off in the designated order; the competitor flies over the scoring grid incorrectly; the competitor breaks either ribbon (will result in a zero score for the take off or landing segment, as the case may be); or the aircraft cannot be taxied off the runway without assistance.

LIMBO (submitted by Mike Brawner & the Florida Flying Gators)



Event The competitor executes the standard circuit pattern for the airfield and then flies his aircraft under a grid of strings which are suspended between 2 parallel vertical poles WITHOUT TOUCHING HIS WHEELS TO THE GROUND within the area 30 feet in front of or behind the ribbon. The event will be the same for each aircraft, that is to fly under the lowest string possible without breaking the string or touching the ground within the restricted area. To ensure that all competitors have the same event, the string grid will be lowered so that the bottom string in the grid is 6" above the aircraft's highest point in "flying attitude." If the highest point is the aircraft's propeller, then a rigid item will be added to the top centerline of the aircraft, perpendicular to the mean cord line, where the top of the rigid item is the same height as the top of the propeller (COMPETITORS WILL PROVIDE ANY MATERIALS AND EQUIPMENT NEEDED TO BE IN COMPLIANCE WITH THIS REQUIREMENT). The strings in the grid should each be 6" apart and the poles should be at least 6 feet further apart than the longest wingspan of any of the competing aircraft.

Scoring The point value of the lowest unbroken string shall be the competitor's score. Fly offs may be conducted as necessary and the lowest string may be lowered to where it is only 3" above the aircraft's highest point. Refer to the scoring grid.

Zero Score The competitor will receive a zero score for of any of the following reasons: the competitor is not ready to take off in the designated order; the competitor does not fly the standard circuit pattern for that field; any of the aircraft's wheels touch the ground within the restricted area; or the aircraft touches either pole.

* - In the interest of safety a competitor may elect to abort a landing attempt in a locally based event. By participating in a locally based event each pilot recognizes the potential danger of landing with power restricted or off and is fully assumes all responsibility for his or her actions.

NAVIGATION BASED

CIRCUIT NAVIGATION (taken from the 1988 FAI Taskbook)

Similar to pure navigation, circuit navigation requires a maximum of 10 turnpoints to be flown in a given order as many times as possible. (The minimum perimeter of the circuit should be 47 statute miles for Colibri qualification) The competitor will declare an estimate of flight time prior to departure. Each turnpoint is worth 10 points, while each minute early or late will cost the competitor one point.

CIRCUIT NAVIGATION SCORING FORMULA

Points = (Turnpoints made X 10) minus (minutes early/late) X 1000
Maximum flown in class X 10

Example: 10 turnpoints made, 5 minutes late, maximum flown in class is 15 and on time.
Points = $\frac{100 - 5}{150} = \frac{95}{150} \times 1000 = 633$

CIRCUIT NAVIGATION II (submitted by Mike Brawner)



Event Circuit navigation requires a maximum of 5 turn points to be flown in a given order. The suggested minimum perimeter of the circuit should be 30 statute miles at a Local Meet, 40 statute miles at an Area Meet, 70 statute miles at a State Meet, and 90 statute miles at a Regional Meet. **PRIOR TO DEPARTURE**, the competitor will declare an estimate of his flight time and estimate the amount of fuel he will use; also the aircraft's fuel tank will be sealed by a contest Assistant. If the competitor feels he does not have enough fuel capacity for the event, he will declare the amount of extra fuel needed and the proposed location of his refueling stop. An Assistant will verify the fueling and re-sealing of the tank at the refuel location. **THE COMPETITOR MAY NOT USE ANY TIMING DEVICE DURING THE EVENT.** Take off time will be measured from when the competitor opens the throttle. Landing time will be when the competitor's main wheels touch down.

Scoring A total of 1,000 points is possible. Each segment (fuel and time) is worth 500 points. Each is scored using the following:

Fuel: 10 points will be deducted for each ounce the competitor is over or under his declared fuel burn.

Time: 1 point will be deducted for each 2 seconds the competitor is over or under his estimated flight time.

Zero Score The competitor will receive a zero score in the event of any of the following: the competitor does not begin the event within the allotted time window; the competitor does not return prior to the official closing time for the event; the competitor does not maintain the required altitude declared by the Meet Director during the briefing; the competitor does not climb out reasonably (as determined by the Meet Director) quickly; the competitor uses a timing device; or the aircraft's fuel tank seal is broken.

TIMED CROSS COUNTRY (submitted by the Houston Area Light Flyers)

Event A triangulated course of at least 50 statute miles is drawn on the official map. **PRIOR TO DEPARTURE**, the competitor will declare an estimate of his flight time. **THE COMPETITOR MAY NOT USE ANY TIMING DEVICE DURING THE EVENT.** Take off time will be measured from when the competitor opens the throttle. Landing time will be when the competitor's main wheels touch down.

Scoring A total of 1,000 points are possible. 1 point will be deducted for each 2 seconds the competitor is over or under his estimated flight time.

Zero Score The competitor will receive a zero score for any of the following reasons: the competitor does not begin the event within the allotted time window; the competitor does not return prior to the official closing time for the event; the competitor does not maintain the required altitude declared by the Meet Director during the briefing; the competitor does not climb out reasonably (as determined by the Meet Director) quickly; or the competitor uses a timing device.

LAP CROSS COUNTRY (submitted by Larry Lingren)

Event This event requires at least 2 turn points at least 2 miles apart and no further than 5 miles apart. The competitor is required to fly for a 1 hour duration. **PRIOR TO DEPARTURE:** (1) the competitor will declare his estimate of the number of laps he will fly during the 1 hour duration; (2) the



competitor will declare his estimate of the amount of fuel he will use; (3) the fuel tank on the competitor's aircraft will be filled either to the top of the tank or to a declared, easily seen mark; and (4) the aircraft's fuel tank will be sealed by a contest Assistant. THE COMPETITOR MAY NOT USE ANY TIMING DEVICE DURING THE EVENT. Take off time will be measured from when the competitor opens the throttle. Landing time will be when the competitor's main wheels touch down.

Scoring A total of 999 points is possible. Each segment (laps, time, and fuel) is worth 333 points). Each is scored as follows:

Laps: THE COMPETITOR SCORES ZERO FOR THIS SEGMENT IF HE IS OVER OR UNDER HIS ESTIMATE OF LAPS.

Time: The competitor will be required to fly for 1 hour. 1 point will be deducted for each 2 seconds the competitor is over or under this 1 hour requirement.

Fuel: 10 points will be deducted for each ounce the competitor is over or under his declared fuel burn.

ZERO SCORE FOR ANY OF THE FOLLOWING: the competitor does not begin the event within the allotted time window; the competitor does not maintain the required altitude declared by the Meet Director during the briefing; the competitor does not climb out reasonably (as determined by the Meet Director) quickly; the fuel tank seal is broken; the competitor uses a timing device; or, for the lap segment of the score only, THE COMPETITOR IS OVER OR UNDER HIS ESTIMATE OF LAPS.

MYSTERY CROSS COUNTRY (submitted by Mike Brawner)

Event Competitors will navigate a course having 6 or 9 turn points, match a landmark (from a multiple choice list) with each turn point, and estimate how long it will take to complete the course. Competitors will be given true courses and distances to each turn point, and will be given a list of landmarks from which to pick a match for each turn point. **PRIOR TO DEPARTURE**, the competitor will declare an estimate of the amount of time it will take him to complete the course. Take off time will be measured from when the competitor opens the throttle. Landing time will be when the competitor's main wheels touch down. **COMPETITORS MAY USE TIMING DEVICES.** The competitor will fly the course to each turn point and mark on the list which landmark is at which turn point. Immediately after completing the course, each competitor will submit his list of landmarks to the Meet Director after first writing his name on the list. If the competitor feels he does not have enough fuel capacity for the event, he may refuel as necessary at pre-declared points.

Scoring A total of 1,000 points are possible. The two segments of the event, navigation and time, are scored as follows:

Navigation: This segment of the event is worth a total of 900 points with each correctly matched landmark/turn point being worth a proportionate amount of this navigation score.

Time: This segment is worth 100 points. 1 point will be deducted for each 1 second the competitor is over or under his estimated flight time.

Zero Score The competitor will receive a zero score in the event of any of the following: if he does not begin the event within the allotted time window; the competitor does not maintain the required



altitude declared by the Meet Director during the briefing; the competitor does not climb out reasonably (as determined by the Meet Director) quickly.

PURE NAVIGATION (taken from the 1988 FAI Taskbook)

A number of prominent points are marked on the official map, such as road intersections, dams, bodies of water, open mines and other identifiable points, enough so that it is not possible to overfly them all. The competitor tries to overfly and photograph as many as possible, once in any order (without landing out).

PURE NAVIGATION SCORING FORMULA

n = Number of points flown
N = Maximum number of points flown in the class.
Score zero if landing out

$$\text{Points} = \frac{n \times 1000}{N}$$

ECONOMY (taken from the 1988 FAI Taskbook)

A line on the official map is set at the briefing. The pilot will fly as far along the line as possible, photograph the turnpoint, and return (all the way). The turnpoint will be identifiable on the official map.

ECONOMY NAVIGATION SCORING FORMULA

1) If a pilot correctly returns to the airfield.
$$\text{Points} = \frac{2 \text{ do} \times 1000}{D}$$

2) If a pilot does not return to the airfield.
$$\text{Points} = \frac{\text{do} + \text{dr} \times 1000}{D}$$

do = distance from airfield to turnpoint

dr = distance from turnpoint to landing point measured in the direction of the airfield projected on to the set line. dr may not exceed do.

D = Maximum distance flown in the class.

SPEED EFFICIENCY (taken from the 1988 FAI Taskbook)

This event measures an aircraft's speed efficiency and may be included in the precision events for the purpose of scoring.

A minimum speed measurement is determined by timing a pilot in both directions along a measured track (approximately 1/4 mile). The minimum speed, V_{min} , is the average of the two passes. In this portion of the event, pilots will maintain an established attitude and heading. Straying from these



values will result in a red flag indicating that leg (pass) will be repeated. Two red flags will result in a 25% increase in a pilots measured Vmin.

A maximum speed (Vmax) is measured by timing a pilot around a preset course determined by two or more turnpoints (pylons). Limited fuel is provided each competitor.

SPEED EFFICIENCY EVENT SCORING FORMULA

$$\text{Points} = \frac{V_{\max}}{V_{\min}} \times \frac{P \times 1000}{S_{\max}}$$

Vmax = maximum speed flown determined by average speed over maximum distance course

Vmin = minimum measured speed (see above).

P = number of pylons achieved.

Smax = maximum score in round.

PRECISION CIRCUIT (submitted by Dennis Pagen)

In this event, a pilot completes a circuit in which one or more of the following events are included (as many as possible should be used).

1. **LOW & LEVEL FLIGHT:** A series of three or more ribbons are suspended one foot above the runway (ground). Pilots will touch all three ribbons without touching the ground. Score 10 points for each touched ribbon, zero points if the ground is touched.
2. **CROSSWIND RUN:** Pilots will complete a crosswind leg along an established ground tract with two side boundaries. This event is worth 30 points total. For each crossing of the side boundaries, a pilot is penalized ten points, these are deducted from the pilot's score. The pilots body determines position.
3. **SLALOM COURSE:** Three pylons are set so pilots will fly in a crosswind direction, and pass on alternate sides of succeeding pylons. This event is worth 30 points with 10 points deducted for each cut pylon. Pylon spacing and staggering determines difficulty. Pilots body determines position.
4. **TOUCH & GO:** Pilots will touch down and take off within a prescribed distance. A box measures his score with a 10 point reduction for being outside of the box on each side and zero score if both wheels fail to touch . Maximum score is 30 points.

U. S. Microlight Championships Series

The United States Microlight Championships Series is open to all ultralight and microlight pilots flying all FAI classes of ultralights and microlights including powered parachutes. The Championships, in its 12th season, challenges groups of pilots to fly under structured conditions in fun-filled meets that help sharpen flying skills and provide pride in accomplishment.

Pilots earn points throughout the season when flying in any of the series of meets counting for points conducted at various locations throughout the country during the calendar year. These flying meets may be held by any group wishing to provide pilots the opportunity to accrue points toward the championships. Pilots may enter as many meets counting for points as they wish during the season.

Scoring is based on the number of pilots entered in a meet. Pilots receive one point for every pilot they best per event. Scores are entered on a score sheet and then submitted to USUA for entry onto the U. S. microlight points championships season scoreboard.

U.S. microlight points champions are determined based on the highest winning percentage between points earned and points possible. National champions will have competed in at least three meets during the season. U.S. Microlight Championship Series trophies are presented annually during the USUA Annual Awards Ceremony. Trophies are given for the winner, runner-up and third place in each applicable FAI class. The top three pilots in each region are also recognized for their performance.

High scoring U.S. Microlight Championships Series pilots also become eligible for selection to the United States Microlight Team which represents America in the FAI World Microlight Championships, World Air Games and other international events.

Guidance for participating in a meet counting for U.S. Microlight Championship Series points and score sheets are available through local USUA Clubs or USUA headquarters.



NATIONAL AERONAUTIC ASSOCIATION



UNITED STATES ULTRALIGHT ASSOCIATION



FEDERATION AERONAUTIQUE INTERNATIONALE

The United States Ultralight Association, Inc. (USUA) is the sole international representative for official ultralight activity in the United States. USUA is an affiliate member of the National Aeronautic Association (NAA), the national aero club which represents the U.S. in the Federation Aeronautique Internationale (FAI), the world sport aviation governing body comprised of all national aero clubs. The NAA has exclusively delegated to USUA the supervision of FAI related ultralight flying activities such as competition sanctions, issuance of Colibri badges, and the selection of the U.S. Team for World Microlight Championships and World Air Games. USUA's national competition program, initiated in 1987, includes local through national meets, accrual of national ranking points, and awarding of regional and national champions. Over 500 pilots have participated in the program to date.

U. S. Microlight Championships Series

Score sheet

SITE _____ REGION _____
Field/Airport Nearest City/Town State

Meet Date(s) Meet Director Name USUA Observer Name

	EVENT NAME	EVENT DESCRIPTION			CHOOSE L, N or E
	Minimum 3 events required	LOCAL: Precision Landing (L)	CROSS COUNTRY**:	Economy (E) Navigation (N)	
1					
2					
3					
4					
5					
6					

FAI CLASSES

SOLO Airplane (FWS) Trike (WSS) Powered paraglider (PPG) Powered parachute (PPT)
TWO SEATER Airplane (FWT) Trike (WST) Powered paraglider (PGT) Powered parachute (PTT)

	USUA No.^	Name* (1st line: Pilot next line: Navigator)	Ultralight or Microlight	Class	Events**					Total
					E	1	2	3	4	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
			MAX SCORE POSSIBLE		1					

** Double score for Cross Country events

^ USUA membership not required for participation.

* All pilots and navigators entering meet should be entered on score sheet. Two seater teams are scored as one.

Microlight Observer Application

Name _____
last (PLEASE PRINT CLEARLY) first middle

Address _____

City _____ State _____ Zip _____

Phone number (____) _____ Date of Birth ____/____/____ Male ____ Female ____

This is a new address new phone number. Please update my records.

Occupation _____ Nationality _____

Instructions

1. Complete and sign the application. **Except for signatures, all data should be typewritten or printed legibly.**
2. Send completed application and processing fee to USUA, P.O. Box 3501, Gettysburg, PA 17325

MY USUA MEMBER NUMBER IS:

A _____
 Required to process application

IMPORTANT NOTICE

Microlight Observer registration is available exclusively to USUA members. If you are not yet a USUA member or you have let your membership lapse, you will need to submit full annual USUA membership dues at the time you submit this form. See the payment section of this form for further details.

Flight Experience (if any, not required for observer registration)

Please complete the following. These questions pertain to single and two place Microlight flying over the past two years.

Hours pilot time: _____
past two years total time

Cross Country (hours) _____

At least 5 hours Pilot In Command (PIC):

Trike Fixed Wing PPG Powered Parachute

Ultralight Pilot Reg? USUA USHGA EAA ASC

Do you hold any certificates issued by the FAA? Yes No

Certificates: _____

Please check or fill in all that you have participated in or earned:

Colibri Badge Bronze Silver Gold

U.S. National Championships Year(s) _____

National Championships Series Year(s) _____

FAI sanctioned championships _____

National or World Record _____

FAI Sporting License No./Exp. _____

Conditions

In return for the privilege, the applicant agrees to the following terms: **(INITIAL EACH CONDITION)**

1. I freely and voluntarily assume the risks of ultralight flight and I, or my heirs, promise to hold USUA harmless for injury or damage caused by my microlight observer activities. I certify that all statements made on this form are true and correct.
2. To never to bring suit or any legal action against the USUA with regard to any consequence which may occur as a result of this action.
3. To fulfill the responsibilities and requirements of the registration being applied for.
4. To assure that officially recognized ultralight contests and records are conducted in accordance with all applicable parameters and rules.
5. To assure that Championships Series meets, Colibri tasks or record attempt flights meet the conditions and requirements as stated in their respective documents.
6. When satisfied, to sign off for a flight or meet in the appropriate area of an application or score sheet.
7. To contact USUA for assistance when there is question regarding any requirement.
8. To promote USUA recognized and sanctioned contest and records activities.

I have read, and am familiar with, all documents and provisions of the U.S. Microlight Contest & Records program including FAI Sporting Code Section 10.

Applicant Signature _____ Date _____

I AM ENCLOSING PAYMENT FOR:

- | | |
|--|---------|
| <input type="checkbox"/> Microlight Observer | \$10.00 |
| <input type="checkbox"/> USUA Member Annual Dues | \$25.00 |

TOTAL _____



NATIONAL AERONAUTIC ASSOCIATION



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