How to Prepare for and Fly your First Contest by Hank Nixon

Introduction

This will be a short talk about how to get ready to fly in your first(or first few) contests. It is focused not on how to win, but on how to avoid a lot of the most common beginners mistakes. My objective is to guide you to a safe and rewarding result. That means having fun! Winning can come later.

Equipment

Glider- The type is not important entering in the Sports Class which is handicapped. Anybody can play. Understand however that tasking is based upon the middle of the handicap range so lower performance gliders can be really challenged on weak or windy days. It should be a glider you are very familiar with. Racing is enough new without a strange glider.

Airframe- Make sure it clean and in good basic shape. Add some seals if you know how and make sure you CG is in the right place. Save the racing preparation for Winter or when you are being held back by the condition of the glider. If the choice is prep or practice-PRACTICE!

Tuning- Make sure your instruments are leak free and total energy is working well.

Nav Instruments including nav display. A graphical display is almost mandatory for effective navigation and to ensure you avoid forbidden airspace. On a scrimpy budget, this can be as minimal as a $50 PDA running free software. There are lots of options in this category, but make sure you know how to use what you have.

Logger- no Mickey Mouse loggers. Buy or borrow one of the ones made by reputable suppliers. Coming in to the scorer with your Garmin Whatever and asking him how to suck your flight out is a very bad thing to do. You would be obligated to bring and be able to use any required software. The scorer really has better things to do than mess with this stuff.

Trailer- It needs to be functional, have working lights, and new tires in last few years. Tires more than about 5 yr old are junk, even if low milage. Have registration, any required instructions, and any tools needed in the trailer.

Car- full size cars and vans seem to work best, but every combination has been used. See comment above about tires. Have car serviced before the trip.

Other Equipment

Batteries and Chargers- don't forget a power strip. Need at least one spare battery. Don't forget PDA chargers and stuff

Logger(s) and Computer

Road Maps- Must be in the car. If you are skipping maps and relying on a Nav system, have complete directions for use in plain sight.

Navigation Chart –Chart- What chart- I have GPS. Wrong, you need a chart for situational awareness plus frequencies and other stuff. Made from current sectional or WAC chart- Turn points marked as well as start points circled and numbered the same as the turnpoint list. Prep of chart is very good way to learn about the area which can be done at home before the contest. It pays also to look at previous contests to learn where they fly in the task area.
I do the following:
Circle all turnpoints about ½ inch diameter(abou8t 4 mi) and color in yellow for contrast. Label each with turnpoint number.
Circle starts about 3/8 diameter and mark in orange or blue to differ from turns. Label all.
Draw circles in dashed lines around finish at 5 mile spacings out to 20 or 25 miles . Highlight for visibility. This helps identify critical obstacle crossings relative to required height(5 mi/1000 ft.)
Add retrieve and crew phone numbers on label.
Cover with clear contact paper for durability.

Practice

Before contest period.
Study. Read as much as you can. Streckensegelflug by Reichman is a classic. Winning by George Moffat is another. Read the rules and especially the Guide to the Rules.

Read the SRA Guide to Soaring Competition available by down load from the Sailplane Racing Association at www.sailplane-racing.org. This will tell you how to do things the right way. Feel free to make a small contribution.

Fly with the equipment you will race with. Learn how to use it in practice so it is not a distraction at the race.

Fly as much as you can and fly cross country every flight even if not far away. Fly on the poor days. Getting a pretty good flight out of a crummy day is a big confidence builder.

Go to turnpoints you haven't been to. This will help you learn to relate terrain to lift. If you don't need a chart, you probably aren't far enough from home.

Log your miles- not just hours- keep track of speeds you make.
I score my speeds from release to finish and always release in first usable lift. This gets me a very realistic idea of achieved speed for the day.
It also puts an emphasis on climbing well right away with no goofing off.

Fly flights of at least 2 hr and preferably 3 to 4 because this is what you will be doing in the contest. If you are used to flying long flights, they won't be as intimidating when the CD calls them.

Try mostly to fly MAT tasks and do not repeat any turn without 2 between. Also don't just try to fly to the next easy place. For a better challenge, task yourself with not repeating any turn. This will force you to figure out how to use the task area.

Race with others part of the time, but fly by yourself so you can build your independent decision making skills and confidence. Being worried about flying alone will not make you fly well. Most of the best pilots I know like to fly by themselves a lot.

End every flight with a final glide back home with finish at about 800 ft and a mile from home. This is what you will do in the race so practice it till it becomes familiar.

Make every landing a precision landing with a steep approach such as over obstacles and proper energy control so you could stop short if needed. Is your brake working?

Try to have at least 1000 miles of XC before your first contest- more is better.

Contest Practice Period

Take advantage of all available contest practice period time.

Find a mentor who is experienced and ask for help in becoming familiar with the area. Try to do as much of this as possible during the practice period when it will be less distracting to your mentor. Most well known pilots will be willing to give you a hand. Just introduce yourself and ask. If not sure who to ask, introduce yourself to the CD and ask for a suggestion. Remember to ask when is a good time to get this help.

Try to see as much of the contest area as you can, with emphasis on places known form history to be popular.

Fly final glides from as many directions as possible to learn what the viewing angles look like and especially what the fields look like if the final glide should go wrong.

Drive out to those fields you picked from the air and see how good they really are.

Fly contest length tasks each day, but don't wear yourself out. The last practice day should be a bit shorter so you can rest up and be fresh for contest day 1.

This is also a good time to get yourself and your crew working together as a team. Make sure your crew has learned about local retrieve information and procedures.

On to the Contest

A little warning here about expectations. You may well be the best pilot at your field and hopefully are feeling pretty good about your preparation. Beware- you are about to get your butt kicked by people that have been doing this a lot longer you have and will avoid many mistakes you are destined to make. This can be be very frustrating if you let it be so. The solution to this is to set of realistic goals.

These might be:
Don't make junk
End up in the top half of the field.
Get home every day.
Have some fun.

How to accomplish these goals?- Here are some hints.

Read to Rules, and NOT the night before the race. You can avoid a lot of dumb mistakes by doing your homework. This especially applies to airspace where breaking the rules has very harsh penalties.

Pay close attention at pilots meetings. Those folks are not talking just to vent excess air pressure. Take notes.

Be early for meetings and gridding so you are not rushed. Rushed is stupid.

Do your critical assembly check.

Finish your checklist early without distraction.

After the meeting on the grid that precedes most tasks these days, ask your mentor to spend a few minutes reviewing his sense of how the weather is shaping up, where might be the places to go if a pilot selected task is assigned.

Fly pretty much like you do at home. Trying to make big changes in your style doesn't work. Fine tune your flying as you get experience.

Thermalling is obviously an important skill. Most pilots don't circle tightly enough, and or do so at excessive speed. Slow speed means small circles. You must fit in with the other gliders in a gaggle. The following are some tips:

Enter gently from the outside so as to join on a tangent to the established circle. No big hairy pull ups into the "core".

Match your turn rate with the other gliders. If they are catching you, tighten up. If you are catching them open up.

Watch for recentering. It is likely to happen as much as every circle. Try to sort recentering from aimless wandering.

Do not fly directly over or under another glider if at all close in height.

No diving through the core on exit even if you think you are alone. You may have a shadow you don't see. A smooth accelerating exit will do just fine.

Look around a lot and NOT just to inside of the circle.

Start a bit early. George Moffatt will tell you this is not the way to maximize your score but it does improve your chances of finishing the task especially if the weather turns poorer, which it does more often than you think. It also gives you an option to fly longer on timed tasks giving you a way to dilute the effect of a mistake like getting low.

Stay high. Try to find the height band where lift is reliable- not necessarily strongest and stay in this band. This avoids costly lost time down low and minimizes the likelihood of landing out.

Deviate a lot for good looking clouds- 30 degrees commonly is worthwhile to get better lift and line up more continuous lift.

Fly the wind line whenever possible to take advantage of streeting. It is as important to do this on blue days also, just harder. This is very important on MAT tasks where you may be selecting where to go next. It pays to think one or two turns ahead where possible.

Fly with other gliders when appropriate, like on blue days, but don't get fixated on this. Be your own pilot.

Avoid the temptation to turn short in the first turn of an area task- you may box yourself in later with not enough room in the last cylinder.

Fly final glides conservatively- about 25 to 1(5 miles/1000ft) for Club Class and not much more for modern gliders. This will waste some time, but ensure you get home for speed points and avoid problems and safety issues with blown final glides. As you get more experience, you can gradually refine your final glides. There are many points to be made with well flown final glides, especially when lift is weak, but the risks rise faster than the rewards, particularly for beginners.

If you blow the final glide, quit soon enough to safely use on of those fields you found in practice.

If you can't make the finish cylinder, but have enough margin to make the field, commit early to a rolling finish so you can fly it right. There is a small time penalty for this, maybe 2 minutes, which is intended to get you to be conservative enough to get into the cylinder, but not crush you if you miss. The danger point is too low for a proper pattern and too high for a rolling finish. This is pretty obvious in the last couple miles if you are looking for it. If in doubt bail out to a safely flown rolling finish- and don't forget to announce it on 123.3 so landing pilots know to look for you.

Post stress stupidity- After a save or finishing it is natural to relax. When you relax after stress, your body goes into recovery mode and your decision making skills drop way off. Don't relax till the glider is stopped and off the runway.
Turn in your flight documentation promptly. This gives you time if you have a problem, makes a friend out of the scorer, and lets the organizers know you are back safe.

Landing out: We said we were not going to do this, but guess what? We all do sometimes. An important process here, in my view is compartmentalizing. By this I mean to have a firm point where you STOP SOARING AND START LANDING. You must not violate this. Most contest landing accidents are a result of breaking this rule, the exception is damage from field surface condition that can't be seen. Write those off to bad luck, but understand most of those are pretty minor. I'll leave off field landings for another time as the topic is way too big for now.
If you haven't been able to get up and going for the last 10 or 15 minutes, what makes you think you can get away from 400 feet? So give up on soaring, and get to your best game to make a safe landing. A call on the radio simply announcing you are landing near XYZ is a good idea, then turn the radio off to avoid distraction. A call after landing Bunky Bozo down safe is good practice also.

Self Evaluation

This is an important element in improving. Ask the opinions of those you respect as to what you did right and what needed improvement. Use your mentor.

Try to honestly differentiate between good performance and good luck- and the opposite. You can have what is a very good flight for you, yet not score all that well.

Conclusion

Sailplane racing is a lot of fun, even more so when you start to master it. The people in racing are second to none. For many of us this is our second family.
Come on in and join the fun.