Glider Competition
101 Seminar

Chris Ruf & Wally Berry
Feb 11, 2017
Much of the Content is based on the SSA Guide to Competition
SES Glider Competition 101 Seminar

Beginners learn how to comfortably fly their first race day & have fun too!

**What:** Seminar to prepare pilots to fly their first contest. Not focused on how to win, but on how to avoid a lot of common beginner mistakes.

**Who:** Any glider pilots interested in learning how to take the leap into racing - now or in the future.

**Why:** Pilots who learn to fly XC & Racing tend to get more out of soaring, stay in the sport longer, and enjoy years of camaraderie with fellow racers. Racing hones your cross country soaring skills and will take your flying to the next level. Beginning racers are often impressed by how much their flying improves and by how far they can fly on days they once considered marginal.

Use advice and content at your own risk! Read and talk to your instructors.
Introductions of presenters & attendees

Name: 
Where you fly: 
What you fly: 
Goals this year:
What do I need for my first contest?

- What is glider racing?
- Where and when are races held?
  - How to formally enter a race
  - Paperwork
- Skills and Experience
- Glider and Tow Vehicle
  - Glider prep
  - Trailer
  - Required equipment
  - Instrumentation
- Equipment
  - Tie downs
  - Rigging aids
  - Ground handling equipment
- Crew?
- Rules
  - Written
  - Unwritten
  - Etiquette
Contest Organization and Daily Routine?

**Contest personnel**
- Manager
- Director
- Operations
- Weather guesser
- Scorer

**Daily Schedule**
- Glider Assembly
- Pilots meeting
- Gridding
- Launch
- Start
- Finish
- Scoring
Why racing?

• Racers & XC record and badge pilots stay in soaring longer and enjoy it more.
• Explore different soaring sites = many learning opportunities.
• You will learn more, faster, flying with other pilots.
• Amazing to see what other pilots can do.
• Camaraderie with fellow racers.
• Great memories & Stories
What is a glider contest?

- Closed course
  - Conventional race: Uses a rally start where pilots choose start time as part of strategy
  - Grand Prix: Uses a Regatta start. Not common (yet)
- Contest classes based on wingspan and presence or absence of flaps, number of seats. Also handicapped classes to allow gliders of widely varying performance to compete.
**Competition Classes**

- **Sports:** Anything, Handicapped, MAT & TAT: Cirrus, Ka-8, SF-34, Duo Discus, ASW-20, PW-5, Ventus, Quintus, L-33, 1-26
- **Club:** 15m max, Narrow handicap range .890-1.020, includes Assigned Tasks: Ventus .890 to 201 Libelle 1.020, Cirrus 1.000, ASW-20, 304CZ, Mosquito
- **15 Meter:** ASW-20, ASW-27, JS-3, Ventus 2ax
- **Standard:** 15m no flaps. Cirrus, LS-4, LS-8, Discus 2, ASW-28
- **“Combined FAI” 15M&Std:** any of the above 2, handicapped
- **18 Meter:** ASG-29, Ventus 3, DG-808, JS-1
- **Open:** <850Kg: Concordia, ASH-30, Nimbus 4, JS-1, Quintus, 1-26 ;-
- **20 Meter 2 seater** soon: Duo Discus, Twin Shark, DG-1000, ASG-32
- **126 Class:** Only true “1-design” class.
- World Class RIP 2012, PW-5. Replaced with the 13.5 meter class.
When & Where are the contests?

The SSA website has a schedule for nearly every race in North America.

Check these 2 boxes for more events!
When and Where to Race?

GTA is a local race series that provides a perfect way to begin racing.

http://gta-racing.org/
http://groups.yahoo.com/group/GTA-Racing/
GTA-Racing@yahoogroups.com
Your First Contest

- Smaller regional - not a “Super Regional” contest or National. (NOT Perry with 65 gliders!)
- GTA is ideal. Usually only 4-8 gliders
- Regional with 6-12 in sports class.

Georgia-Tennessee-Alabama
Sports Class Sailplane Race Series

Where real soaring fun in the South begins!
How do I formally enter a contest?

SSA Website has a contest registration webpage...
Paperwork Required for SSA Regional, National, or GTA

You should ensure that all paperwork is available and in order:

- Airworthiness certificate
- Aircraft registration
- Pilot license
- Insurance policy front page (as proof of coverage)
- SSA Membership card (valid through the last day of the contest)
- Pilot logbook (showing current BFR)
- Aircraft logbook

A really good plan is to collect the first five of these items and make an electronic image of them (by scanning or taking a photo of them). This makes it easy to email copies, which is often more convenient that hard copy. For a comprehensive list of the items (paperwork, etc.) that the rules require you to bring to a contest, check out the document on Pilot Requirements under Contest Forms on the SSA website.
Flying Skills needed for Competition flight

A Silver badge is a good prerequisite or guideline for when you are ready to start contest flying.

**FAI Silver Badge**

3 required elements.

1. Silver Altitude is a 1,000-meter (3,281-foot) altitude gain above an in-flight low point.
2. Silver Duration is a **5-hour** flight time after tow release.
3. Silver Distance is a **50-km** (31.07-mile) cross country flight.

**New habit: log your miles & speeds not just hours.**

Prior to a Silver pilots should work on their readiness for cross country, work on skills as outlined in the Bronze Badge. Practice cross country courses even while staying close to home as shown here:
FAI Silver Badge Course Example

Warm Springs Roosevelt to Lanett = 51.9km (32.2 miles) one way

Exact course line has few landing options
Divert for landable options along the way as shown in the examples below.
Read...

Cloud base or top of convection

<table>
<thead>
<tr>
<th></th>
<th>Blue Sky</th>
<th>Cumulus Sky</th>
<th>MacCready</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3</td>
<td>Stay on track</td>
<td>Intercept all active cumulus clouds within 15 to 20 degrees on either side of track</td>
<td>Set to expected average climb rate in next thermal</td>
</tr>
<tr>
<td>1/3</td>
<td>Consider small track deviations to align track with likely thermal sources.</td>
<td>As above but include clouds further off track. Accept average lift.</td>
<td>as above</td>
</tr>
<tr>
<td>1/3</td>
<td>As above but accept greater track deviations</td>
<td>Look for lift upwind of cloud and accept average lift to get up again</td>
<td>Reduce MacCready setting to extend range</td>
</tr>
</tbody>
</table>

The Joy of Soaring

GEORGE MOFFAT
Introduction by Philip Wills $5

New Revised Edition
18. Small changes of heading can save height and therefore minimize time spent circling.

19. To improve average speed by reducing time spent circling in thermals and therefore time spent getting established and centered in them. Practice in “tactical undersetting of speed-to-fly ring.”
Preparing Your Glider

- **Performance tuning hardly matters** for your first few contests. It's more important that the ship trim & fly well with no annoying distractions to divert your attention.

- A good **audio vario** is essential for contest flying.

- Your **trailer & tow vehicle** should function well - with **gas & keys**.

- Wing stands, tie down ropes and spikes.

- Ground handling equipment: tail dolly, wing wheel, towbar, or **at least a rope!**
Equipment

- A good **audio vario** and a moving map navigation system are essential for contest flying.
  
- Need not be state of the art or expensive!
Equipment

• Nav systems
Preparing Your Glider

- Don’t forget to download the updated contest site files to your nav system!
- Free at soaringweb.org/TP/NA.html#US
Charts/Maps/Turnpoint maps

• Marked up Sectionals & printed maps are still helpful (sectionals are still required equipment)
• Situational Awareness & frequencies.
• Chart prep = learn contest area.
Equipment

- Your **trailer & tow vehicle** should function well
  - Adequate tow vehicle!
  - **WITH gas & keys!!!!**
  - Lights working
- Proper hitch and ball
- Spares and tools
Equipment

- Wing stands, tie down ropes and spikes.
- Ground handling equipment: tail dolly, wing wheel, towbar, or *at least a rope*!

*Ground handling equipment becomes absolutely critical if you are without a crew!*
Equipment

Tie Downs: For glider and trailer
Equipment

Rigging & Ground Handling (Don’t leave home without it!)

Self Rigger is optional - plenty of help around

Label with your contest #

Tow bar and wing wheel allow you to grid yourself. Using just a rope requires 2+ people.
Required Equipment, Restricted Equipment

Required:
1. Glider - club glider, partnership, borrow, or your own.
2. Parachute
3. Emergency Location Devices:
   Emergency Locator Transmitter (ELT) or Position tracker like Spot

Prohibited from carrying:
1. Any instrument which:
   Permits flight without reference to the ground = Artificial Horizon.
Outlanding Preparations, Landing Out, reporting in, tracking systems & ELTs

Get a tracking system & register it on SSA’s “Sailplane locator”. FYI there are 2 tracking systems on SSA, the “locater” is better for friends & family to find you.
Suggested checklists:

- Equipment to take to the contest (it's discouraging to find that you left your battery charger at home)
- A thorough assembly checklist
- A pre-flight checklist
- A pre-landing checklist
- A trailering checklist (showing how to hook up your trailer and start your tow vehicle)
- Cell phone belongs on checklist.

Your pre-flight checklist should include several contest-specific items, such as the need to ensure that a task sheet and outlanding card are in your cockpit, and that the keys to your tow vehicle are not in your pocket. Your landing checklist is one you may wish to commit to memory, since contest landings can get busy.
Best Practices
Pilot & Crew Checklist

This checklist was originally developed for world championship flying and included as part of the U.S. team Best Practices series. This copy has been substantially modified for domestic use. PLEASE NOTE & UNDERSTAND: Checklists need to be updated for each individual’s circumstances and that errors and omissions in this checklist are the responsibility of the user.

Sailplane, General:
- All systems working?
- GPS flight recorder
- Parachute (note repack date)
- Seat cushion

Flight Documentation

• Flight Documentation = fancy way of saying .igc flight recording.
• Many software & hardware options.
• iPhone and Android apps for GTA & regionals (XCSoar, iGlide, SeeYou Mobile)

• Input your Name, Contest Number & Glider type to make a scorable .igc file.
Staying comfortable, and Safe:

- Drinking Water
- Snacks keep your blood sugar in the right range, and backup food for a landout.
- Pilot Relief
- Oxygen in Western US
Crews help a lot, and crewing is a good way to learn - try it.

Now common to create a Crew-for-Each-Other-Group as secondary plan.

Nobody has been left in a field forever as far as we know.
The Rules

- Regionals & Nationals

- Good Idea to read them at least once - might save you from losing all the points for a day.

- **Guide to the Rules** at the end are really helpful.

- Pay particular attention to the rules concerning turnpoint control, starting, finishing, & penalties.

- Left Circling within 5 miles of the contest site or within an active start cylinder.
Rules: Site Specific

- Every race site has their own unique operating procedures and rules.
  - Provided on the contest website and in printed documents made available before or at the contest.
  - READ THEM!
The Unwritten Rules

For any sport, the rules that aren't written can be as important as those that are. A brief list of the things you should be trying to achieve in soaring competition, in decreasing order of importance. The first four should be considered mandatory on every flight.

• Don't endanger people on the ground
• Don't endanger other pilots
• Don't endanger yourself
• Don't endanger your glider
• Learn from the flight
• Enjoy the flight
• Score well
Airport Etiquette

Beyond the published airport rules, there is contest etiquette that all pilots (and crews) should observe:

• Around the airport, drive at moderate speed (don't terrify pedestrians or stir up dust)
• Don't leave cars or gliders where they block others
• If your car might block anything, leave the keys in it.
• Drive around, not across, runways, unless you are certain it is allowed and safe
• Display your contest ID on your car & trailer (makes them easier to find)
• Whether on foot or in a car, always defer to aircraft
• Treat contest workers politely (remember, they are volunteers)
• Be considerate of non-contest airport traffic (so the contest gets invited back next year)
Competition Director, the head honcho – the one who calls tasks, and is responsible for ensuring that the contest is a safe, fair soaring competition.

Contest Manager, responsible for administration of the contest. The CM organizes all the volunteers, ensures that there are enough towpilots, towplanes, towropes, water faucets, porta-potties, etc.

Weatherman, responsible for monitoring weather observations & forecasts, and presenting this information to pilots each day. As we all know, meteorology is an inexact science, and it often pays to be a bit skeptical of the day's forecast.

Scorer, keeps track of the results achieved by all pilots every day, entering these into a computer, and producing scoresheets.

Retrieve Office, group of volunteers who take phone calls from pilots that have outlanded.
Preparation for the day

• Prepare early; then relax before the flight.
• Work your checklists.

Typical:
8:00 show at glider
9:30 Pilot meeting
11:30 glider near/next to grid
12:00 on grid spot
12:10 grid meeting
12:25 first launch
Pilot’s Meeting
Gridding, Launching & Relighting
Gridding, Launching & Relighting

You’re doing it wrong!
Gridding, Launching & Relighting

Typical Contest Launch
• Water Ballast - not needed for sports or club class
Radio Usage

• 123.3 Contest, CD, Pilot to Pilot Safety

• 123.5 Pilot to Crew
  (pilot must initiate - cannot start with crew calling pilot.)

• Unicom at public airports
Charts/Maps/Turnpoint maps

• Marked up Sectionals & printed maps are still helpful.
• Situational Awareness & frequencies.
• Chart prep
  = learn contest area.
Navigation

• GPS flight recorder is required so you’ll have GPS.

• A moving map is massively helpful - to understand Start, Finish, Turn Area points, and staying out of Airspace.

• What system is not as important as knowing how to use it well. Practice on the ground in Simulator mode.
Airspace

How to earn Minus 100 points for the day! (Lose all your points for the day & 100 more).

Never Over Airspace Violation!

-100 points for the day!

Min 500 ft. under OK!

Closed Airspace Clearance Requirements

Note: this diagram is for illustration only, the text of the rules is authoritative.
Start Points, vs Turnpoints & Finish points.

• Important to understand that waypoints have various attributes. Some have multiple attributes.
• Some are Turnpoints, Start, Finish, non-turnpoint airports.
• Do not use a point with only Start Point attribute for a turnpoint.
• Turnpoints lists that have the Number at the beginning of the name cause the least confusion.
• Remain skeptical of airport attribute.
• Worldwide Soaring Turnpoint Exchange: soaringweb.org/TP
Landing Out

Decide early: stop soaring start landing.

You should already be comfortable with landouts. Steep approach & pattern at home like landout every time.
Assigned Task Not used in Sports Class

Note: this diagram is for illustration only, the text of the rules is authoritative.
Task Types & Planning MAT

Modified Assigned Task Overview

- A minimum task time is specified
- Zero or more required TPs
- Additional pilot selected TPs – (but no A-B-A-B - think triangles)
- See rules for additional TP restrictions
- Possible required final TP
- Max 11 TPs (exclude start and finish)
- Finish after any TP (mind min distance)
- Turn in task claim form with log

Note: this diagram is for illustration only, the text of the rules is authoritative.
2016 Sports Class National Championship

Location: Garner Field Airport (UVA)

Field Elevation: 942’ MSL Lat: 29° 12.680’ N Long: 099° 44.615’ W

Email Log files and questions to: ssa.scoring@gmail.com

Retrieve: Primary 830-279-1191 Secondary 830-591-4554

SAFETY FINISH REFERENCE ALTITUDES:
@10sm from airport (9sm from cylinder edge): 3,800’ MSL
@5sm from airport (4sm from cylinder edge): 2,800’ MSL

Wednesday August 10, 2016

Max Start Altitude: 7,000’ MSL Finish Cylinder Floor 2,000’ MSL

Start Cylinder Radius: 5 sm Finish Cylinder Radius: 2 sm

UVA CTAF 122.800 Sunset: 20:15 (8:15 PM) local

UVA AWOS-3 124.175 Contest frequency 123.3

10sm from finish frequency 122.8

TASK A: Modified Assigned Task Minimum Time 4:00

ID Name Distance (Miles) Radius
3 StartB 0.00 5.0
50 Dilley 43.83
46 CarrizoSprings 83.98
29 Anacacho 138.03
1 FINISH 168.41 2.0

TASK B: Same as “Task A” Minimum Time 3:30

Comments: overnight stratus likely to disappear during breakfast, or earlier. CU very likely throughout the day, strutting possible but with max winds aloft of 10 kts SSE through 5 PM. Heat index maxes with 107 at 4 PM today. Average lift of 3.5 + average through 3 PM, then perhaps some softening, perhaps as low as 2.0 average balance of day.

Outlandings: remember — you are trespassing and a guest of the owner whose property you land upon. Please be a good ambassador for soaring
Task Types & Planning

A minimum task time is specified

Turnpoint

Turn Radius Maximum 30 sm

Flight Path

Scored Distance

Home Field

Finish Cylinder or Finish Line

Start Cylinder

Note: this diagram is for illustration only, the text of the rules is authoritative.

Turn Area Task Overview
### 2016 Sports Class National Championship

**Location:** Garner Field Airport (UVA)

**Field Elevation:** 942’ MSL  Lat: 29° 12.680’ N  Long: 099° 44.615’ W

**Email Log files and questions to:** ssa.scoring@gmail.com

**Retrieve:** Primary 830-279-1191  Secondary 830-591-4554

### SAFETY FINISH REFERENCE ALTITUDES:

- @10sm from airport (9sm from cylinder edge): 3,800’ MSL
- @5sm from airport (4sm from cylinder edge): 2,800’ MSL

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**Tuesday August 9, 2016**

**Max Start Altitude:** 7,000’ MSL  **Finish Cylinder Floor:** 2,000’ MSL

**Start Cylinder Radius:** 5 sm  **Finish Cylinder Radius:** 2 sm

**UVA CTAF:** 122.800

**UVA AWOS-3:** 124.175

**Sunset:** 20:15 (8:15 PM) local

**Contest frequency 123.3
10sm from finish frequency 122.8

### TASK A:  Turn Area Task Minimum Time 3:30

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Distance (Miles)</th>
<th>Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>StartB</td>
<td>0.00</td>
<td>5.0</td>
</tr>
<tr>
<td>73</td>
<td>UnoMas</td>
<td>74.33</td>
<td>20.0</td>
</tr>
<tr>
<td>63</td>
<td>Catarina</td>
<td>115.02</td>
<td>15.0</td>
</tr>
<tr>
<td>44</td>
<td>McKinley</td>
<td>173.02</td>
<td>15.0</td>
</tr>
<tr>
<td>1</td>
<td>FINISH</td>
<td>217.84</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Distance (Miles)- 217.84 Min: 138.98, Max: 305.9

### TASK B:  Same as “Task A” Minimum Time 3:00

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*Outlandings: remember – you are trespassing and a guest of the owner whose property you land upon. Please be a good ambassador for soaring*
GTA Warm Springs 2015, Sunday, May 03, 2015, A Class Day 2

Task: Turn Area

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Distance (Miles)</th>
<th>Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ROOSEVELT MEM</td>
<td>0.00</td>
<td>3.0</td>
</tr>
<tr>
<td>56</td>
<td>Police Academy</td>
<td>39.78</td>
<td>18.0</td>
</tr>
<tr>
<td>50</td>
<td>Montezuma</td>
<td>91.99</td>
<td>30.0</td>
</tr>
<tr>
<td>29</td>
<td>Grayhill</td>
<td>167.37</td>
<td>17.0</td>
</tr>
<tr>
<td>1</td>
<td>ROOSEVELT MEM</td>
<td>186.94</td>
<td>1.0</td>
</tr>
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</table>

Minimum Time 02:30

Cumulative Rank | Points | ID  | Name         | Glider  | Day | Rank Points | Speed Hndcp | Actual Hndcp | Distance Hndcp | Actual Code |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1000</td>
<td>WB</td>
<td>Berry, Wally</td>
<td>Libelle H3</td>
<td></td>
<td>1000</td>
<td>57.29</td>
<td>58.28</td>
<td>156.09</td>
<td>158.79</td>
</tr>
<tr>
<td>2</td>
<td>982</td>
<td>H6</td>
<td>Ruf, Chris</td>
<td>303 Mosqui</td>
<td></td>
<td>982</td>
<td>56.27</td>
<td>59.87</td>
<td>145.39</td>
<td>154.67</td>
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<tr>
<td>3</td>
<td>970</td>
<td>1FL</td>
<td>Larsen, Tim</td>
<td>304CZ</td>
<td></td>
<td>970</td>
<td>55.60</td>
<td>59.33</td>
<td>148.73</td>
<td>158.71</td>
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<td>4</td>
<td>962</td>
<td>OG</td>
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<td>Cirrus</td>
<td></td>
<td>962</td>
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<tr>
<td>5</td>
<td>943</td>
<td>J4</td>
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<tr>
<td>6</td>
<td>940</td>
<td>2EZ</td>
<td>McGowin, Tim</td>
<td>304CZ-15</td>
<td></td>
<td>940</td>
<td>53.88</td>
<td>57.49</td>
<td>144.12</td>
<td>153.81</td>
</tr>
</tbody>
</table>
Most problems result from using nm instead of sm.

Turnpoint Radius
1 sm unless part of Turn Area Task

Penalty applies

Note: this diagram is for illustration only, the text of the rules is authoritative.

Turnpoint Control
Starting

1. Start after the task opens!
2. Stay below MSH for 2 min before you start
3. Exit through top or side

Start early as beginner, let pack catch and pass you so you have company.

Note: this diagram is for illustration only, the text of the rules is authoritative.
Area A Start gets full d1 distance from Start Time
Area B Start gets d2 distance from Start Time

Note: this diagram is for illustration only, the text of the rules is authoritative.
Gaggles
Gaggles

Gliding Safety Videos 1  Cutting In
https://www.youtube.com/playlist?list=PLg2FFq0MZjyNkbxgE0RvDrQ1Z8QvGktZ
(a) Always join outside their circle and only move in when on the opposite side. [Notice when red glider is at position 6 the green glider is 180° across circle]

(b) Never join by cutting across another pilot’s circle or pulling up into the circle.

(c) Always circle in the same direction as any nearby glider to make joining each other safe and simple.
Joining Gaggles

• Enter from the side, don’t aim for the middle

• Vary your bank to fit yourself in

• Turn in the same direction of the first sailplane in, usually above

• Avoid just above or just below positions

• Passing, avoid cutting across the nose of a slow climber

• Don’t bomb through the center upon leaving, no matter what the books say
Thermalling Low

- Low saves are a fact of soaring
- Routine in ridge flying
- Very difficult much below 1000 feet – and that’s for experts
- Typically very narrow with sharp boundaries between sink and lift
- Typically very turbulent
- And dangerous as hell with any wind speed

Notice down low the air movement is vastly horizontal inflow - don’t expect much upward motion to save you.

So:
- Have a field picked
- Add a bit more speed
- Expect to be in and out of sink
- Look for positive average climb
- Stay with what you got – it’ll probably get better
- Make small circle adjustments

Remember, look outside for:
- Birds or other gliders circling,
- Change in wind direction on the ground,
- Dust devils, Fires, Tractors,
- Newly forming clouds
- Find the trigger, go to the high ground.
Final Glides

Conservative:
1,000+AGL finish & 3.5+McCready,
Or even more so to start with.
Finishing - Finish Cylinder

Finish Cylinder
No maximum height

Good Finish!
Above Minimum Finish Height

Minimum Finish Height (MFH)
Recommended minimum of 700' AGL
at 1 sm plus 200' per additional mile

Finish
Penalty applies

No Finish
Landout

200 ft below MFH

Finish Point

Note: this diagram is for illustration only, the text of the rules is authoritative.
Finishing - Finish Gate

Finish Gate Not used in Sports Class

Finish Gate
Approximately 3300 feet long

Note: this diagram is for illustration only, the text of the rules is authoritative.

Finish Gate
Safety Finish

Rarely used

Safety Finish when using a Finish Cylinder
Safety Finish

Rarely used

Safety Finish when using a Finish Gate

Note: this diagram is for illustration only, the text of the rules is authoritative.
Finish & Landing
... and Landing
Racing to learn

• GTA
  B Beginner class
  A Advanced class

• SSA Regional Competitions

• Contest Calendar  ssa.org

• OLC onlinecontest.org
• Calling a task any weekend
THE INNER GAME

- Sportsmanship
- Pressure & Pacing
- **Following as a learning technique** - pair/group flying
- **Fly in Duo with KS or JG...**
- Thinking about Safety
- Ask for Help
  - most pilots are glad to help, find a mentor or two.
If you can't measure it, you can't improve it.

Peter Drucker

Flight Analysis

- SeeYou flight analysis
- Task Planning
- % climb
- Achieved climb rates
- Achieved L/D
- Distance achieved
- OLC onlinecontest.org
Flight Computer/Software

**XCSOAR**

- Glide Range - altitude needed to reach goal.
- Above or below glideslope.
- Where are alternates?
- Wind
- Airspace
- Flight recorder > Regionals, OLC & SeeYou
- Xcsoar.org
Flight Computer/Software Suggestions

- use 12V external power when possible, or backup battery
- use canopy or panel mount - not loose in cockpit
- use WGS84 datum
- Worldwide Turnpoint Exchange has waypoint files
- use interval for track log of 1,2,4 seconds
- use track up orientation for map
- Simple setup so you don’t get stuck with heads down time.
Social Aspects of Races

This is our second family,
Come on in and join the fun!

Dinners, socials, kegs, rain day tour aircraft factory/museum, shoot skeet, RC, bonfires, friends, family, stories...
Faster, Further, Higher, Funner

This Year…
What is YOUR Goal?
END
Appendix 1 - Links

Much of the Content is based on the SSA Guide to Competition & How to Prepare for and Fly your First Contest by Hank Nixon

http://www.ssa.org/ContestRules

Calendar http://www.ssa.org/ContestCommittee?show=blog&id=3110

http://www.dragonnorth.com/djpresentations/ Andy Davis’ articles and others


Xcsoar.org

•http://gta-racing.org/
http://groups.yahoo.com/group/GTA-Racing/ GTA-Racing@yahoogroups.com

Gliding Safety Videos https://www.youtube.com/playlist?list=PLg2FFq0MZjiyNkbxgE0RvDrQ1Z8QvGktZ

•World Wide Soaring Turnpoint Exchange http://soaringweb.org/TP/NA.html#US

http://www.fai.org/igc-documents
**Agenda**

_Syllabus:_ Based on the SSA GUIDE TO SOARING COMPETITION, with discussion and explanations by Wally & Chris - interactive Question & Answer throughout.

**PREPARATION**
Flying skills needed for Competition flight
Your Glider or borrowed glider, and required equipment, Emergency Equipment Checklists
Paperwork needed
Charts/Maps/Turnpoint maps Start Points, vs Turnpoints and Finish points.
The Rules, Competition Classes
Flight Documentation - fancy way of saying .igc flight recording. We will discuss software and hardware options. XCSoar demo and setup.
Water Ballast --- not needed for sports or club class
Staying comfortable: Pilot Relief & Drinking Water, etc
Crew

Airport Etiquette
Contest Personnel roles
Radio Usage
Navigation
Outlanding Preparations, Landing Out, reporting in, tracking systems & ELTs
The Pilots' Meeting
Gridding, Launching & Relighting
Starting
Task Types and Planning
Gaggles [play flight safety videos]
Final Glides
Finishes, Safety Finish and Landing

**THE INNER GAME**
Pressure & Pacing
Sportsmanship
Following as a learning technique
Thinking about Safety
The Unwritten Rules

Weather - minimums for a contest, weather resource websites
GTA & SSA Regional Competitions & calling a task any weekend.

Social aspects of races.

_End of Program_ - Lunch and if the weather is good we go fly.