

# Expanding Soaring Horizons

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Did you pass your private pilot glider check-ride and are now wondering what you can do to further your training? Want to safely expand your experience? Looking for additional things to do within your BASA membership? This document will provide some ideas for training, growth, and new challenges.

## Introduction

A recent email exchange had me thinking about how we mentor new members and advance them in their soaring journey. BASA used to have a lot more personal interactions between members. Over time, this has all but withered to nothing, and of course the pandemic restrictions have exacerbated the situation. We do not have regular membership meetings any more. The opportunity for newer members to learn from experienced pilots has diminished. Once a new soaring pilot has completed their training and joins BASA, they may face a slump of “okay, what do I do now”? You can take your friends for rides around Hollister, but what else? Hopefully, you can find some ideas and inspiration here.

## New ships

Most people complete their training in a basic two-seater such as an ASK 21 or Grob 103. When they join BASA, there is a choice of several different ships. New members can check out in the single-seater “Junior” without any additional prerequisites, so this is a first step for many. The “Junior” is a great ship for building time and advancing soaring skills around the local Hollister area. In contrast, BASA’s other ships require a bit more experience and training, mostly because they are more valuable and perhaps also a bit more challenging to fly. BASA members also have access to Hollister Soaring Center’s Grob 103, N4464P, with no usage charge. This glider is a good stepping-stone to flying BASA’s DGs because it’s mass is closer to the DGs than the Junior.

The DG two-seaters are BASA’s most valuable assets, but they are not hard to fly. After some dual experience, you can get signed off for these, which allows you to take them out solo. They are a great platform for taking friends for rides and also for mentoring flights with more experienced BASA members. Flying dual is a fun way to learn and trade off flying duties.

The “Discus” is a higher-performance single-seater than the “Junior”. It’s a nice ship for more serious cross-country flying. It’s a step up in performance from the “Junior” and also needs to be treated with more respect.

Reference: [BASA flight rules](#) Section 3. Qualification Requirements for initial PIC flights in BASA gliders

## New sites

BASA primarily flies out of Hollister, but there are multiple other sites where BASA gliders can be found throughout the year. Flying out of different airports provides the opportunity to be exposed to new weather conditions and different terrain, which will enhance your soaring skills.

The first step away from Hollister is often Panoche. This is a dirt strip 35 miles south-east of Hollister that BASA can use for landing and towing operations. A well-specified tow procedure has been established for getting from Hollister to Panoche and back. BASA members can learn the procedure and about operations at Panoche via a Panoche checkout. Lift at Panoche is often much better than Hollister, because it is protected from the sea breeze. Once checked out for Panoche, you can tow to Panoche, explore the local lift, land, and get a tow back to Hollister. We also run Panoche paloozas (typically in the spring and fall) where we bring multiple gliders and a tow plane or two to Panoche for a few days of local flying there. It's very different from flying around Hollister!

The other common site for BASA gliders is Truckee, where we typically keep some of the BASA fleet in the summer. Truckee is much more challenging than Hollister because of the high altitude, stronger soaring conditions, and the distinct possibility of severe weather. Truckee is also quite busy with a control tower and lots of power traffic, including jets. But it also offers the opportunity for hour-long local soaring from a short tow, and the possibility for some outstanding cross-country soaring. We typically keep one of the single-seaters and one of the two-seaters in Truckee over the soaring season there (May through September). To get started soaring out of Truckee, it's best to get some dual experience flying there with a more experienced pilot. The Truckee check-out involves showing that you are aware of the local hazards and can handle the typical afternoon crosswind for landing on runway 19. Once you are checked out, you can build time and experience flying first in the local area and then venturing out on cross country.

Other common places for BASA gliders are Air Sailing and Minden. Air Sailing is a glider-only airport north of Reno. The folks at Air Sailing generally run thermalling and cross-country camps every year in the summer. BASA usually dedicates several of our gliders to these events, and they come recommended as a great way to get into mountain soaring and cross-country soaring. The camps are well-run and offer a mix of theoretical learning and practical experience. Experienced BASA pilots often volunteer their time to attend as mentor pilots. Thermalling camp includes a local checkout, so all you have to do is sign up and show up. For cross-country camp, more experience is required. More on these camps follows below.

Minden is optimally placed for flying the Sierra wave. Minden typically offers a wave camp once a year in the spring. This is a great way to get into wave flying (see below) if that's your interest. Getting checked out in Minden involves a flight with an experienced BASA pilot or Minden CFI-G.

BASA has also taken gliders to various events or on “safaris” on a short-term basis. If you’d like to participate, it’s a matter of getting approval for you to take the glider to this new location or event. It’s easier to get approval if several BASA members participate.

References:

[BASA flight rules](#) Section 5. PIC requirements for special situations and at particular sites  
[Guide to Flying Panoche](#)

## New challenges and achievements

The Soaring Society of America (SSA) runs a soaring achievement program that encourages glider pilots to progressively increase their skills, achieve new goals, and earn a series of “badges”. The first badge that folks usually go after is the bronze badge, which is considered the entry point into cross-country soaring. It makes sure the pilot has all the prerequisites for cross-country soaring, skills such as being able to precisely land and stop in a short distance, knowing theoretical cross-country information, and having flown a couple of longer (2-hour) flights.

The silver badge starts to get into some real cross-country flying, and is also the starting point of the internationally recognized badges (FAI). There are three requirements: altitude, duration, and distance.

With the gold badge, you are getting into more serious cross country soaring, focusing mainly on altitude and distance (duration comes naturally trying to cover a long distance).

Finally, the diamond badge is the top of the badge achievement requiring an altitude gain of 5000 meters (16k feet!), a goal flight of 300 km, and a distance flight of 500 km. Many BASA members have reached this level of soaring achievement, and so can you!

Badges are a great way to challenge yourself to progressively more difficult tasks and keep learning along the way.

Reference: [SSA badge site](#)

## New types of flying

Initially, everyone just learns to control the glider and to safely conduct local flights. That’s the basis for expanding skills into different kinds of flying.

### Aerobatics [by Jonathan Hughes]

Aerobatics are a fun way to improve your mastery of controlling the glider. The DG-505 and DG-1000 are both capable of basic aerobatics. The DG-505 is slightly better suited for

aerobatics as the aileron control force is less and we have 17.2 m tips specifically designed for doing aerobatics. Aerobatics can be performed in the DG-1000 with the 18 m tips installed. You should be comfortable with flying the DG-505 prior to getting aerobatic instruction.

You will learn how to prepare the glider for aerobatic flight, the rules for performing aerobatics, and where it is safe to do so around Hollister. You will also learn how to really make the glider do what you want without over-stressing the glider structure, and how to recover from “botched” maneuvers safely without making things worse.

With proper instruction, you can get approved to do loops, hammerhead stalls (called stall turns), slow rolls, spins, and a clover-leaf (a loop and roll combined).

Reference: [Basic Sailplane Aerobatics](#) [Jonathan Hughes]

## Thermalling

Our base, Hollister, does not often have conditions for thermalling close to the airport, but it does happen if you pay attention. On some days, there are puffy clouds all around and you can connect with lift from a short tow. These are the days to start honing your thermalling skills, efficiently working lift, and being able stay up for extended periods of time. Truckee has much more reliable lift close to the airport during the soaring season, so this is a great place to build your experience. The scenery is great, too. And with good thermal heights, you can fly quite far and still be local to the Truckee airport. So that starts to get into more of a cross-country experience.

Air Sailing typically runs a thermalling camp every year in the summer. It lasts for 5 days or so. Usually, there is a lecture in the morning, and flying in the afternoon. Attendees are paired with more experienced mentor pilots to show them “the ropes”. Flying in good thermalling conditions multiple days in a row will quickly advance your skills, so this camp comes highly recommended for getting better at thermalling, which is a key skill for cross-country flight (see below).

Reference: [Air Sailing gliderport](#)

## Wave

Mountain wave sets up in the lee of mountains when there is a strong wind blowing nearly perpendicular to the mountains and the atmospheric conditions are right. Using wave to climb your glider is very special and can take you to great heights. All the world altitude records have been set in wave. But wave flying does require additional preparation, because the conditions are much tougher. Typically, this involves strong winds, mountains / high altitude, and lots of turbulence down low before you can climb into the smooth lift of the wave. The Minden soaring operation usually runs a wave camp in the spring and this is a good way to get into wave flying under the eye of an experienced mentor.

For flight above 18K feet BASA requires physiology training. This is offered by the FAA and typically includes a lot of material about how the body deals with altitude and lack of oxygen. It also includes a practical portion in an altitude or low-oxygen chamber where you can experience your own symptoms of hypoxia. The key observation is that the symptoms of hypoxia vary quite a bit from person to person, but are consistent for any one person. So if you can experience hypoxia in a safe environment, you will be ready to recognize the onset of hypoxia in yourself during high-altitude flight, should there be a problem with your oxygen supply.

Reference: [BASA flight rules](#) Section 5. PIC requirements for special situations and at particular sites

## Cross-country

Staying up for a long time or climbing high in a glider are exhilarating achievements, but soon there is the desire to face more varied challenges. Cross-country flying refers to flying long distances and out of range of the home airport, and for many glider pilots is the pinnacle of soaring challenge and achievement. It requires knowledge of weather forecasts, reading the current conditions, knowledge of terrain, finding and working lift, and making decisions about where to go when. Flying somewhere far away and returning back home at the end of the day, all on nothing but air currents brings great satisfaction. Because conditions are always different, cross-country flying never gets boring. And there is no way to top out in skills - you can always get better, learn more, fly faster and further.

Because cross-country flying involves a higher risk of a landout in a location that might damage BASA equipment, BASA's flight rules are pretty conservative in terms of how to conduct a cross-country flight in a BASA glider, and also set a high bar for getting signed off for full cross-country privileges. BASA requires cross-country flights to be planned airport-to-airport using a conservative glide ratio of 2/3 of the max L/D of the glider, and arriving at the airport at least at pattern altitude.

The path to cross-country signoff can vary depending on the member's experience prior to joining BASA. If starting with no experience, good first steps are the Panoche check-out and flying dual with more experienced members in the BASA two-seaters. Opportunities for this arise at the Panoche paloozes which are typically held in the spring and fall, but dual mentoring flights can be arranged at any time. Some dual cross-country flights will also tell you whether you enjoy this type of soaring and whether this is something you'd like to pursue. The next step is often attendance of the thermal camp and then the cross-country camp at Air Sailing. The cross-country camp is the easiest way to accumulate all the required knowledge and gain flight experience towards getting signed off for cross-country. But it is not the only way - just explore the flight rule requirements and forge your own path towards fulfilling the requirements. New cross-country pilots initially get signed off for limited cross-country privileges. These require the member to put together a detailed plan and have it approved by an experienced member prior to each cross-country flight. The idea is that the experienced member makes sure weather and other conditions make the proposed flight viable for the member proposing the flight. Once a

member has done a few of these successfully, they can get signed off for full cross-country privileges.

Reference:

[BASA flight rules](#) Part D, Cross-country requirements

[BASA sign-off sheet](#) where checkouts and privileges are recorded

## Your own ship

If you want to fly a lot, fly out of different locations, and be more in charge of your own destiny, owning your own ship (either solo or in partnership with a few others) is a natural progression. When the conditions are great, everyone wants to fly, so it can be hard to get a BASA ship reservation on a great soaring day. Buying your own ship does not mean you have to leave BASA behind. Many BASA members have stayed in BASA even after they have purchased their own ship, in order to have access to the two-seaters, to support the sport, or just to stay in touch with the local soaring community. Talk to some of them to get an understanding of what it takes to buy and maintain your own ship. Taking care of one of the BASA ships as a ship captain (see below) is also a good way to prepare for ownership.

## Additional learning

There are lots of ways to learn about soaring by reading about it. Some resources:

- The [soaring online contest](#) (OLC) is where most glider pilots record their cross-country flights. You can see when/where people are flying and be inspired by their achievement. You can download the details of their flights and learn from their technique and decision making.
- There are several local mailing lists used by the glider community. Some examples are [hgcgroupp.groups.io](#) for Hollister pilots (BASA and non-BASA), [soartruckee.groups.io](#) for Truckee. Subscribe and follow along to hear what local pilots are up to, or how their flights went.
- Learning about weather and weather forecasting is really valuable so you know when and where to fly. The BASA site has a [weather page](#) with lots of good links. Study them, then follow the weather, and see what flights people have made in those conditions.

## Step up to help run BASA

BASA is a club run by volunteers. If you enjoy the opportunity to fly BASA gliders, consider participating in their upkeep and the running of the club. Ship captains make sure that each ship is kept in good flying order with the proper paperwork. You don't have to know a lot about glider maintenance to be a ship captain, you just have to stay on top of issues, and see them through their resolution. This is also a great way to learn what it takes to operate your own glider. The membership chair is the first contact point for new members and assures their smooth integration into the club. The flight committee is made up of more experienced pilots who are in charge of maintaining and enforcing the flight rules, mentoring and encouraging pilots, and

helping with various sign-offs. The executive committee (president, vice president, treasurer, maintenance chair, and flight committee chair) are responsible for running the club and put in the most effort. Thank them for their service and consider taking on one of these positions at some point.

## Wrap-up

I hope this document has provided you with some inspiration and ideas for expanding your soaring horizons. Use your imagination and go for it! Learning new skills and proving yourself in the natural environment are their own rewards.