APS NEWS

The official Publication of the Auxiliary-powered Sailplane Association, Inc.

Volume XIX Issue #120 **ASA Web Site: <www.motorglider.org>** **May - June 2008**

2008 Carat Fly In - Harris Ranch from the Air

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NEWS FLASH

Hot off of the Digital Presses
Self- Launch Retractable Engine Sailplanes
Pete Williams definitive book on SMG's
is now available on DVD with bonus features

President's Corner

PRESIDENT'S CORNER

The Parowan fly-in was a success again this year. I thank Brian Utley and Eric Greenwell and all of the others who made this such a great success.

The race for the Stevenson Memorial Trophy was made much more of a test this year. See the summary for details. Congratulations to Bill Gawthrop for winning the competition and also first place in the Region 9 contest (18 Meter Class).

I missed the fly-in event this year because of health issues. I thank you for your cards, letters and prayers. I thought I would have more to report, but the test results are in and the report indicates that I am "normal", so it is obvious to me and most my friends that the tests are wrong. I have never had any idea I was or desire to be "normal". OK, there is no indication of cancer (even though the PSA number continues to rise). I will have another visit with the doctors this week.

I have also received a letter from Jim Herd. He suggested some ideas for newsletter articles. He suggests that we need a mentor program for training. He also suggests that it is time to revisit some maintenance issues (fuel lines). I will ask our Board of Directors to act on both of these areas. We encourage ideas from all of the members.

Rick Howell

EDITOR NEEDS HELP

Thanks to Woody Woodard, Oliver Dyer-Bennet, Bryan Utley, Myles Hynd & Gliding International for contributing to this issue. For the rest of the readers I could really use your help with articles and photos. There's lots of flying being done and a lot of us have digital cameras so it is easy to submit photos. I am always looking for content so please contribute to the newsletter.

SAFETY COLUMN

Oliver Dyer-Bennet, CFI/CFIG
Safety Director ASA

Devoted to the enjoyment and safety of the sport of high performance powerered sailplanes and motorgliders.

In the last column we went through the first half of the take off procedure, the check list and what to look for.

In todays column we will finally launch our bird into the wild blue yonder.....

Using a typical flight manual, for the Carat motorglider, we have the following points. In addition we have added comments and additional points.

Take-Off and Climb:

1. Line up the aircraft on the runway.
Lining the glider up properly, helps the pilot to keep the aircraft in the center of the runway during the take-off roll and reduces the chance of an incident.

2. Apply throttle smoothly.
Applying the throttle to fast can P-factor, twist, the aircraft off the center line of the runway, or put it on its nose. To slow with the throttle, and too much runway is used.

3. With trim set to neutral, the initial part of the take-off roll should be with the control stick back, to keep the tail wheel on the ground. As the take-off roll progress the control stickshould be moved into a neutral position.

In the case of a DG-505M, with steerable nose wheel, the initial control stick inputs are reversed. Remember; in a severe cross wind, the tail wheel, when on the ground, is very useful in keeping directional control of the aircraft.

4. Follow the manufacturer's recommendations as to control stick movements as it relates to lift off speed. In the case of the Carat, @ 43 knots you lift the tail wheel off the ground by gently moving the control stick forward. At 48 knots you allow the aircraft to fly itself off the ground.

5. After take-off increase speed to the manufacturers recommended initial climb out speed. Check your owners manual for this information.

6. After reaching a safe height, retract the landing gear, increase the take-off speed to the manufacturers recommended climb out speed. During the climb out the pilot should keep a balance between the ASI, the CHt and the oil temperature gauges. Increase climb out speed, if necessary, to keep the CHT and OT within limits.

Each aircraft manufacturer has the take-off data in the aircrafts Flight Manual, for our individaul self-launchers and motorgliders. For safety, its a good idea to review the manufacturers guide lines and to follow them.

FROM THE DESERT BETA TEST FACILITY

TECH TALK

by Gary Evans

AIRCRAFT CONTROL CABLE

Most all gliders utilize control cable (wire rope) somewhere in their control systems. Properly installed control cable has a very long service life but there are several things it pays to know about its care and repair. It should go without saying that any aircraft repair needs to be performed and/or signed off by qualified aircraft mechanic. This article covers only the control cable basics and is not intended to be all-inclusive.

Control cable is available in steel, galvanized steel and stainless steel. Most aircraft applications will use stainless steel but replacement should be of the same material employed by the manufacture. The most common cables come in 3 different braids designs.

Semi-Flexible Control Cable

Has seven strands of seven wires each. Used for control purposes where extreme flexibility is not required but where abrasion is a factor.

Flexible Control Cable

Has seven strands of 19 wires each. Its greater metallic area makes it stronger than 7 x 7 cable. Because of its fine wires the best service is obtained where abrasion is not too severe. These same wires, however, make it flexible to meet severe bending.

Non-Flexible Cable

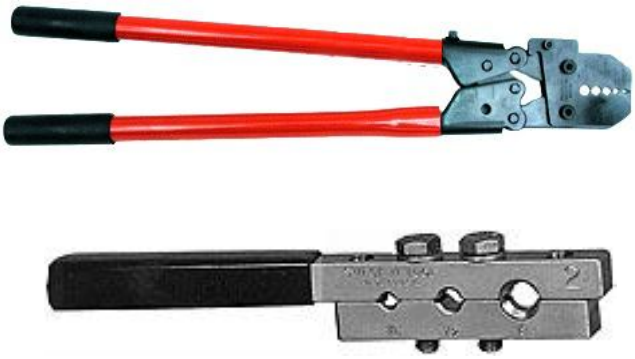
Is one strand of 19 wires. It has more metallic area than 7 x 7 or 7 x 19 constructions, which makes it the strongest, but also the least flexible. 1 x 19 is generally used for bracing purposes, drag and anti-drag wires. It is often used with swage type terminals.

The best way to cut cable to length is with cable cutters made for the purpose but wrapping the cable tightly with tape and cutting with a sharp chisel can do a reasonable job.

Many designs of special cable ends are available which must be swaged onto the cable with expensive equipment but the most common method of termination is to employ nicropress sleeves.

These crush sleeves are available in copper, zinc plated copper and aluminum. The aluminum grade is worthless for aircraft purposes and is best used for making clotheslines.

The tensile strength of a single properly installed copper sleeve will exceed the rated strength of the cable. Nicropress sleeves are installed with one of two different special compression tools.



The installed sleeve diameter should be checked with a thickness gauge that comes with the tool in ensure correct compression. A thimble may be employed to protect the cable attachment point.

The bare end of the cable protruding from the installed sleeve can be covered with shrink tubing to enclose the sharp wire ends.

CABLE INSPECTION

Control cables normally wear from the inside out due to internal friction and wear from flexing. This makes inspection more difficult. The best inspection method is to flex the cable at areas subject to flexing and carefully look for broken wires. This should be done both visually and by rubbing a cloth over the cable, which may catch on broken wire/s. Any broken wires, deformities or corrosion are also reason for replacement.

Carat Fly In 2008 - Harris Ranch

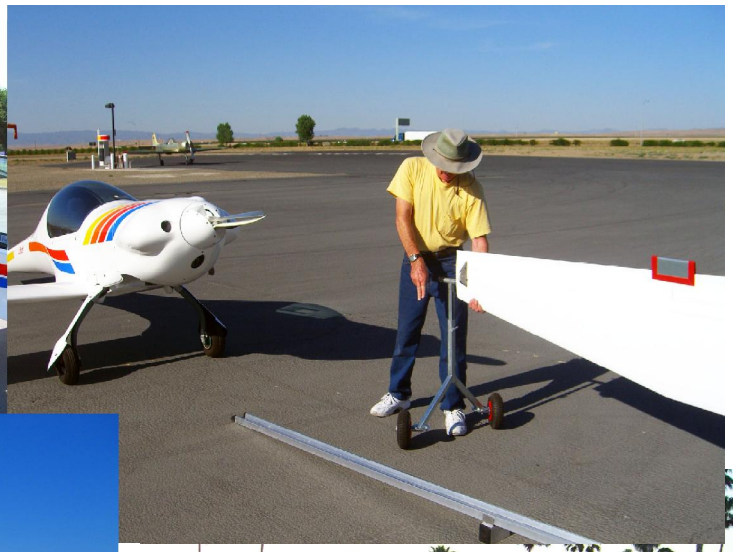
by Oliver Dyer-Bennet

This year the Harris Ranch, Carat Fly In, was held May 16th, 17th and 18th. This tied in well with the Avenal glider contest just down the road from the ranch.

Covered during the seminars were such topics as glider assembly & disassembly, using the one man rigging system & the Cobra trailer. Also covered were engine maintenance, the landing gear systems and electrical systems.

Later we delved into how best to fly the Carat as a high performance sailplane, or as a very fuel efficient power plane, 1.7 GPH @ 115 mph. On Saturday afternoon we flew, and found that Mt. Harris had a reliable house thermal, N/W of the Harris Ranch airport.

After that we retired to the olympic sized swimming pool for a recap of the activitys and to prepare for the awards dinner that night.



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ASA

Auxiliary-powered Sailplane Association

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Brian Utley
9541 Virginia Avenue South
Bloomington, MN, 55438

Letter to the SSA Soaring Hall of Fame requesting Induction of Pete Williams into the Soaring Hall of Fame

Date: June 22, 2008

To: Soaring Hall of Fame Vetting Board
National Soaring Museum
51 Soaring Hill Drive
Elmira, NY 14903

From: Auxiliary-powered Sailplane Association (ASA)
222 Thayer Dr.
Richland, WA 99352

Subject: SSA Hall of Fame Nomination

This letter requests the Soaring Hall of Fame Vetting Board consider Peter Williams for inclusion in the SSA Soaring Hall of Fame.

The enclosed statements support our request. The first group is the most comprehensive; the second group contains minor points, but also shows the breadth and depth of domestic and international support for Pete's nomination.

This is a summary of the main points from the first group, stressing that Pete Williams:

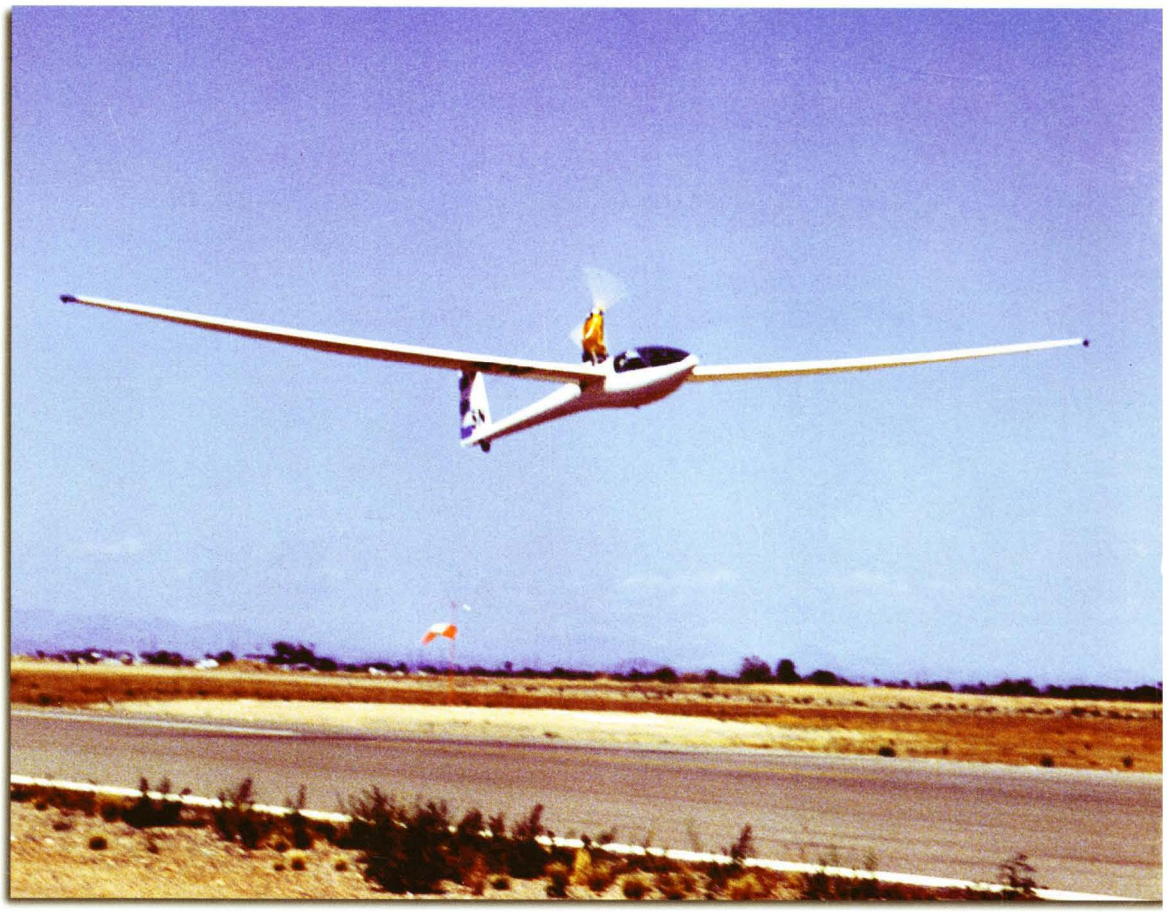
- actively promoted safe flying of motorgliders
- actively promoted acceptance of motorgliders in contests
- actively promoted the use of motorgliders at every opportunity
- promoted motor glider design improvements; in particular, higher power self-launchers better suited to the high, hot conditions in the Western USA.
- was a major founder of Self-Launching Sailplane Pilots Association (SLSPA - the organization's original name), and it's president from 1988 to 1995
- was the SLSPA newsletter editor from 1988 to 2004, with over 100 issues published
- wrote many articles for Soaring Magazine - a search of the author index of Soaring yields over 50 citations for columns, articles, and letters (index is at http://soaringweb.org/Soaring_Index)
- wrote articles for Motorgliding International Magazine (while it lasted)
- wrote, published, and sold the book "Self Launch! Retractable Engine Sailplanes", which sold thousands of copies while it was in print. The ASA republished it on DVD this year, and over 100 DVDs were sold since then
- received The Paul E. Tuntland Memorial Award (1998) and the 2004 SSA exceptional service award
- received a Certificate of Recognition from the National Aeronautic Association (1996)
- Set several Nevada motorglider records, including one that still stands: 500 km Triangle Speed, 84.07mph, 7/22/1991

Please contact Eric Greenwell, ASA Treasurer, at the above address (or phone 509-943-9065; email: engreenwell@verizon.net) if there are questions.

Regards,

Eric Greenwell and the ASA Board

Self-Launch!
Retractable Engine Sailplanes



- Development
- Buying & Flying
- Maintenance
- Makes & Models
- Power Plants
- Flight Safety

Foreword by Donald D. Engen, Current Director,
Smithsonian Institution National Air and Space Museum

Peter A. Williams

ASA with permission of Charm Williams is re-publishing Pete Williams definitive book on Self Launch Motor Gliders.

This DVD has the complete book, cover to cover, as well as an added bonus of every ASA newsletter ever printed through the fall of 2007.

You can get your copy for only $14.95 + $4.05 in postage/handling by sending a check to:

ASA - Pete Williams DVD
c/o Eric Greenwell
222 Thayer Dr
Richland, WA 99352

Also available from Cumulus Soaring.

A story from Germany about the EB 28 and the Binders

by Myles Hynd

There are five very excited EB 28 owners now in existence - albeit they are poorer in pocket, but excited nevertheless. Owning a Binder EB 28 is the ultimate - sailplanes don't come any better than this.

Series production is now in top gear with EB 28 #5 test flown on schedule in April - now proudly owned by Woody Woodward (USA), the very strong advocate for the Bitterwasser soaring site in Namibia where no doubt his '28' will ultimately reside.

The Binder team had some initial concerns with turbulator positioning as well as problems with the mylar seals. These problems had the effect of producing a lower than expected performance at high speed - but the issues were resolved with the factory re-working gliders (#2, #3, #4) so the entire fleet will be up to speed during the next couple of weeks.

I have had two flights in two different EB 28 gliders - one in #2 and one in #4 (at Bitterwasser) and believe you me the handling is fantastic - roll rate is 3.8 seconds, 45 to 45 - it climbs fantastically whilst glider #4, owned by Renato Mussio flew like a dream with 850 kg gross weight.

I am somewhat biased, but firmly believe this glider is the next step up in glider performance - L/D = ~65:1 with the best glide speed at 115 km/hr.

Most other gliders have a best glide speed ~100 to 105 km/hr - a speed no one flies at except the most desperate.

It is my belief that Binder is doing something very special for all glider pilots. Now - a few technical points - the first 10 gliders Binder produced were called ASH-25 EB-28 and the weight limit was 810 kg. The wing structure was "defended/protected" with 12.5 kg of lead in each wing tip. Now - the new wing for the EB 28 has a smaller chord and less wing area - at the same time the I.G.C. weight limit was increased to 850 kg. Binder found a stronger carbon fibre for the spar caps and made the wing spars a little deeper at the fuselage and in doing so allowed him to remove the lead from the wing tips of the new wing.

But most important of all, Binder uses a special technique to squeeze out any excess resin by pulling a vacuum on the wing shells in the moulds - saving another 45 kg in weight. This, plus the increased weight limit gives the glider 45 + 40 kg (total 85 kg) wider wing loading range - up to 50 kg/m2.

The cockpit has been lengthened and widened making it the most roomy cockpit available today.

There are a lot of other very clever and performance enhancing features in this glider too numerous to describe here. It is very easy to fly and I immediately felt comfortable - a glider that is very well behaved.

Glider #5 for Woody Woodward is about to be shipped to the U.S.A. as I write and is registered N43EB for this summer's flying. Then it will be shipped to Bitterwasser for the southern hemisphere season starting in October. (Glider #6 "QQ" goes direct to Namibia for the coming season)

But back to Binder and his factory. Every time I visit, the shop is neat, clean and orderly - everything in its place and no "messes" laying around. Everyone is working - no one standing around holding up a broom.

Describing the vacuuming process in a little more detail I have to tell readers this way. Carbon fibre (and in the vertical fin only - fibre glass) is laid up in the female mould - then a porous layer of plastic is applied - then a piece of something like (or maybe it is in fact) felt - then another layer of non-porous plastic and then they draw a vacuum - it squeezes the excess resin through the porous layer and into the felt layer - eliminating any non structural resin.

The felt layer is then discarded along with the embedded excess resin. I believe this process was perfected during the production of the ETA. - Walter Binder was the final assembly man for the ETA - so he learned all of the good processes and as well as the newly developed techniques. This knowledge can readily be seen in his new glider. Please bear in mind that when I say Binder, I mean Walter Binder and his brother's son Oliver Binder (nephew). Oliver is better with English than Walter, but I understand a little German and I can have a discussion with Walter - he understands some English but Oliver and Walter's wife Petra both speak good English.

It is really a family operation with Petra and Oliver's wife, Nicole, in the office and Walter and Oliver running the shop. Walter is the real "chief" - no question about that.

Walter started his professional life as an "electriker" installing high voltage power lines. He started "fiddling" with gliders and eventually built the first self launch motor/prop system and is the real father of our self launch systems. They supply Schempp-Hirth and other glider manufacturers with the Solo motors, pylons, props and drive belt systems.

I have the highest respect for Walter - he is a self made man who is not burdened by any formal aerodynamic engineering education - he taught himself and is now producing the best glider in the world - certainly the best two-seater and probably the best glider period. They are undoubtedly leaders in extracting higher performances from a sailplane. Make a suggestion to Walter or Oliver, and they actually listen, evaluate the suggestion and make a decision or response based on actually thinking about the subject matter. Binder is very good (especially Oliver) with doing the special things his buyers ask for.

It is a pleasure to deal with people like that. If they can't do it, they explain why in a logical manner. If they can do it they say so and do it.

A big part of the Binder success is that they are concentrating their entire efforts into making one glider - not several gliders - so every ounce of energy goes in to the one glider.

Both Walter and Oliver are very good glider pilots - Oliver flies in the German Nationals and does well. Both go to Namibia for their flying vacations each season. They are a very hard working team producing something very special.

A very biased Myles Hynd
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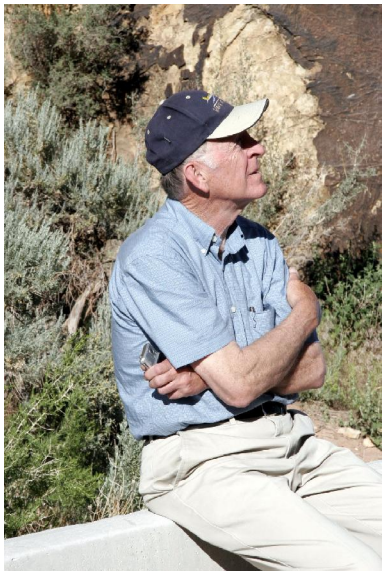
Photos by Woody Woodard.


www.binder-flugmotorenbau.de

Parowan Fly-in 2008

photos by Brian Utley



Dick VanGrunsven studying prehistoric rocks

Pilots meeting

Russ Owens describing his flight

Yours Truly conducting the pilots meeting

Bill Gawthrop, Russ Owens and Thorsten Steppel studying Parowan area maps

Academy girls pushing out the DG1000 for take-off

Steve Dee on approach in his DG 400

Steve Dee about to release a Golden Eagle to the wild

Della and Tom Sein from Washington

Martin Tyner’s Prairie Falcon

Russ and Lynn Owens

2008 Stevenson Trophy

Each year the Stevenson Trophy is awarded to the highest level of soaring performance at the annual ASA soaring event. Last year (2007) the trophy was awarded based upon the best three OLC classic flights during the event and was won by Bill Gawthrop. F or 2008 it was decided that the soaring performance would be measured using three different tasks:

1. OLC Classic
2. FAI Triangle
3. Out and Return

Multiple attempts were permitted but only the best of each task was selected for final scoring. The best flight of each task was worth up to 1000 points. The Triangle and O & R tasks were measured for both distance and speed with distance being valued at up to 600 points and speed up to 400 points thus a maximum of 1000 points could be scored. As can be seen from the final scores, no pilot achieved both the longest distance and best speed in these tasks.

The winner, Bill Gawthrop, flew a total of 3,068.6 miles out of a total of 22,568 miles flown by all the competitors. Russ Owens actually flew the furthest total distance: a remarkable 3,350.6 or 478.7 miles per flight. Many of the flights exceeded 8 hours and several actually exceeded 9 hours

2008 Stevenson Trophy Final Scores

Pilot	Comp #	H'cap	OLC Classic	FAI Triangle	O & R	Total
Bill Gawthrop	F8	120	937	824	998	2759
Ed Salkeld	5S	120	834	979	705	2518
Richard VanGrunsven	RV	120	864	984	667	2515
Russ Owens	OO	120	1000	921	588	2509
Tom Seim	2G	110	745	649	798	2192
Rolf Siebert	UO	120	757	640	617	2014
Eric Greenwell	6A	120	657	388	755	1800
Steve Dee	DM	110	609	732	339	1680
Bob Duncan	TU	110	521	499	519	1539

And good time was had by all…

ASA Mission

The Auxiliary-powered Sailplane Association, Inc. was founded in 1988 as a non-profit organization to encourage the design, development and safe use of motorgliders, self-launching and sustainer engine sailplanes.

ASA Membership

Membership in ASA is open to anyone interested in powered sailplanes. Write or call: Brian Utley, ASA Membership Chairman, 9541 Virginia Ave. South Bloomington, MN 55438
Ph: 952-941-5683 email:<Utleyb@aol.com> USA Dues $20/yr, $38/2 yrs, $55/3 yrs. International Dues $25/yr, $48/2 yrs, $70/3 yrs.

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APS NEWS Publication

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For Sale in Colorado. $65,000. Dave McConeghey 316-409-9624 Photos http://members.cox.net/motorglider

DG 808B

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