



Skyline

Spring 2003 (Volume 42, No. 1)

Capital Hang Gliding & Paragliding Association

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Pre-Flight ~ by Ralph Sickinger

The news of Chad's death hit me pretty hard. I hadn't even begun to deal with this when I heard about Terry's crash. Whoa! What do you do when you lose two very experienced pilots (*pilots that I respected and looked up to*) in such a short time? I mean, if guys like that can be killed by this sport, what are the chances for a mere mortal like myself? It's a sobering thought to contemplate, and it's made for a rather gloomy April. Ultimately though, I've come to realize that I **could** die from hang gliding; I would most likely live a lot longer if I gave this sport up. But, living without being able to fly would be a miserable existence, and what would the point be then? So I'm going to keep flying. Chad helped me get my "three", and I'm really going to miss him, but I'm sure that he would want me to continue flying. I know that if anything ever happened to me, I wouldn't want anyone to quit flying on **my** account. What I *will* do, is rededicate myself to practicing my flying, in order to keep my skills sharp, and I will try to stay focused on safety and exercising good judgement. *(Something that I failed at this week, but that's another story, which I'll tell you about later.)*

expanded to 12 or 16 pages (*depending on available content*), and I hope to focus more on articles that are either entertaining or educational. I'll leave the distribution of actual "news" to the listserver and the website - by the time I get around to reporting it, it's usually ancient history! I'm also sponsoring two contests through the newsletter, which are described in their own articles

In the long run, I think that what we're gaining outweighs what we're giving up. As always, I welcome your feedback; you can always email me at:
skyline@sickinger.net

Which brings me to my flying story...
(The one that I alluded to earlier.)



SO THERE I WAS... (*Don't you know that all good flying stories start that way?*) I had flown out along the spine, and I was still scratching for lift, slowly succumbing to a major case of the "stupids". When I finally left for the LZ, I was actually wondering if I was even going to clear the tree line to get INTO the LZ! Fortunately, having attended Brian Vant-Hull's "Speeds to Fly" seminar, I was able to optimize my glide slope. *(Besides, I'm not ready to start competing*

for the "BVH Restricted Landing Field" award. Yet.) I arrived over the field with maybe 150 feet of altitude; I continued flying up the field, trying to get over the wind-sock, which happened to be at the *other* end of the field. When I got to the sock, two things happened: first, I realized that I had been flying upwind, and I was now too close to the edge of the field to land in the same direction, and second, I got hit by a severe downdraft. I immediately cranked a 180, in an attempt to begin a [severely abbreviated] DBF approach. Basically, I just

(See PRE-FLIGHT, on page 15)

It's the start of a new year for Skyline, and the plan is to do several things differently, but I hope that you'll like the changes. To that end, I've modified the format some: each issue will have a real cover, and a table of contents immediately inside the cover. My column will appear regularly on page two, and Lauren Tjaden's column will appear on page 3. The newsletter is being

later in this issue. Of course, this won't come without a cost: First, Skyline will no longer come out every month, but quarterly instead. That means only four issues per year, but I'm hoping to make them good, quality issues. Second, I will no longer maintain "Wing Things" listings from one issue to the next. What that means is, that if you want to list something in Wing Things, you will have to re-submit your listing before each issue. This will ultimately help ensure that everything listed in Wing Things is current.

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Capital Hang Gliding and Paragliding Association

CHGPA represents hang glider and paraglider pilots from the Washington, DC mid-Atlantic region. We are committed to the safety, growth and solidarity of hang gliding and paraglid-

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Prez Sez ~ by Lauren Tjaden

This is not what I want to say, not what I want to feel. I want to talk about how a cloud looks, from under it or beside it, in a way that you don't imagine in your dreams. About how it feels when you rise into the mist, blind. About how you taste the cloud, and it's cold and forbidding, not warm and fluffy like you thought it looked, but instead, like breathing in a bit of snowdrift. I want to talk about what it feels like to run down a mountain and fly, as if you had wings planted in your back, even though really you just have them strapped on top of you. And how it feels when you are suddenly flying, and the mountain falls beneath you. How the trucks and cars turn into mere toys, and you turn into a Goddess, a hawk, someone gifted, like someone witnessing a birth or finding belief.

Instead, I feel bound to the earth, chained to the soil and pain, trapped in a nightmare. Of course, I am talking about Chad and Terry. I feel more like I'm breathing ashes and dirt than cloud, more mulch than mist. Chad taught me to fly. I admired him tremendously, not only because of his flying skill, but partly because he had this great life force, this energy. He burned at four hundred watts. Karen told me I should write down the things I remembered about Chad, because I would forget the details in time. I made a list, and that turned into the letter I wrote about Chad. I was happy to know that it perhaps lent some comfort to some of his loved ones, but it seemed petty. Like I was turning all the things he gave me into this

stupid few paragraphs, into trivial quips about playing spoons and racing motorcycles. But I didn't know what else to do.

And now I find myself making the list of memories with Terry. I saw him a couple of



weeks ago at Manquin. I hugged him and told him to kick butt at the competition. He showed me how to hook my camelback into my new harness, which was like his, and he warned me about colliding with other aircraft in the busy skies. I noticed that he had added a few pounds on his wiry frame, and it made me laugh secretly and tell Paul that Katy was making Terry fat and happy.

I often crouched on launch behind Terry at the mountain sites, and he would tell me how to read the signs of the wind coming up the slope. He had favorite trees to watch and signals that told him when it was okay to start springing.

Once I was struggling down the back of Woodstock mountain with my harness and my glider. The main road was closed because of snow. Terry had hiked up to ob-

serve me, but conditions didn't look good, so I had to carry my equipment out again. Terry picked up half of my glider when he noticed I could barely move the load by myself. We marched down the trail, and I congratulated myself for being able to shoulder such a burden – until I looked behind me. Terry had scooted forward, so he was bearing the weight of all of my glider except about ten pounds. I protested, but he just laughed.

What else? When I drove Terry's truck to pick him up the seat closed around me like a big pillow. He had candy to eat and blues playing in the tape-machine. Terry liked to laugh. His wit was so dry I sometimes didn't know he had made a joke until a few minutes after the fact.

I cried with him, too. I remember sitting with him on the Pulpit ramp, when Paul was in the hospital and I was afraid he would die. He told me that Paul was as strong as an ox, and that I shouldn't worry, because he would surprise everyone. He was right, too.

I remember more, lots more, about both of my friends. I'm sure you have your own memories, of Chad helping you, of Terry's quick smile. None of us can ever do much about what happened, to make it right. But do what you can. Remember them. Do the small things you can do for the ones they left behind. Examine any lessons you can find from their accidents to apply to your own flying. In addition, this should remind us all what a gift every day is, and how we should try to spend each one accordingly. I just want to be able to look at the sky again and think of tasting a cloud.



Lauren & Terry at Jack's Mountain
April 11, 2002

Photo by Ralph Sickinger

Coming Down to Earth ~ by Brian Vant-Hull

Incident Reports

It's difficult to discuss safety after so much tragedy. The reminder is too sharp; the motivation too obvious. But we can't avoid the issue without avoiding flight altogether, and for the majority of us this is not an option. Perusal of email IDs and license plates makes it clear that our particular form of flight has become a large part of our being and identity. I found some of the recent list-serve posts to be very moving: Dave Rice and Allen Sparks who both tried to give up hang gliding but could never stop being affected by it; Paul and Lauren who claim they were coming near divorce just because they couldn't fly for a few weeks. Struck a chord, didn't it? This isn't them, this is *us*.

The benefits of discussing incidents is too clear to waste time arguing the merits. Instead I'll list a couple reasons why it doesn't happen as much as it should, followed by my thoughts on how to address them. Further thought and input from the community is needed.

Two reasons why it doesn't happen enough:

1. *Pilots are embarrassed by their own faults, and fear judgment from the pilot community.*

A past attempt at a solution is the anonymous submission. This must fail under the glare of an obvious fact: we are too close a community for anonymity to ever be preserved. Another reason for the failure is the need for a "gatekeeper": a trusted person to whom such submissions may be made, and who is willing to continue the task of compiling and reporting incident reports. We can't always expect to have such a person available.

I never felt any trepidation recounting my incidents as a H-2 because I felt I was still a student, expected to make mistakes, yet supported by the concern and advice of

more experienced pilots. And yet I've heard of incidents where H-2's were actually told they should leave the sport. Given how our identity is tied up with flying, I can't imagine a more grievous personal insult. Such things should never have happened and I will say no more about it.

But if new pilots are embarrassed by their mistakes, a greater danger is to experienced



pilots, who feel, if anything, even greater embarrassment when they've committed a lapse in judgment. I think we've done a good job of creating a culture where people have learned the value of community analysis, but a way must be found to allay the fears of all pilots, new and old.

Perhaps we can turn the situation around: the person who is involved becomes the

We are too close a community for anonymity to ever be preserved.

principal analyst. Who else is better placed to understand what happened? Instead of the involved pilots laying bare their incidents in a confessional manner, they should instead be viewed as the experts who have had time and thought to analyze what happened. For the most part this is something we already do, but we could formalize the procedure. The pilot is empowered to make a public presentation: laying out the contributing factors, the decision making process,

and suggesting alternate actions which may have prevented the incident. Easel pads of paper and markers would be provided. The incident becomes an opportunity for the pilot to lecture the community rather than the reverse. Confident, objective analysis rather than contrite confession. Discussion would follow, bringing the analysis to maturity.

2. *Discussion of safety incidents becomes a downer as we realize our own mortality, and the topic is gradually avoided.*

This is a prime reason for incidents to be discussed with the person involved manifestly present and lively. We have a duty to discuss the most serious incidents, but discussions in absentia or anonymously (if such a thing exists) always lead to worry about our friends and ourselves.

Only the person involved has a right to discuss the incident with a light heart (*which only comes after a thorough self analysis*) and can therefore bring the rest of the crowd along with them. Comedians make a living by exposing our darkest fears to public scrutiny, and their insights are sometimes the deepest. I'm not saying an incident presentation should be comic (*not that there's anything wrong with that*) but the objective distance which comes from dissecting one's own actions does tend to lighten the load. Why not have some fun with it? Most people already make pretty a pretty good story out of TIW...TIWGD.

I also consider us to be a group of intellectuals, and most of us would jump at the chance to flex our flying knowledge by thorough analysis of something we observed a little too close for comfort. For those who feel their knowledge base is a little weak, a little homework and discussions with other pilots in preparation for the presentation is a worthwhile experience. And with presentation comes the inevitable creativity.

Yes, this could be fun.



Custom Comms

~ by Ralph Sickinger

They say that talk is cheap; but when you're up in the air in your hang glider, the ability to talk to someone else can be worth a lot! Or maybe you're on an X-C, and you're losing altitude; it's nice to be able to tell someone exactly where you're landing. Many pilots shun radios, because the noise and chatter intrude on their flying, but I'm not one of them. Having a radio has saved me once or twice, and I try not to fly without one! So the real question then, is how to hook it up...

There are several different ways of mounting a radio, as well as several different ways of hooking up an external speaker and microphone, and I think I've tried most of them at one time or another. I started out with an over-the-ear bud with integrated boom microphone, but this method has its drawbacks: it's hard to keep the ear-bud correctly seated when you put your helmet on, and once you do, the plastic ear clip presses into the side of your head rather uncomfortably.

I learned to wire the speaker and mic right into my helmet, based on an earlier Skyline article written by Mike Chevalier (*"Radio Gizmos"*, Skyline, February 1999). The original article called for a hole in the base of your helmet for a connector to the external wiring. I wasn't really comfortable with the idea of doing anything to my helmet that might compromise its integrity, and I wasn't thrilled about using large 4-pin DIN plugs.

The microphone control issue (VOX vs. PTT) has been debated before too, and the decision here is simple: Don't Use VOX! Wind noise in your helmet will set it off, keeping the channel open, and pretty much annoying everyone else on the same frequency. Besides, I've used both, and I've found that a PTT switch is a lot more reliable, and turns out to be easier to use in the long run. Unfortunately, most PTT switches that I've seen are the finger-mount type, which require a wire that runs up your arm to connect the switch to the radio. It's kind of a pain to hook up, and having a wire running along my arm just isn't all that comfortable, especially in the summer time, when I fly in a T-shirt. In-

stead, I prefer to mount my PTT switch on the basetube. It's a permanent mounting, that includes a small connector at one end of the basetube; the other part of that connector runs up to the radio. This allows me to disconnect the wire when I remove the basetube from the glider.

And, as a result of a listserv discussion on radio mounting locations, I decided to move my radio from the side of my harness to the downtube. Now I've got the radio conveniently off to the side, but where I can see it clearly when I turn my head, in case I need to adjust something in flight. More than once I've had to adjust either the volume or the squelch, in response to changing radio conditions.

Recapping my "ideal" radio set-up: the mic and speaker are integrated into my helmet; the PTT switch is conveniently mounted on the basetube; the radio is mounted on the downtube, where I can see it for easy in-flight radio adjustments, but I also want to be able to use it in the LZ. And to top it all off, I want this whole setup to go together and come apart quickly and easily, so that I can minimize my setup and break-down

time. That's a tall order, but it IS possible, and I'm going to show you how...

Like many pilots, I use the Yaesu Vertex-150 handheld radio; its compact, and relatively inexpensive, making it ideal for mounting on the downtube. Unfortunately, it's external speaker/micro-phone jack uses a [single, non-standard] 4-conductor 3.5mm plug. I had to do some searching on the web, but I WAS able to find the plug that I needed. The end result is well worth it - a single plug on the side of the radio is a lot more convenient than a pair of plugs that go in on top. Including the special-order plug, you'll need about \$60 worth of parts; most of them are available at your local Radio Shack, but you'll also need to stop at the hardware store for some silicone adhesive and velcro, and at CVS for some neoprene. The complete parts list is included at the end of this article. In addition, you'll also need the following:

- Soldering iron & solder
- Wire strippers
- Electrical tape
- Hot-melt glue gun
- RJ-11 crimping tool
- X-Acto knife
- A thin piece of closed-cell foam to act as a wind-screen for the microphone.

The RJ-11 crimping tool can be found at Radio Shack for \$10. (*If you don't want to buy one, contact me and I can arrange to let you borrow mine.*)

Let's start with a quick look at the overall design of the system. This setup has 5 major components, as shown in Figure 1:

- (A) The helmet wiring itself;
- (B) The helmet connector coil;
- (C) The main comm line;
- (D) The radio mount; and,
- (E) The basetube mounted PTT switch.

First up is the helmet: the basic idea is to mount the speaker and the microphone inside the helmet, with the wires connected to a short length of 4-conductor phone wire. This gets plugged into an in-line modular phone coupler glued to the side of the helmet, providing a con-

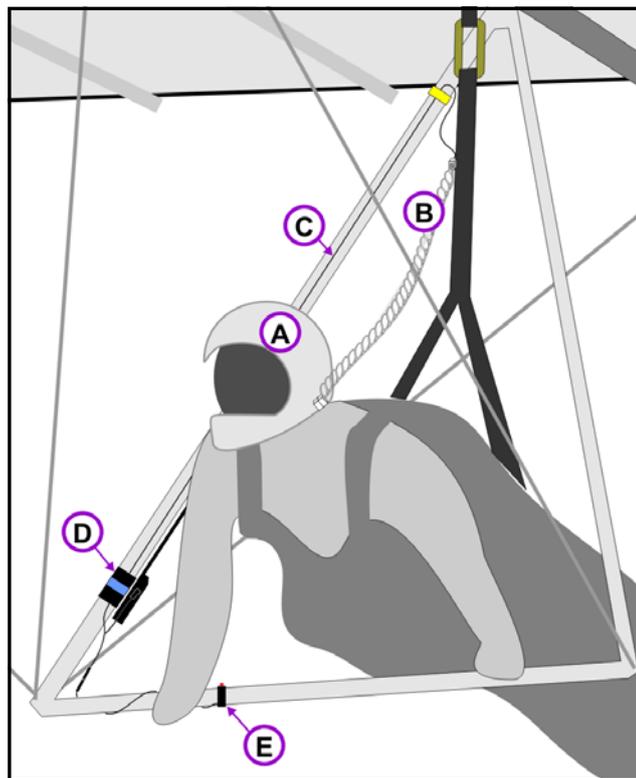


Figure 1: Overview of Radio Setup

venient connection point to the rest of the system. When I put the first version of this system together, I soldered the resistors and capacitors together right next to the microphone, inside the helmet. It worked well... until I got a new radio which used a different schematic! I ended up having to rip everything out and re-wire it to support the new radio. This time around I took a different approach: each contact is directly connected to one of the four wires in the modular phone cord; by keeping track of which contact is on which wire, I can connect everything at the plug end, right before it goes into the radio. If I ever have to change it, all I have to do is cut off the existing plug, and wire in a new one. Of course, they say that “the Devil is in the details”... you have to keep track of which wire is connected to what. This is even trickier with modular phone cord, where it is very easy to flip a modular connector when you attach it. To keep things straight, I adopted the following convention: there are four wires in modular phone cord (*black, red, green, & yellow*); I used the black and yellow pair for the speaker connections (*negative and positive, respectively*), and the red and green pair for the microphone (*positive and negative, respectively*). To keep the connections oriented correctly, I use the rule “red, right, returning”. (*Ok, it's not original; but I live near Annapolis, and it's as good a rule as any.*) That is, for connectors that are going *towards* the radio, I put the red wire closer to the *right* side when I insert it into the jack before I crimp it. I reverse the orientation for connectors going in the opposite direction (*i.e: towards the helmet*).

To wire the helmet itself, I begin with the speaker, and one of the in-line modular connectors. Decide where you want to put the speaker; in most helmets there is a gap in the phone where the ear hole is, and the padding should lift up enough that you can slide the speaker underneath it. Cut a short piece of phone cord. You can cut off one end of the 12' modular phone cord (*verify that the plug is oriented correctly - if it's not you'll have to cut a section of cord from the middle, and crimp a jack onto it yourself*). Cut a piece

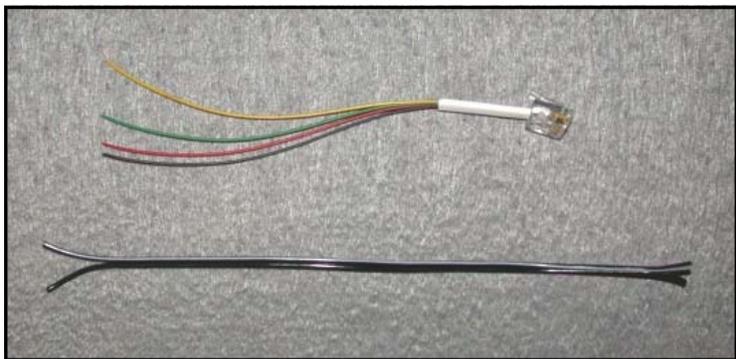


Figure 2: Modular Plug and Leads

that's about 4" long - it needs to be long enough to reach from the modular connector to the speaker, with a little bit of extra for slack. Cut away all but 1" of the insulation. Solder the black and yellow leads to the speaker. Cut the red & green wires back to within 1/2" of the insulation. Next, take the Adaptaplug cord, and cut a 6" long segment out of the middle. Make sure that you leave at least 2' of cord attached to each plug for later. Solder one end of the Adapta-cord wire to the red and green leads, and wrap the junction with electrical tape, as shown in Figure 3. (*Remember which wire is connected to which lead.*) Next up is the microphone. Since the

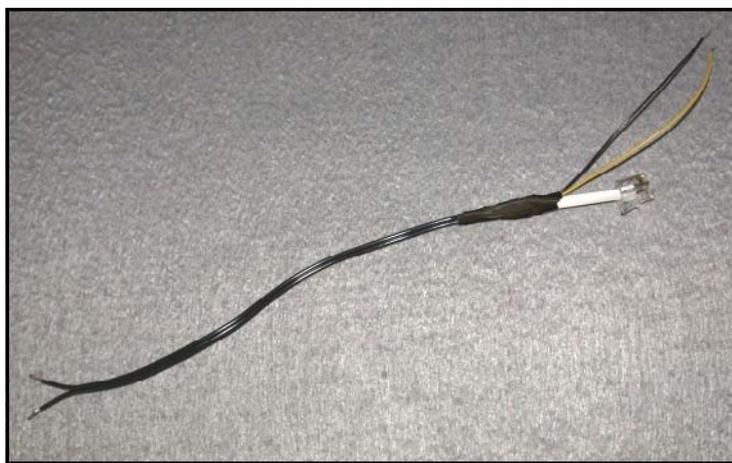


Figure 3: Microphone leads attached...

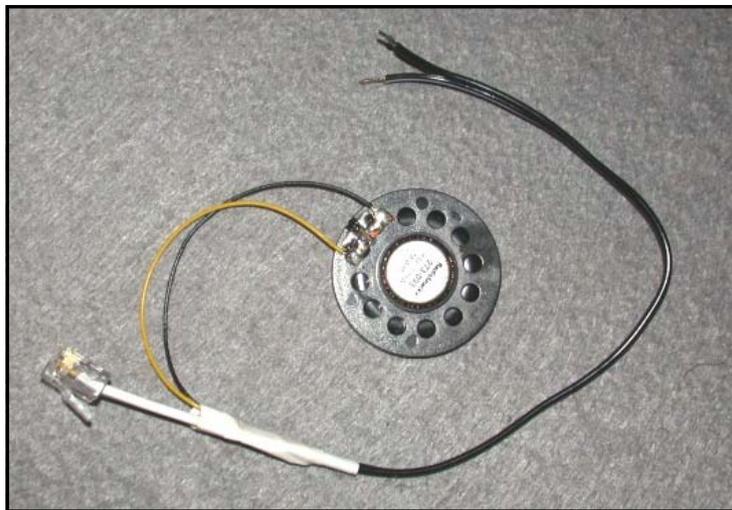


Figure 4: Leads attached to speaker.

leads are going to be bent horizontally, it's important to shield them from the body of the mic, so that they don't short out. Cut some thin strips of electrical tape, 1/4" wide by 1 1/2" long, and cut one of the strips in half. Take one of the halves, and poke the mi-



Figure 5: Mic terminals protected by electrical tape.

crophone leads through the center of it, so that the tape covers the bottom of the element, and folds down over the sides. Take the long piece and wrap it around the outside of the element to secure the first piece, as shown in Figure 5. Now decide where you want to mount the microphone. I recommend mounting it in the crease where the chin guard meets the main body of the helmet (Figure 6).



Figure 6: Microphone laid in place.

It's close enough to your mouth for good pick-up, and it fits in there nicely, without sticking out where you could get hit by it. (Thanks to Pete Lehmann for this tip!) Cut another piece of electrical tape (about 5" long) and poke the terminals through this piece, so the sticky side is away from the element. Solder the Adaptacord wire to the terminals (Remember to make sure that the positive terminal goes to the red wire!), and bend them over 90°, so they lie on the sticky part of the tape. Flip the tape over, and secure the microphone in place. At this point, I like to take two pieces of styrofoam packing material, and shape them to smooth out the area around the microphone (again, Figure 6). Next, take another 5" strip of electrical tape, and cut a hole the size of the mic element out of the middle. Lay the tape over the styrofoam, so that the element is still un-



Figure 7: Microphone taped in place.

covered, and wrap the ends of the tape around the chin guard so that the styrofoam is secure (Figure 7). Now take the thin piece of closed-cell foam (also available at Radio Shack, if you don't happen to have some lying around the house) and lay it over the mic, and



Figure 8: Foam wind screen taped in place.

secure it with electrical tape. The last step is to use the "Goop" adhesive to glue the modular in-line connector to the side of the helmet. Use some electrical tape to hold it in place until the adhesive sets, as shown in Figure 9. The adhesive will need at least 24 hours to set completely, then you can remove the electrical tape, and you're done with the helmet! (Figure 10).



Figure 9: Modular plug and coupler taped in place while adhesive dries.

Now for the other end of the system: the PTT switch and the radio connection. Since the PTT connection is the easier of the two, let's tackle that first. If you're going to mount the PTT on the basetube, you'll need to decide where you want to position the switch on the basetube, and how you want to run the wire past your hand. Typically, you'll want the switch fairly far in, but where you can still



Figure 10: Completed helmet!

reach it easily with your thumb. You can then either run the wire in a straight line along the basetube, or wrap it around the basetube in a spiral. In either case, you may want to consider put an additional wrap (such as tennis racquet over-grip) over the wire, so it's more comfortable. Once you've established how much wire you need to reach the corner, cut the Adaptacord wire that distance from the end with the female plug. Solder the cut ends to the two contacts on the bottom of the switch. Next, attach the switch to one of the velcro cable ties using the hot-melt glue gun. (If you don't have one of these, you can use the Goop adhesive instead, but hot-melt glue will provide a more rigid connection.) This will result in a PTT switch which attaches to the basetube simply by wrapping the velcro strap around it (see Figure 11). I actually built mine up with some extra hot-melt glue; I wrapped some aluminum foil (shiny side out) around the basetube, and velcroed the switch in place before the glue hardened. This helped shape the glue so that



Figure 11: Velcro strap attached; hot-melt glue shaped to basetube.

the switch holds it's position better. Once the glue has hardened, the foil can be peeled off.

Next, it's time to wire the plug. Cut a short segment of phone cord (3"-4"), and cut away 1" of insulation. Solder the leads to the four connections on the plug. There's no rule here for which order to connect them in, just keep track of which color wire is connected to which connection. (For purposes of this article, assume that the yellow wire is connected to the tip, with the other wires connected in order [green-red-black] to the rings.) There are two different kinds of 4-conductor plugs that you can use: straight or right-angle. The right-angle plug makes more sense, but it's harder to find, and there is a minor issue with it and the Vertex 150: the jack on the Vertex 150 is recessed a little bit, and the insulating cover is wider than the recession. It also extends down just a little too far for the plug to seat reliably in the jack. To solve this problem, you need to trim about 0.5mm off of the bottom of the cover (see Figure 12); however, this means that the plug won't stay seated in the cover properly and will need to be glued in instead. (Again, using our trusty Goop adhesive!)

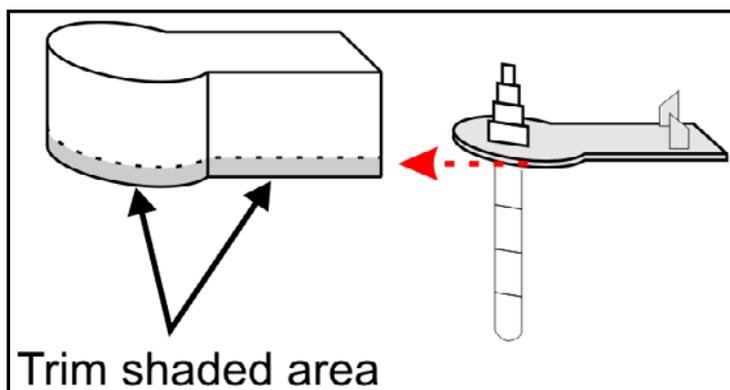


Figure 12: Trimming the casing from the 4-conductor plug.

Now that you've got leads coming out of the plug, it's time to con-



Figure 13: Modular phone cord attached to 4-conductor plug. Casing has been trimmed.

nect them to the PTT and the wires running up the helmet. You'll need the other plug from the Adaptaplug cord, with a lead on it long enough to reach from the desired radio mounting location on the downtube to the other plug on the basetube. You also need the rest of the modular phone cord; this cord needs to be long enough to run from the radio up to the apex of the control frame, and back down to the other in-line coupler, which will end up being attached to the harness lines, about a foot down from the carabiner (*more on that later*). Remember the "red, right, returning" rule when wiring in the leads from this cord. The schematic for the entire circuit, and a diagram showing the specific connections to be made are both shown at the end of this article. Once everything is connected and wrapped in electrical tape, you can secure it to the downtubes using a few more of the velcro straps.

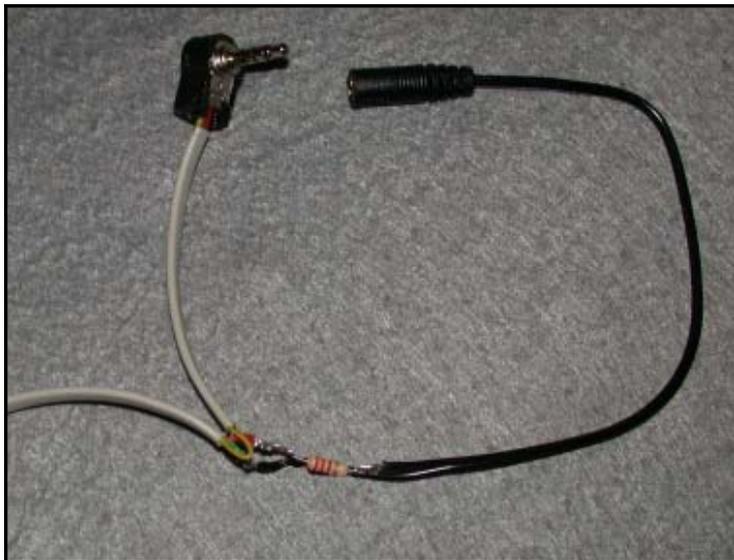


Figure 14: 4-conductor plug attached to main cable and PTT connector.



Figure 15: Modular coupler on harness riser.

The last part of the circuit is the connection from the control frame to the helmet. This is accomplished by attaching the second in-line modular connector to one of the harness lines running up to the carabiner. Cut two 3" long strips of electrical tape; then stick the two pieces to each other in a cross pattern. Wrap one of the tape segments around the coupler, and the other segment around the harness straps (*see Figure 15*). By securing the modular phone cord to the top of the downtube, near the apex, you'll minimize the distance that the coupler moves, as the harness moves around in flight (*either forward/backward or side-to-side*).

You also need a connection from the coupler to the helmet. For this we'll cut a section from the coiled handset cord. Using a coiled cord allows you to run a short length of wire from the helmet back, so you don't have a lot of slack cord hanging around which could

Cutting Template for Radio Mount (for Vertex 150 on faired downtubes)

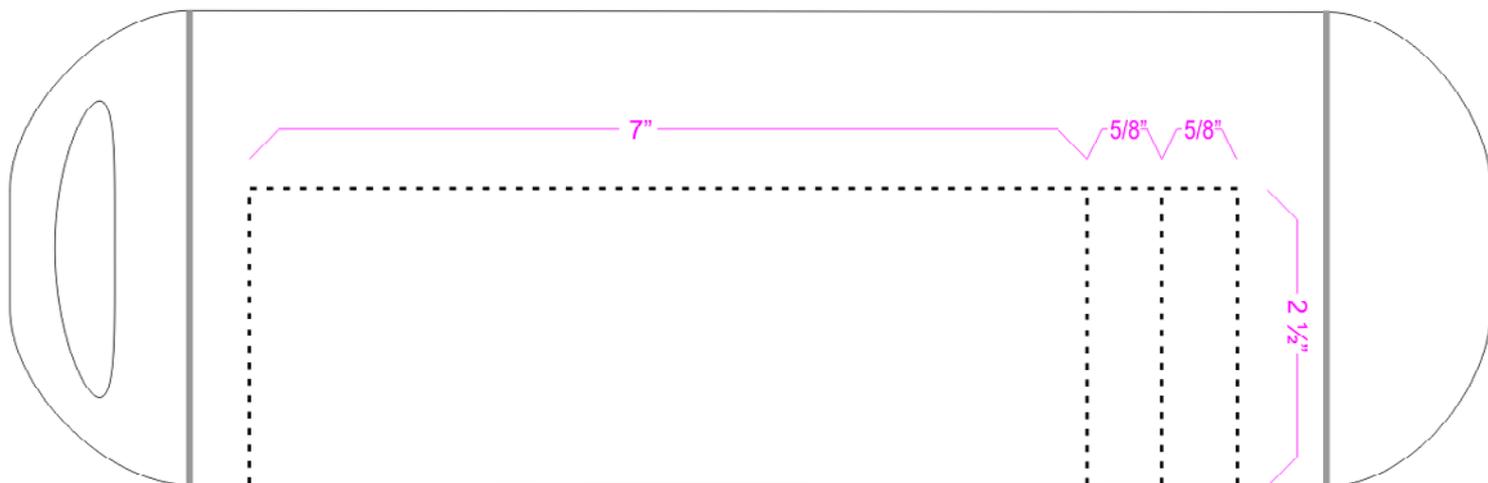


Figure 16: Cutting template for neoprene radio mount.

potentially tangle; at the same time, the coiled cord will give, and extend up to 4 times it's coiled length if necessary. The only problem is that the plugs on the handset cord won't fit into the modular couplers! Also, the 12' cord is way too long - you only really need about 2' (*coiled length*). So, cut off the existing plugs, then cut off a 2' length of coil, and finally, attach modular plugs at both ends of the coil. Remember to pay attention to the wire orientation when you connect the plugs: one of them has to have the red wire on the *right*, and the other plug HAS to have the red wire on the *left*. If you get this wrong, you'll end up reversing the polarity on the microphone, and it won't work. (*Polarity is irrelevant to the speaker though, so it will work either way!*)

There's one more piece left: connecting the radio to the downtube. The Vertex 150's small size makes this pretty easy. We'll use the Futuro Sport wrist support for this. It's a relatively rectangular piece of neoprene rubber, that is just a little larger than we need. If you know of a better source for neoprene rubber, I'd love to hear about it; in the meantime, the wrist support works well, and it's easy to find at either your local CVS or Giant Food Store. The general plan is to cut a strip of neoprene just wide enough to fit the belt clip on the radio, and long enough to wrap around the downtube, with about 2" of overlap. In addition to this main strip, I also cut two 1/2" wide strips (*see Figure 16*). These will be glued to the inside of the main strip, just far enough a part to fit the radio clip in between (*Figure 17*). Attach the strips using more of the Goop adhesive. Cut two pieces of velcro, about 1 3/4" x 2" long, and the same width as the main strip. If you are using the industrial strength velcro with the self-adhesive backing, you can just peel and stick. Alternatively, you can get sew-on velcro from a fabric store, and glue it on with the Goop. I prefer this approach, because I think the velcro holds better when glued with Goop, than with the self-adhesive backing. **IMPORTANT:** do not use Goop and the self-adhesive backing at the same time; the velcro will peel right-off of the Goop! Also, be sure to give the glue plenty of time to dry (*at least 24 hours*) before using the radio mount. The last step



Figure 18: Radio mount, with radio clipped in.

is to spread a thin layer of Goop on the inner surface of the main strip; this will give the neoprene a little more "grip" when attached to the glider. I also use one of the velcro cable ties to wrap around the outside of the strip, as a safety measure in case the velcro decides to peel off of the neoprene. Once the adhesive finishes drying, you're all done! (*Figure 18*)

So now that you've finished all of the construction, how does this all come together on flying day? It's actually pretty easy. Set up the glider as you normally would; when you put the control frame together, connect the plugs from the Adaptag wire. Grab your radio (*which I leave permanently clipped to the neoprene radio-mount*), and attach it to the downtube - it just velcros on. Plug the main communications cable into the radio. When you hook your harness to the glider (*After you close and lock the carabiner!*) plug the main line into the modular coupler (*the modular phone plug just snaps right in*). Last, plug one end of the coiled handset cord into the same coupler, and plug the other end into the helmet. This may sound complicated, but it actually goes together pretty quickly. (*All 5 steps together only take about 30 seconds; yes - I've timed it.*) When everything is connected, you're ready to fly!

This setup is still evolving, and constantly being improved. If you choose to fly with the same setup, I'd love to hear your comments. I'm also interested in any suggestions for improving it. You can e-mail me at skyline@sickinger.net

I wish you good flying!



Radio Mount Assembly

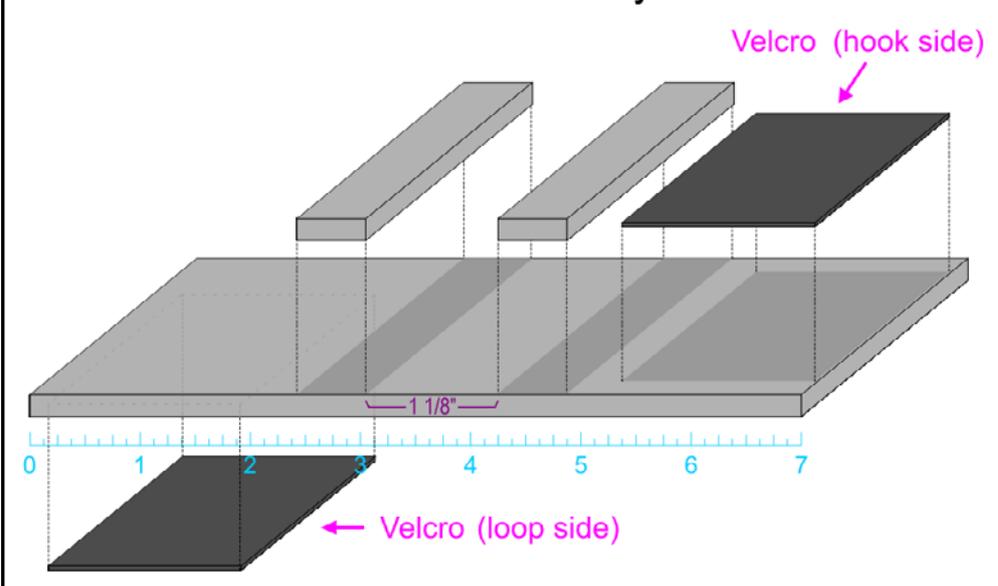
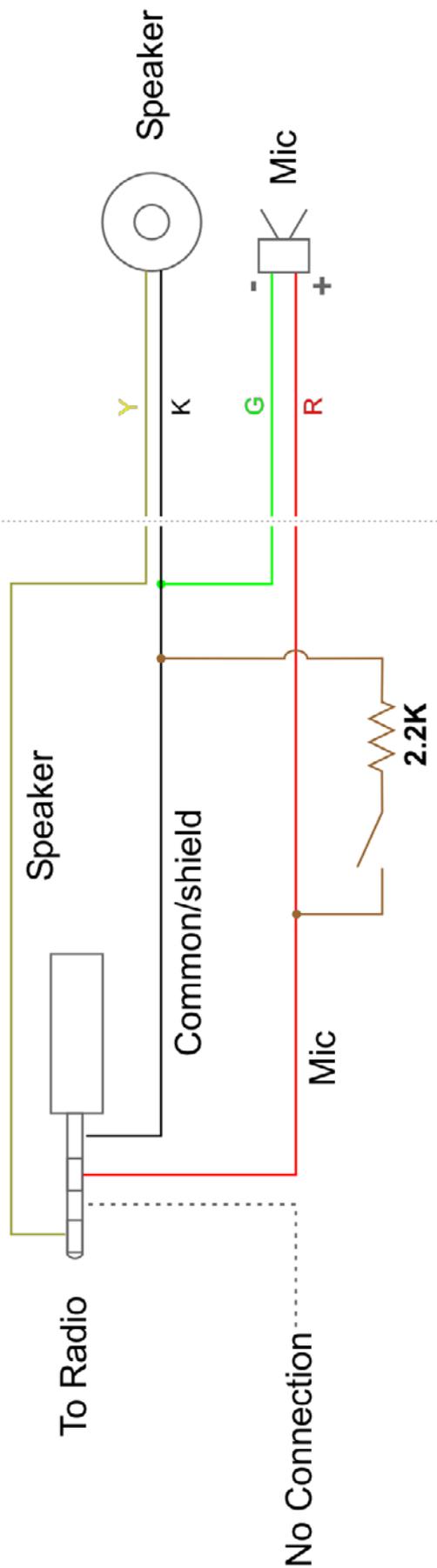
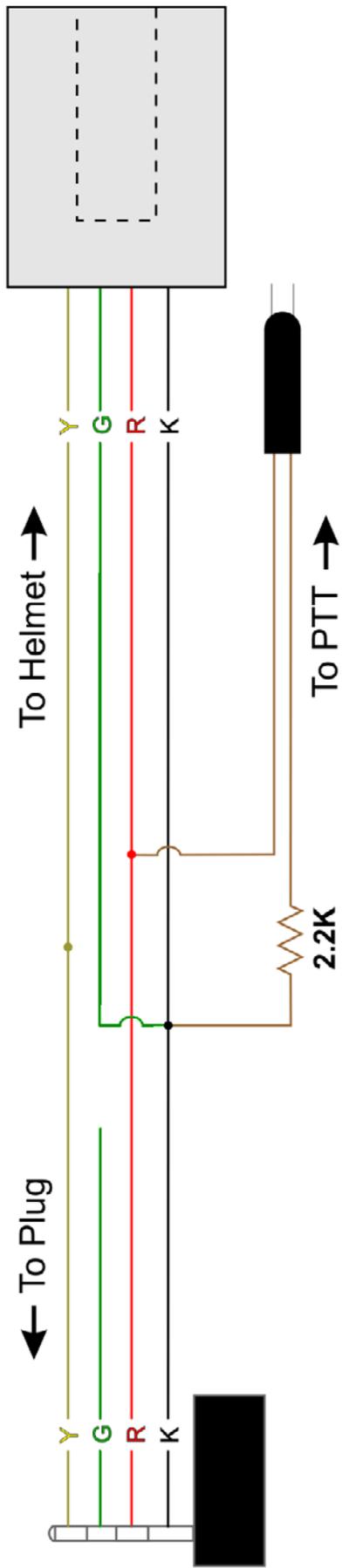


Figure 17: Radio mount assembly diagram.

Vertex 150 Helmet Wiring Schematic



Main Comm Cable Wiring Connections



Parts List for Helmet Wiring Project

Source	Description	Code	Qty	Price	Total
Radio Shack:	a) 4-Wire In-Line Coupler	2790458	2	2.99	5.98
	b) 4-Pin RJ11/14 Modular Plugs (10 pack)	2790384	1	2.99	2.99
	c) 12' 4-Conductor Modular Line Card	2790335	1	5.79	5.79
	d) 2.2K Ohm Resistors (5 pack)	2711121	1	0.99	0.99
	e) 6' Adaptaplug [extension] Cord	2731641	1	3.49	3.49
	f) 12' Coiled Telephone Handset Cord	2790306	1	5.49	5.49
	g) PC Mount Condensor Microphone Element	2700090	1	2.49	2.49
	h) 16-Ohm Mini Speaker	2730093	1	1.97	1.97
	i) Soft-touch SPST Momentary Pushbutton Switch	2751566	1	2.69	2.69
	j) Hook-and-Loop ["velcro"] Straps (5 pack)	2781676	1	2.99	2.99
CVS or Giant:	k) Futura Sport Adjustable Wrist Support		1	5.99	5.99
Lowes:	l) GOOP - Outdoor		1	4.87	4.87
	m) 4"x2" Industrial Strength Velcro		1	2.94	2.94
	<i>Tax on above items (5% MD Sales)</i>				2.49
Action Electronics: www.action-electronics.com	n) 3.5mm 4-conductor Right-Angle Plug	CR-30-702	1	2.52	2.52
		<i>Shipping</i>	1	7.23	7.23
	Total:				\$62.10

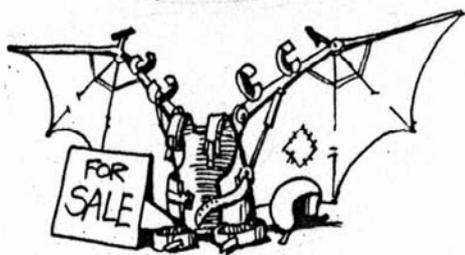


CHGPA Landing Contest

It seems as though the one thing that tends to motivate us more than anything else is competition. That being the case, I thought that a little friendly competition involving one of our most important flying skills (*landing!*) might give us all a little incentive to better ourselves. Last year, for the first time, I actually kept track of my good-landing percentage. It was less than 60%! Not even a passing grade, and that's with a Falcon! (*Which I ought to be able to land blindfolded.*) I think that the ability to land safely, and with consistency, is very important, and it's amazing how quickly that skill degrades without regular practice. So, with that in mind, I thought that a contest with real money up for grabs might make a difference! There's two reasons that I think that this will help: first, I'm hoping that it will motivate people to spend more time practicing; either on the training hill, or at the flight parks, with pattern and/or truck tows. The other reason has to do with benchmarking and metrics; in order to improve, you have to be able to quantify where you're at, so you can tell if you're getting better or not. My thought is that by participating in the contest, people will start tracking their own landing statistics, and possibly learning from it. Keeping track of my own statistics last year was certainly an eye-opener for me!

So, how does this work? The official rules are below, but here's the simple version: the goal is to improve landings that occur after normal flying; I've found that landings after I've been flying for 30 minutes or more are significantly worse than landing after a sled ride. I'm going to allow landings at tow parks, as long as you're doing "normal" flying, and not "practicing". That means doing a full aero-tow. It also means that, if you tow more than once, only the first two flights count. The reason for this is: the hardest landing to make is when you're "cold"; you show up, you fly, and then you land. If you've already flown the same place a few times, you start getting used to the field and the conditions, and making a good landing is considerably easier. It's good practice, but that's not the point of this contest. I'll be handicapping gliders as well; because of the extra difficulty involved in landing a topless glider, those pilots will be given an extra 5% in their score. Conversely, single-surface gliders will suffer a handicap of -5% on their score.

Last, because we're doing this on the honor system, you will have to log all of your flights (*whether they are eligible for the contest or not*) in order to win. A sample log page is available online at <http://skyline.sickinger.net>,



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To place or change an ad, send e-mail to: skyline@chgpa.org

which can be photocopied and punched, and then stored in an 8"x5" mini 3-ring binder, available at Staples. Alternatively, you can e-mail me after each flying day with your results, and I will be happy to keep your stats for you. I encourage everyone to submit their stats on a regular basis, so I can maintain an active "leader board" for the club!

I hope that this will be a fun challenge for everyone in the club, and I look forward to seeing lots of good landings this summer.

OFFICIAL RULES

- 1) This contest is open to all members of the Capital Hang Gliding and Paragliding Association.
- 2) This contest will run from May 22, 2003 through November 10, 2003.
- 3) Scoring will be calculated based on the number of good, eligible landings, divided by the total number of eligible landings.
- 4) A landing is considered "eligible" if:
 - a: the pilot launched from a region 9 mountain site, or towed from any region 9 flight park.
 - b: if towed, the pilot must achieve a maximum flight altitude of at least 2000' AGL, OR have a flight duration greater than 25 minutes.
 - c: only the first two flights in any given day are eligible for the competition.
- 5) A landing is considered "good" if:
 - a: The pilot must land on his/her feet;
 - b: The control-frame of the glider may not touch the ground during the landing;
 - c: The leading-edge of the glider may not touch the ground during the landing;
 - d: The glider may not be damaged during the landing;
 - e: The landing is considered finished when the pilot has either held the glider in place for 3 full seconds (with both feet on the ground) OR the pilot has carried the glider at a walking pace at least 30 feet from the touchdown point.
- 6) The pilot must log ALL flights in Region 9 during the contest, whether they are eligible landings or not. Log entries must contain the following information:
 - Date
 - Site
 - Glider type
 - Number of flights
 - Landing result for each flight (good or bad)
 - For eligible tow flights, max altitude and/or flight duration must be included as well.
- 7) Pilots will be scored on ALL eligible landings made within the contest time frame.
- 8) Pilots must have at least 20 landings. Pilots with fewer than 20 landings will be scored as though the remaining landings were evenly split between good and bad. (I.e: a pilot with 16 landings, 12 of them good, would be scored as 14/20, or 70%)
- 9) Landings made with topless gliders will be scored an additional 5% for each good landing. Landings made with single-surface gliders will be handicapped by subtracting 5% points for each good landing. Paraglider landings are **not** eligible for this contest.
- 10) Prizes will be awarded to the pilots with the top 2 scores.
 - First place: \$35
 - Second place: \$15



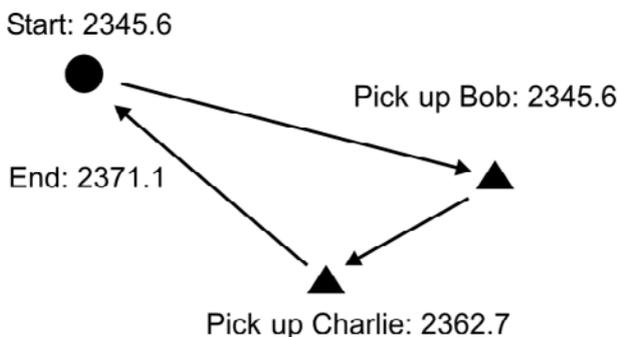
Skyline Retrieve Driving Contest

So why a Retrieve Driver contest? Oh, for a couple of reasons. For one thing, I'd be interested in seeing the statistics that this contest could generate. For another, it's something that I read about somewhere, and I always thought it would be a cool thing to try. But the most important reason is this: I know that we all share driving and retrieve responsibilities, with a fairly even give and take, but I believe that in the end, somewhere out there is one individual who goes above and beyond, retrieving the last X-C pilot after everyone else has gone home, or making sure that everyone in the LZ gets back to their cars. And I want to find out who that person is.

The way this contest will work is that you score points for every pilot and/or glider that you carry, multiplied by the number of miles traveled. Each pilot is worth 2 points, and his glider and equipment are worth 3 points. Picking up your S.O. ("significant other") is only worth half. After all, the point here is to credit people for retrieving pilots that they don't *have* to pick up. So what about picking up more than one X-C pilot in the same trip? Basically, each leg of the retrieve gets scored separately, with the drive to pick up the first pilot and the drive to pick up the second pilot combined and scored as a single leg. For example: Alex sets out to pick up Bob, who has landed 12 miles away. On the way, he hears about Charlie, who only flew 9 miles, but landed about 2 miles further south. Alex drives 12 miles to pick up Bob and his glider, then drives another 5 miles and picks up Charlie and his glider, and another 9 miles back to launch. This run would be worth 175 points:

First leg: 17 miles x 5 points (1 pilot+glider) = 85
 Second leg: 9 miles x 10 points (2 pilots+gliders) = 90 points
 Total: 175 points

Don't worry, you won't have to do all this math to participate in the contest. Instead, you can use the log sheets provided with this issue. Simply record the starting and ending mileage from your odometer (*you only need the last 3 or 4 digits*), and fill in the number of pilots in each category. A sample log entry for the previous example is shown in Figure 1. "Standard" runs from the LZ back to launch are even easier: simply write in the name of the site and add "LLZ" after it. (*For sites with more than one LZ, identify which LZ by number; 1 = Primary, 2 = Secondary, etc.*) Send me your log sheets (*or fill them out electronically using the online log at <http://sickinger.net/chgpa/retrieve.html>*) and I'll score them and keep track of the totals. One last note: while it isn't necessary to write down the names of the pilots that you retrieve, it might be worthwhile to do so. Later on it might be interesting to see which pilots benefited the most from other pilots' generosity. And so, on to the rules...



Date	Site	Odometer Reading Start	Odometer Reading End	Pilots & Gliders	Pilots Only	S.O.s	Pilots (by Name)
5/12	Pulpit	2345.6		1			Bob
		2362.7	2371.1	2			+Charlie
5/20	Pulpit	LLZ1		3		1	Bob, Charlie, Denise, Eric

Figure 1: Sample Retrieve Scenario

OFFICIAL RULES

- 1) This contest is open to all members of the Capital Hang Gliding and Paragliding Association, or to any person who retrieves a member of the CHGPA.
- 2) This contest will run from May 22, 2003 through November 10, 2003.
- 3) Scoring will be calculated based on the number of pilots and/or gliders retrieved, multiplied by the number of miles driven to retrieve each pilot.
- 4) Retrieves are eligible for scoring for any CHGPA pilot who has launched from a region 9 mountain site, or towed from any region 9 flight park.
- 5) Retrieve mileage is scored from the point where the retrieve driver leaves to pick up a pilot, until the pilot is dropped off.

6) The driver must log any retrieve that is to be scored for the contest. Log entries must contain the following information:

- Date
- Site
- Starting odometer mileage
- For each leg of the retrieve*:
 - number of pilots carried
 - number of gliders carried
 - number of "significant others" carried
 - odometer mileage at the end of the leg

* The drive from the beginning until the first pilot is picked up is considered part of the first leg.

7) Retrieves may also be made from the launch area of a site to one of its LZs. In this case, the log entry must contain the following information:

- Date
- Site
- the notation "LLZ" in place of the odometer mileage
- number of pilots carried
- number of gliders carried
- number of "significant others" carried

7) Retrieve points will be scored as follows:
 2 points per pilot per mile
 3 points per glider per mile
 2.5 points per significant other per mile

8) The winner will be the driver with the most retrieve points at the end of the contest. The winner will receive a \$50 cash prize.



(PRE-FLIGHT, continued from page 2)

wanted to get downwind far enough so that I'd have some room to land. I pulled the bar in to pick up speed, and went about to the middle of the field, and then cranked another 180 to head back upwind. At this point, I was probably 25-30 feet above the ground. Before I started the turn. I brought the glider around, as much "twisting" it towards the correct heading as actually carving the turn. Somewhere in the middle of this, I remember thinking "Oh God - this is what happened to Terry!" The next thing I knew, I was on the correct heading and my wings were level, but I'd bled off a lot of my airspeed, and I was now 15 feet off the ground. I pulled in and dove for the ground, leveling off at 3ft, but now carrying some extra speed (*as well as floating in ground-effect*). I eased the bar out, floating up to 5 feet AGL, rotating upright and getting my feet out of the harness. I flared, and landed, taking all of two steps, and staying easily on my feet. *Technically*, I guess it qualifies as a "good" landing. (*But a really bad approach!*) And then it all was all over, and I finally started breathing again! I could stop there, but that would leave out the best part of the story. Besides, this is where it starts to get spooky...

Witness who saw my landing said that it "looked like a comp-pilot landing". I'm not sure if they meant it as a compliment. I'm sure they must have been wondering how I managed to pull that off. To be honest, at the time I was asking myself the same thing! I think that my flying skills are fairly good, but they're not *that* good! On the drive

home, I thought about what happened. A lot. By the time I got home, I realized two things: One, I could have been killed; and two, I wasn't, because I had help. Call it "Divine intervention" if you want, or call it supernatural. Whatever. The fact is, I don't know how I made that last turn. Normally, I'm blessed with near-photographic recall of events. I can "play back" an event in my head, and see every little detail, like watching a VCR. Looking back, I can remember every single moment of my entire flight, except for that last turn. I can remember starting it, and I remember coming out of it. I don't remember any part of the turn itself, except for thinking about Terry Spencer. I found out after the fact that he had passed away at 2:05pm, exactly 90 minutes before I landed. I know that Woodstock was one of his favorite sites. Is it possible that he stopped by, to revisit a place that meant so much to him? Is it possible that he took over for me, in order to prevent a potential disaster? I don't know. I had planned to back up my story with the GPS plot from my flight, but when I went to download the track, there was no record of my flight! There is data at launch, and again in the LZ, but nothing in between. Go figure. I've never been one to believe in ghosts, but I'll admit that I don't disbelieve quite as strongly as I used to.

The bottom line is that I screwed up. I exercised really poor judgement, and only narrowly avoided a catastrophe. But I survived, and I'll learn from this, and I'll continue to fly...

With a little help from my friends. 



Danny Brotto takes-off from High Rock
May 14, 2003

Photo by Steve Kinsley

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*Capital Hang Gliding and
Paragliding Association*

15914B Shady Grove Road #L-197
Gaithersburg, MD 20877-1315

Next CHGPA meetings will be held:

May 28, 2003

June 25, 2003

July 23, 2003

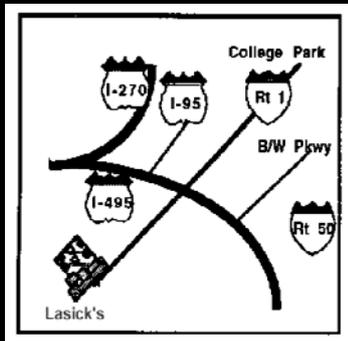
Meetings are held downstairs at: Lasick's Beef House

Directions: 0.8 mile inside the beltway on Route 1 South,
just past the Super 8 Motel (College Park exit off I-495).

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SPRING '03



Chad Elchin's "Blaze of Glory" ~ Photo by Ellis Kim