

## P2/H2 & Guest flying @ Mt. Brace

Important technical, weather and safety information for new and guest pilots, plus some etiquette.

All free flying pilots are welcome at Brace, and the Mt. Brace Outdoor Club as well as the LZ landowners are committed to opening this mountain and the sky to as many aspiring pilots as possible. This includes especially newly minted P2/H2 pilots, as well as all others with limited access to mountain flying, for which continued availability of Brace is extra important. There are only a few flying sites in New England, and even fewer which are open to newcomers. With apologies if any of this should feel patronizing, but in order to keep everyone safe and the site functioning, a certain amount of information about launching and flying at Brace must be considered.

### 1. Rationale

- a) The Brace launch is on state park land, and too many disturbances would jeopardize our permit to use it. Therefore the flying activities at Brace need to be organized in order to preserve such opportunity.
- b) Brace is a real mountain launch, not a forgiving training hill. Newer pilots need special guidance until their skills and experience enable them to stay out of trouble by the merit of their own, fully informed decisions.

### 2. P2/H2 and that whole instructor/mentor/observer thing

**If you are a totally new P2/H2 pilot, with no high mountain flights above 1000 feet AGL**, your first three flights at Mt. Brace must be launched in the presence of a USHPA instructor, with an additional instructor/mentor/observer present in the LZ. After three flights, instructor observation is required at launch only. After 10 high mountain flights, and until you receive your P3/H3 rating, the presence of a Mt. Brace Club appointed mentor is required at launch.

**P2/H2 pilots with previous high mountain flights** must have a minimum of **10 witnessed high mountain flights** above 1,000 feet AGL documented in their logbook to be released from instructor supervision at Mt. Brace. After that, and until they have achieved P3/H3 rating, the presence of a Mt. Brace Club appointed mentor will be required at launch.

Observation requires significant pre-arrangement. Some instructors will charge you a fee per flight or per day, especially with the now very expensive professional insurance situation. Please pre-arrange your appointments, and plan to hike up early. Treat your flights like a lesson-by-appointment. Try to learn something from the instruction, and don't be shy to ask questions. On a good day, two flights are possible.

When you have 10 high mountain flights, you may ask for a *Brace Club Approved P2/H2 Pilot* helmet sticker. **Do not fly Brace without instructor supervision unless you have a helmet sticker.** (P3/H3 and P4/H4 stickers are available to qualified pilots.)

Why do we ask P2/H2 pilots to fly with instructors or mentors? Because the Brace launch is not a forgiving training hill, and because learning by trial and error works well for, say, fly fishing, but not so much in aviation. This is not a formal requirement for its own sake. Everyone wants you to become a sufficiently competent pilot as soon as possible.

You will benefit from guidance when assessing launch and flight conditions, and more so during your first 10 flights. Listen, learn, observe and ask questions. Be early. Make your arrangements on the day before. Your mission is to improve your technical launch skills, experience and site knowledge, while erring on the side of caution.

If you show up late at the LZ, 11am or later, barely connected with your mentor, trying to figure out the day, you are probably already too late. Then you will not be ready to launch at least until 1pm, probably when the cycles are already too strong for you, and your mentors would rather be flying themselves.

**If you want to continue to find willing mentors, allow them to launch their own flights when it's getting good, by launching well before them. With a P2/H2 rating, you should not be jockeying for a launch during the most demanding time (~noon–4pm) anyway.** If you can't launch quickly when it starts to get strong, your mentor may leave you behind and take off. Then what? How do you get down? At this stage of your flying career, it is smarter to use every chance for an uneventful launch that presents itself. Extending the duration of your individual flights comes later—be patient, and live to fly another day.

### 3. Mt. Brace Instructor and Mentor List

Please see the "Contacts" section on the continuously updated Mt. Brace Club website.

### 4. The Launch

At the right time, Brace can be safely launched by new pilots, if you pay attention to your instructors or mentors and keep honing your skills. You can learn a lot at this mountain. Make it part of your ongoing education.

But to assume that the Brace launch is totally unproblematic just because some other sites are requiring much higher ratings would be a big mistake.

- a) The launch area is part of the Taconic State Park, and no major changes to the land are permitted. Therefore, your "runway" is studded with tree roots, dips, holes, bushes, small trees, dead branches and sharp rocks, plus the occasional rattlesnake. Tripping is common, as are cut or tangled PG lines. The launch area is also not steep or smooth enough to compensate for major shortcomings in launch technique (tailwind, wing control issues, overload, slow acceleration, etc.). If your launch attempt is mediocre, you may get away with a few scratches. If your launch fails entirely, if you don't abort and you collide with tree limbs or rocks at full speed, you can hurt yourself badly.

We see a lot of launch attempts ending up in the trees and bushes, most of them harmless, and all of them avoidable. The first thing for new pilots to appreciate is that the Brace launch is shaped like a ski trail carved from a tree covered mountain top. What that means is that any prevailing wind direction other than straight West will cause turbulences at the tree lined edges and in the launch slot. Even if the streamers inside of the slot show West, the air flow 30 ft higher can be 30 degrees different, which will make the transition area a little bouncy. Once your wing is out in the air stream, it

may get impulses the streamers did not indicate. Before you launch, observe both the windsock and the streamers for a while and compare. When thermal cycles develop, they tend to straighten out the wind direction in the launch area, but those cycles also contain more energy and will try to bully you around in their own way.

- b) Your launch technique. You need to be comfortable with reverse launches (PG only ☺). A forward launch will only rarely be the better choice. If your launch preparation gets you out of balance, or pushes you to one side, or your wing is coming up crooked, start over. Like with most PG issues, kiting and ground handling practice helps a lot.

One critical point to understand is that you need good airspeed in order to be able to steer your glider away from obstacles, like the bushes left and right. And you will only achieve good airspeed if your paraglider is allowed to accelerate unhindered when you start running AND for 1 or 2 seconds AFTER your feet have left the ground. Fight your instinct to try gaining altitude by braking while you are still launching. Depending on the day and your glider, a little (!) bit of brake may be the right amount, but if you find yourself trying to run with your hands deep in the brakes, or getting jerked around by your wing, you are doing something seriously wrong.

## 5. Weather

Brace is generally launchable with wind directions between NW and SW. If the prevailing wind is light, thermal cycles in the middle of the day will often change the airflow in the launch slot to West. It is perfectly possible to launch into an apparent west wind and to then encounter cross winds once you are flying away from the immediate launch area. Be aware of what you are getting into. The signs are very obvious. If you are very new to this, avoid launches where you have to deal with multiple wind directions.

Observe. It's always a good idea to arrive early at launch and to observe for a while what is going on. Parawaiting does not have to be lost time. Every day on the mountain provides more data points for your personal memory, no matter if you are walking or flying down. How often do the cycles come in? What is their strongest speed? How much are the thermals being pushed to leeward? Do the streamers switch direction? Do the birds indicate the same wind direction as the windsock? Are the birds circling in thermals, or merely soaring along the ridge? At what time do they start to soar higher than the ridge? Are the clouds moving into the direction you expected? Hopefully you did check the forecast for Winds Aloft, not just for the surface, correct?

In general, clouds and other weather formations will travel with the winds at altitude (i.e. 3,000 - 6,000 ft). For flyable days at Brace, that is most often SW - NW (but double check that). Look into that direction and see how the clouds are building to windward. Are they already higher than wide? Getting dark underneath? Please stay on the ground. If you have a smart phone, look at the radar picture. Does it already rain upwind from you? Don't even think about flying. Once you are in the air, upwind is the direction to pay the most attention to.

Weather is a much bigger topic, of course. Buy a good book, talk to your mentors, and keep learning.

## 6. Timing

Every day is different. Having said that, the easiest time to launch on a thermally active day (usually March through November) is late morning, when the first westerly cycles start to come in, and late afternoon, after a steady westerly airflow has been established.

If you have fewer than 50–100 mountain flights, early morning and late afternoon flying is what you should be aiming for. Expect to do many sled rides, and be pleasantly surprised when more and more are turning into extended soaring experiences. Focus on mastering your launches, and try to do many. You will benefit much more from two short flights early and late in the day than from a single accidental thermal adventure. Push the envelope, but only a little bit at any one time. If the afternoon gusts push your launch attempt into the bushes more than once, you have been too ambitious. Review your attitude. Stay safe. At this stage, you need launch practice much more than airtime.

## 7. Risk profile of the day.

Different days present different challenges. You need to understand what they are before you fly.

- a) Days with very light prevailing winds but good lapse rates will allow pilots to thermal over and behind the mountain top, but will be less forgiving if you start scratching low over the trees in front. When there is thermal lift, there is also sink, which can dump you 20ft very unceremoniously.
- b) Days with strong cross winds present the biggest launch challenges, and may also cause turbulences behind or along ridges. Scratching low is not a good idea due to the heightened chance for collapses in rotors. But for an advanced pilot who gets up, long distances may be easier to achieve.
- c) Days with strong westerly winds make it easy to soar along the ridge in dynamic lift, often for hours. But you need to stay well in front of the mountain until you have a feeling for wind strength and gradient. The risk to get blown back is what you need to be most respectful of on such days. Approach these situations very defensively. Somewhere behind the ridge lies a very deceptive point-of-no-return, since the lifting component disappears suddenly once you are too far back. Landings half a mile down wind, in trees and turbulence, don't have happy endings.
- d) Quickly changing conditions. Especially during the summer months, the weather in the area can go from nice clouds to full on downpour back to blue sky within two hours. Be respectful and aware. Not all weather is moving upon you, much is actually developing above you. Sometimes you are where it happens first. Learn when to expect days with high instability (i.e. by checking the Lifted Index on XC Skies).
- e) Moving fronts. Check the entire weather situation, and not just the forecast. Predictions can be off by a few hours. If you get surprised by a fast moving front, you have been careless with your life.

There are more patterns. Share your observations. You can't ever stop being a student of the weather.

## 8. Launch accessibility

Well, it's not. It's a steep 90 minute hike up the front, or a 40 min drive plus a 40 min hike over the back, for most people. Parts of the trails are rocky and tough. What that means also, is that there is no easy way of getting you out if you get hurt during launch. Getting you down with an injury will be a slow and painful process. If you suffer a time critical injury, a helicopter rescue will still take 90 minutes, and will cost you thousands of \$\$\$. It's only smart to manage and minimize your risks.

## 9. Equipment and Clothing

Covering any exposed skin during launch is smart and highly recommended. The last helicopter rescue could have very likely been avoided if the pilot would have been wearing long pants. If you end up on the rough ground or in the trees, you will be thankful for any difference a pair of jeans or a nylon jacket can make. They are also a good protection when you help your fellow pilots out of the trees, which will happen. Plus, it's cold at cloud base ☺.

## 10. Attitude and Objectives

As a relatively new pilot, your state of mind should be one where you are seeking flying experience in an enjoyable way, while progressing carefully to become a better pilot. Your objective should be to become as fast as possible self-sufficient, able to make your own decisions where and when to fly, all while living to tell the tale. Notice that flying longer or farther has nothing to do with this. Logging 1,000 flights without a tree landing is just as great an accomplishment as holding your local XC record. Notice too that flying with a 99% safety probability is not good enough. Notice that many of your senior pilots have logged several thousands of flights. They wouldn't still be around if they screwed up 1 out of every 100 flights.

Are you flying with a video camera? Selfie stick? A vario and a GPS? A full-fledged cockpit? Does your setup look like an oyster bank at low tide? Please consider simplifying your task, and focusing entirely on your flying performance and safety. Please try to feel what wing and wind are trying to tell you. During your first 100+ flights, it is better not to distract yourself with technology at the expense of developing authentic feel and judgment.

The most difficult task in free flight is to control yourself. Thanks to science and technology, flying itself has been made easy. But picking the right wing, tasks and flying circumstances can be hard. Being able to judge your own and your aircraft's limitations correctly is a major skill, and needs to be developed and maintained just as any other. Be aware of the traps your own mind and ego is setting you.

## 11. Etiquette

The Brace launch allows only a few gliders at a time. During the time window when the best flights can be had, and if any other pilots are waiting, the main launch is for launching. During the busiest time you need to be able to perform, or everyone else will suffer because of you. If your launch skills are sketchy, let everyone else go first, until your prolonged launch attempts are not creating a line behind you.

It is generally considered bad form to push other people into launching. The right moment can only be the pilot's decision. Be mindful of that when you have been occupying the launch slot for more than 15 minutes. Just because everybody still seems polite and muted does not mean you are still in the right place.

If you are not skilled enough yet to launch successfully with a single try, please don't attempt to launch when the more experienced pilots are rearing to go. When it's both busy and good, it is totally unacceptable to use up two thermal cycles for opening and checking your wing, building a wall, and finally launching. It is ok to wait for the right moment, but you better be able to recognize and utilize it when that moment comes.

If your launch attempt fails, consider going back to the end of the line. People may be too considerate to tell you, but it is not ok to block the launch during prime time for 30 minutes with three launch mishaps.

It should go without saying that you must look out for your fellow pilots. Help when someone ends up in a bush or tree. Retrieve people who have landed off site. Offer rides back up. Don't take everything that comes your way for granted. Participate in work parties. Contribute. Join in the après-flying fun. Become a member of the community. Bring some beer. Have fun.

## **12. Summary for P2/H2 Pilots at Mt. Brace**

- **You need a Mt. Brace Club sanctioned, USHPA rated instructor or mentor to launch**
- **Connect with your instructors/mentors on the day before.**
- **Aim for 2 flights/day, launching early and late. Avoid the noon–4 pm window.**
- **Master your launch skills, accelerate well. Stay out of the trees.**
- **Be sensitive to etiquette.**
- **Wear protective clothing.**
- **Become a student of the local weather.**