

From the Downwind Carolina Rigging Loft
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What We Learned at PIA

Welcome to 2005 everybody, we are looking forward to a great new season. Dawn and I recently attended the Parachute Industry Association Symposium in Jacksonville Florida. This is our second PIA symposium and we have found the experience very educational and rewarding. I just wanted to put down a few notes about things we learned and saw. There are presently no truly revolutionary developments along the order of magnitude of the AAD (particularly the digital AAD), the 3 ring release or the ram air parachute. However, there are very interesting developments along all these lines that could create very major changes in our sport.

AADs

Airtect still dominates this market with the Cypres II, which we heartily endorse. Its improvements over the proven Cypres I make it the superior of any AAD I've previously seen. These improvements include:

1. Waterproof – it has a very technically advanced filter, which protects the unit from damage due to submersion. (However, *please* go see your rigger if your rig/reserve has gotten wet. We've seen several Cypreses rusted to trash after water exposure. Even if you have a Cypres 2, it will need to have the filter replaced.)
2. You'll never have to worry about battery replacement, and neither will we. The batteries are good until the 4- or 8-year check. Speaking of which ...
3. Cost of ownership is lower. You'll still need to send the unit back at 4 and 8 years after the date of manufacture, but the maintenance cost includes battery change. Right now, a Cypres 1 insp costs \$195, or \$275 with battery change. Cypres 2 insp costs \$195, including battery change. In addition you won't have to pay for batteries every two years.
4. The unit is a bit smaller, and is much more robust.

Vigil is back on the scene and they "appear" to have all the bugs worked out. For what it costs and does, I would like to see a little more reliable track record before really encouraging its use. It has some advantages over the Cypres II as far as features go, and is definitely more cost-effective, but does not have a proven record and has had some start up problems. We worry about the user-defined settings. A big theme at PIA was making things as idiot-proof as possible; after all, who (besides Dawn) reads every owners manual? Would you trust your Cypres as much if you knew it could be changed to student or tandem mode with a few pushes of a button?

AAD and Vigil USA have been very helpful and have dealt with the problems in an exemplary fashion. We hope this continues and we wish them well. The

Cypres has had a lock on the market for some time, and competition is a good thing.

There is also an east European AAD called the MPAAD. We do not recommend this model. There is too much unknown about it and it requires a major modification to the rig before it can be installed.

Mains

Every canopy manufacturer is always working on new main designs. Here are a few that got our attention.

Paratec, a company from Germany, has a very interesting 9 cell tapered ZP “Trapezoidal” design with a fascinating leading edge dual valve system that is supposed to create much more efficient wing pressurization. This allows the canopy to have a very thin airfoil and reduces nose drag. Called the R.A.G.E., an acronym for Ram Air Guiding Engine, their model was fascinating and the designer incredibly accessible, interesting and helpful. (This canopy should not be confused with the Rage from Flight Concepts.) We *hope* to have these guys here for the Easter boogie.

Icarus – They have some new stuff. Frankly, Dawn and I have very little good to say about the company. While they design excellent canopies, their terrible customer service and generally very snobbish corporate culture has not engendered good responses from us. Representative Nick was quite frank with us. He acknowledged service problems in the US and said they probably won't get better anytime soon ... although they are “working on it.” Since they're so big in Europe and Australia, they seem to be concentrating in the US only on their pro-swoop canopy team. Icarus did have a new reserve canopy on display. Apparently it will be released after the TSO testing is completed.

Performance Designs – Staff from PD conducted 5 very good seminars during the symposium: John Leblanc on wing loading, Scott Miller on turbulence and canopy control, Rusty Vest on canopy design, Scott Miller on canopy inspection and packing, and Ian Bobo and Shannon Pilcher on high performance canopy flight. This company continues to have our endorsement as the single best canopy manufacturer in the industry based on quality control, customer service and dedication to education and safety in the sport. They are presently developing a new canopy design called the “Z Brace”. Basically this is a new type of cross bracing that involves each cell being divided into 5 chambers as opposed to 3 chambers as on the Velocity, or 2 chambers as on a conventional canopy. Their marketing touts “a 35 cell canopy with the line drag of a 7-cell.” This is a fascinating design and they are being very meticulous with their testing so unfortunately it won't be available any time soon.

Big Air Sportz – Brian Germain is continuing to produce the Lotus and Samurai, both canopies that Dawn and I think are great. He is close to getting his Sensei tuned in and we discussed it in detail. I test jumped the Sensei last year and determined that it was not right for me. However, if he gets this one right, look out!!! (Note from Dawn – this project greatly interests me. If you want to hear more, come see me or e-mail me.) Brian conducted excellent seminars on

canopy control, teaching canopy control, and the psychology of skydiving/fear/risk-taking. He continues to revise his excellent book, "The Canopy and its Pilot," which is available in the Downwind store. He also has a new work in progress titled "Transcending Fear."

There are two exciting new developments in canopy materials. The first is a fabric called "Blue Quantum" from Perseverance Mills of England. They say that this new fabric is better at maintaining strength, has a more stable porosity, better resistance to UV damage, and (most importantly) is 20% lighter and packs up 20% smaller than other canopy fabric. PD is currently considering using this fabric to build its reserves. The second new material is a type of suspension line similar to Vectran or HMA. It is black in color, very thin, is supposed to retain dimensional stability (won't shrink or go out of trim) and is claimed to have the strength and abrasion resistance to last for 3,000 jumps Wow! We had heard about this line way before PIA, and are looking forward to seeing it in the field. Some of the manufacturers (particularly Icarus and Atair) have been using it on test canopies for some time, but we don't know when it will be generally available.

Basically, all the HP canopy manufacturers are working along the line of reducing leading edge drag and creating thinner cambered wings (at least that's my impression). Frankly, they are being very closed mouthed about a lot of the developments because competition is fierce and they are holding their cards close.

Always remember however, no matter who you buy from, anytime you buy something new, you are still part of the testing process.

Altimeters

Alti II – These folks are continuing to develop the Neptune audible/visual altimeter. I have been using one as a visual for the last year and have found it very useful. The newer models seem to have much better battery life and the latest update includes a swoop mode for HP canopy landings (sort of an instrument approach). Its data logging ability has had lots of bugs however and whenever a problem arises a new version comes out on their website. Software can be upgraded from their website www.alti-2.com but for me it's easier to send it to them or see Heather Kent at the DZ. Heather will be flying video for my 4 way team this year so she will be available. Alti II is also working on a visual heads up display to mount on full face helmets – it's called the Titan

Larsen and Brusgaard

These folks tend to put a little more R & D into their products before releasing them and thus no need for continual updates from websites etc. They have four new models of visual and audible altimeter coming out, the VISO, ALTITRACK, OPTIMA and SOLO. Refer to their website www.L-and-B.dk for more on these. They all look interesting and impressive.

With both the above companies, there is an increased emphasis on instrumentation, especially for HP pilots. In fact most of the competitors are now using instrument type approaches through audible tones.

Rigs

Velocity Sports (Infinity) – it was great to finally meet Kelly Farrington, and tell him how much we appreciate his excellent customer service. The only problem we've had with these rigs is cracked stiffeners – mainly in riser cover tuck tabs, the main #1 flap, and the main pin cover flap. He says he's now using stronger stuff. He's a great guy and he makes a great rig – we just don't see a lot of Infinities here on the East coast.

Sun Path Products – the Odyssey is still the rig we all know & love. It now has internal riser covers! This should make it more marketable to the freefly community, although we question the necessity. There are some minor changes to the reserve container which only concern us (riggers.) It has new front riser dive loops – probably the best in the industry. This continues to be the best-selling rig on the market, for good reason! As Lyman says, "If I can't have my Javelin I'm not jumping!" We deal with this company almost daily, and their commitment to safety, quality, personal service, and to the skydiving community as **a whole** never ceases to amaze us.

Relative Workshop – the micron continues to set a standard with the sport H/C market and the Skyhook is gaining a tremendous following. We feel the Skyhook is an excellent innovation but feel it could also unnecessarily complicate what should be a simple process. While we have already rigged several rigs with the Skyhook and take great care to follow all steps set forth in the manual, the chances for a mis-rig by an un-educated rigger are increased. The first few that came from the factory, in fact, were incorrectly placed on the rig and could have caused a reserve pilot chute in tow. The error was caught by a rigger in the field doing a routine assembly. This alarmed me in that if it can be mis-rigged at the factory, what else could happen. The problem has been fixed but again, it's new and unseen problems could still exist.

Mirage – a recent incident in Russia (those guys are crazy) has elicited a service bulletin on all Mirage harness containers requiring the change of placement of the Cypres cutter. The process is not too difficult and we have already conducted several as of this writing. Mirage has addressed the problem which is in all actuality not their fault, but a result of sloppy rigging, in a most professional manner. Unfortunately the SB does adversely affect the cosmetic appearance of the rig.

Aerodyne Research – the packing seminar by this company was frankly, not impressive. However, they have a nice looking rig and some nice features. We wish them the best.

Safety / Incidents

As always, Jim Crouch of USPA has provided a run-down of last years fatalities and the causes. His report is usually published in the March issue of Parachutist magazine. Basically, it comes down to education and personal responsibility in regards to how we maintain and operate our equipment. Having a skydiving license is not a license to be stupid, but a license to learn. Unfortunately, some just don't get that until it's too late. More on this later.