APS *NEWS*

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Upper Grand Canyon from Parowan -Bill Gawthrop

In this Issue:

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President's Corner

I want to start by thanking the authors of the articles printed in the recent APS News. Gary Evan's "Tech Talk" and Rick Howell's account of this summer's flying in Nevada have been well received.

I have thought for a number of years that if we could get the right technology and a good set of light batteries, an electric self launch or sustainer engine would be the ideal direction for sailplane self-launch to take. I realize that this is a simplistic approach but I have to say that efforts are being made to accomplish this unique dream. Instead of carburetor, magneto, noise emission, and 100LL, words like kilowatt, electric motor, and quiet may be in the future soaring vocabulary. Alisport and Apis are two sailplane manufacturers, and there may be others, who have prototypes currently flying. I wish them luck and look forward to seeing their product at a future convention.

It is the time of year when we start to think about the annual SSA convention. I always wonder what new plane or gizmo will be unveiled. This year's convention will be in Arlington, TX. I have been in touch with the program directors, and have been taking names of those people interested in doing the plane-side presentation or making a regularly scheduled presentation. If there is anyone who has a favorite topic and is interested in making a presentation, please contact me as soon as possible.

I was able to take part in an organizational meeting for the Divisions and Affiliates at the SSA Convention in Ontario last spring. It seemed like a good idea at the time and to me still does) to have the different organizations of the SSA sharing ideas and directions. Unfortunately the project did not materialize and has been temporarily set aside. At least I hope it is temporary, because I think the Divisions and Affiliates Committee is a good way to strengthen and help the SSA grow.

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ASA National Champion Decided - Montague Ca

Submitted by Ed Salkeld

Bill Gawthrop, F8, flying a Schliecher ASH-26E is this years national auxiliary-powered sailplane champion and the recipient of the Stevenson Memorial Perpetual trophy. Bill narrowly edged out Dick VanGrunsven by a slim 4 points (5590 to5586) after 7 contest days. And yes, Dick is the same gentlemen that designed the RV series of home-built aircraft with over 4000 of his designs completed and flying. Besides RV's, Dick flies a Ventus 2CM.

This year the ASA decided to hold the annual auxiliary-powered glider national championship in conjunction with the 18M national championship held at Montague Ca, 12-21 July. Since most of the currently flying aux-powered gliders have an 18m span, this provided an opportunity for pilots to participate in a major FAI championship, and fly with some of the country's top competition pilots. It also had the advantage of sharing the costs of organizing a major contest.

Montague is a great place to fly, but it's location in Northern California just to the north of Mount Shasta may have limited the number of entries. Twenty two pilots including several of the top seeds in the USA were entered. In spite of the driving distance pilots from as far away as Virginia, Texas, and Florida joined the fun. But only four had a gasoline thermal generator on board. In addition to Bill and Dick, Ed Salkeld, 5S, flying another ASH-26E and Wiktor Kozlik, VK, with a LS-8-18T made up the contest within the contest.

5S - Ed Salkeld's 26E

The contest was a well run and challenging competition. The contest manager was Gary Kemp and the contest director, Charlie Minner. Overall winner in the 18M division was Gary Itner with second place going to Rick Walters. These two were close throughout the competition with Gary

Plenty of ramp space

finishing on top by only 3 points. Both are on the US team to represent the US in Sweden next year.

There were several good individual efforts by our aux-powered contingent throughout the 7 contest days. The soaring conditions for the practice and first few days were weak by Montague standards. Day one was a modified assigned task with only two pilots over 60 mph. Salkeld had the best result in the aux-powered group finishing 6th on the day.

On day two the soaring conditions were slow to start by Montague standards and contest director, Charlie Minner called a Turn Area Task (TAT) with Callahan, Restaurant, Duzel, R Ranch the turn points with turn area circles of 10 to 20 miles and a minimum time of two and a half hours. The TAT gives the pilot some options with a minimum, nominal, and maximum distances of 65, 160, and 259 miles for this day. Dick, RV, won the day with a speed of 80.24 mph over 205 miles with Gary Itner taking second at 79.78mph. This placed Dick in 4th overall with Ed Salkeld right behind in 5th.

Day three was an assigned area task with 6 turn points and a distance of 219 miles. Ed and Dick fell short on final glide, undone by the late afternoon north wind and resulting down wash from the high ground at the last turn point. Ed had to use the engine just four miles short of the runway on final glide and Dick had to cut the last leg short to make the airport. Both Bill and Wiktor avoided that trap and moved up the chart to 10th and 11th overall. Itner and Walters were 1 and 2 where they remained for each or the remaining contest days.

On day 4, Salkeld made up for his disappointing finish on Day 3 by finishing second for the day. This was a scenic flight with the first turn point at Lake Siskiyou Dam. The first leg was typical for this contest. The 5 mile radius start circle is centered over the local house thermal on craggy mountain, about 4 miles from the airport. The usual strategy was to get up to 7,000 MSL more or less, move over to the higher ground to the west where one could climb to 10,000 or higher and then glide back to the edge of the start circle to begin the task. The start circle maximum altitude was 10,000 feet MSL.

The first turn point for each contest day was to the south west, usually Callahan at the south end of the Scott valley. The area west and south of Montague is the Trinity Alp region of California and many of the higher peaks still had a mantle of snow. The strategy for day 4 was to cruise down the shear line just to the west of Yreka and interstate 5, climb up China Peak and run the ridge line marked by Cus to Mount Eddy. This was well inside the turn area radius of 15 miles centered at Lake Siskiyou dam.

The second turn was at Dutchman peak to the north across the beautiful Klamath River valley; beautiful, but without attractive places to land. And conditions were much weaker to the North. Most pilots found the going difficult with altitudes down to the ridge tops and 2-3 knot thermals to get back up. Rick Walter's reported he got to 12,000 feet early, but flew the rest of the task below 8,000 feet. Salkeld and Itner joined up on the ridge justbsouth of Dutchman peak and worked back south on the third leg toward Mount Carter. Gary had a few hundred feet above Ed and managed to make the top of the ridge called Gun Sight just east of Montague and about halfway to the turn. Ed had to take the low ground to the east which turned into a lucky 6 knot thermal to 9500 feet, enough to make the high ground by the last turn and head for home.

The last turn point was Restaurant, with a10 mile radius which almost overlaps the Siskiyou airport, the same area that shot down Ed and Dick the day before. Additional margin for the final glide avoided a repeat of the previous day's error. The speeds for this day were considerably slower with Rick Walters the fastest at 59.7 mph for 209 miles and Ed second at 56.4 mph for 201 miles. This moved Ed to 9th overall with Gawthrop in 8th just 10 points ahead. Dick and Wiktor were now setting 12th and 13th but still only a few points behind.

Charlie called a rest day on the 17th after 6 continuous days of flying (including practice days) and hoped for an improvement in the soaring conditions. We were rewarded as the 18th started with a substantially higher temperature and much stronger soaring forecast. The surface temperature reached about 105 this day (+ or- depending on whose thermometer you used) but the simple description was it was HOT!

Charlie called another TAT this time with turn points to the east and a 4 hour minimum. As usual, the first leg was to Callahan but then the task took us east into the high desert. From the high ground near Callahan, the route was along the shear line that often runs to the east and just north of Mount Shasta. The strategy for this leg was to glide across the Siskiyou valley, bump along the slope of 14,000 foot Mt Shasta and pick up the cloud street running east into the desert. Gawthrop extended his lead in the aux-powered group with an impressive 354 miles at 87 mph winning the day overall. Dick Ed and Wiktor were close behind in 9th -11th.

Bill Gawthrop & Dick VanGrunsven

At the pilots meeting on Day 6, the CD started the meeting by saying that a few of the pilots complained that if they could have picked their own task they could have had a 100 mph day. So Charlie granted that wish for Day 6. He called a modified assigned task with a 4 and a half hour minimum and Callahan the required first turn. (By now we all knew where Callahan was). His goal was to log a 750KM day to showcase the really spectacular soaring conditions that can occur at Montague. Unfortunately the day warmed up more slowly than expected and he changed the time minimum to 4 hours. Never the less, the illusive 100mph speed was almost achieved.

Rick Walters blazed the way with 96.3 mph and 400 miles in the recorder. Dick VanGrunsven showed he not only knows how to design fast airplanes, he knows how to fly fast turning in 92.3 mph and 371 miles for second on the day. This moved Dick to within 40 points of Bill as the contest entered day 7.

Wiktor Kozlik with his LS-8-18T

Day 7 which turned out to be the last contest day dawned with some cirrus and slightly cooler temperatures. The races for overall 18M champion and aux-powered champion were both very close. Charlie called a 4 hour TAT. Rick Walters and Gary Itner were first and second on the day with less that 1 mph difference after 325 miles of racing. Gary now held a three point lead over Rick. Salkeld led the aux-powered group with 4th on the day followed by Dick with 5th, and Bill for 9th. Dick closed the gap with Bill to only 4 points. First and second places in both the 18m and aux-powered championships were now separated by less than a 10th of a percent after 7 days of racing.

And that's the way it ended. Day 8 arrived with a low overcast and virga in all quadrants. Charlie staged the gliders and hoped for a clearing to get in a task, but it was not to be. The contest was over. Bill Gawthrop won the aux-powered bragging rights for the year finishing in 7th overall with Dick, Ed, and Wiktor in 8, 9, and 10. We flew and finished as a group. It was a great experience flying with the best in the US in one of the more beautiful soaring venues in the country.

Bill Gawthrop 2005 Auxilary Powered National Champion with the Stevenson perpetual trophy

Montague is a great place to fly. Siskiyou County Airport has long wide runways, and very little traffic. A closed runway provides a 150 foot wide paved area for assembly, tie down, camping and staging with easy access to the departure end of runway 35 which is usually the favored runway. Yreka about 6 miles away offers several good restaurants, shopping facilities, a Wal-Mart, Ace Hardware, RV service, and just about anything one needs on a glider safari. And for the off days with the family, there's Mount Shasta, Lake Shasta, the Trinity Alps wilderness area, Klamath River, etc, etc, hundreds of square miles of beautiful wilderness areas to explore.

Next years 18m and open class nationals will be held in Hobbs from 7/19 through 7/28. If the aux-powered national championship is held again in conjunction with the 18 M nationals (which this writer recommends) then I urge anyone who has an interest in contest flying or just participating in a well organized soaring venture to come to Hobbs. It's also a great soaring location. It will be a good opportunity for a non contest pilot to learn and improve his cross country skills.

For more details on this or any other SSA sanctioned contest, go to the SSA site and click on Contests.

The Story of Pacific AeroSport

New West Coast Authorized DG and LS Sailplane Dealer

Pacific AeroSport LLC was founded in the year 2000 by Christian Klix. Located at the Arlington Airport in the state of Washington, we have 6,000 square feet of shop space with an emphasis on inspections, maintenance and repair services for primarily sailplanes and motorgliders. We have a paint booth and large dust collector perfect for glider repairs. Our two 60 foot hangar doors open to a spectacular view of the Cascade mountains, and diverse aviation activities, whether it's ultralights, sailplanes, aerobatic aircraft, Paul Allen's flying museum aircraft or surplus military jets, there is never a dull moment at the Arlington airport.

Pacific AeroSport is the DG and LS dealer for the Western SSA Regions 8, 9, 11, and 12, as well as the Twister kit plane, but our shop always reflects a wide range of aircraft. If it has wings, it is welcome.

Chris began his aviation career right out of high school. In 1975 at the age of 19 he traveled the globe and settled in Germany for two years with one desire - to learn to fly sailplanes like his father did. While there Chris also received his German and US Glider license and German Winch Operators license. After returning to the states, he then pursued his Commercial Glider, Commercial Instrument SEL, General Radiotelephone Operator, A&P, and IA licenses, but never lost interest in the sport of soaring. He was one of the original members of Evergreen Soaring and has been a long standing member of the Seattle Glider Council. Chris has competed in several soaring contests with his Standard Cirrus which he has owned since 1986.

Chris trained in composites and sailplanes with Art Penz in the late 1970's and helped construct the Chinook sailplane, a one of a kind two place in which he made the first flight. The aircraft is now owned and flown by Fred Hermanspan, a co-designer with Art Penz. Chris worked at Stoddard-Hamilton Aircraft, Glasair and GlaStar manufacturers, for over thirteen years serving as Builder Support, R&D shop manager, and board member. He had the privilege of making several first flights while helping develop and oversee the construction of the several prototype Glasair and GlaStar aircraft. At the same time, Chris managed and owned the tow plane for Evergreen Soaring and served as their fleet maintenance director for a number of years.

When the Symphony 160 certified aircraft was introduced to the United States and because of its close association with the GlaStar, Chris felt this turn-key airplane was just what the market needed. It was a visit to the past (GlaStar), only enhanced, with all the benefits that come from certification. The outstanding flying capabilities are a perfect replacement for many worn out Cessna's. Pacific AeroSport was the first US dealer for the Symphony 160, and is proud to be the Northwest authorized Symphony Aircraft dealer for the new Symphony Aircraft Industries organization located in Quebec, Canada.

A friend of Chris' had been looking for a kit aircraft for quite some time, and had finally decided on the new single seat kit plane, the Silence Twister, manufactured by DG Flugzeugbau. They both flew to Germany to finalize his decision. The Twister is innovative and clever. It disassembles like a glider yet flies at over 150 mph. Fuel burn is approximately 3 1/2 gallons an hour using the Jabiru 80 hp engine.

A side benefit of the Twister inspection was to see first hand the DG factory and all their beautiful sailplanes lined up in the process of being finished. The factory was impressive. About a year later Chris was approached to be part of the reorganization at DG. There are three dealers in the states now, all offering DG and LS products and assistance organized by SSA soaring regions.

Along with Chris, Timothy Kinney and Mark Wolfe work in the shop. Tim has his power Commercial Instrument rating with over 400 hours. He has been working in the aviation field for about seven years working at FBO's and volunteering at Mission Aviation Training Academy (MATA). MATA trains pilots who then offer their services world wide to assist in missionary activities.

Mark got the aviation bug flying at age five in a DC-3 over central Pennsylvania. After college, he got his first chance

(cont. page 6)

FROM THE DESERT BETA TEST FACILITY

TECH TALK

by Gary Evans

THE BEST SPARK PLUG AND WHY

No other engine component has received as much undeserved praise as new designs of spark plugs. There have been dozens introduced over the years and new designs always claimed to be head and shoulders about the rest. While some provided very slight improvement most were about as helpful as gas line magnets with two exceptions. The first was the introduction of the Platinum plug. Before Platinum spark plug center electrodes were about 2.0mm in diameter. In a spark plug the smaller the electrode the better because a smaller center electrode requires less voltage (as much as 5,000 volts less) to jump the gap hence better performance will result especially with less than ideal air/fuel mixtures. This means fewer misfires, which will be seen as smoother running, less fuel consumption and more horsepower.

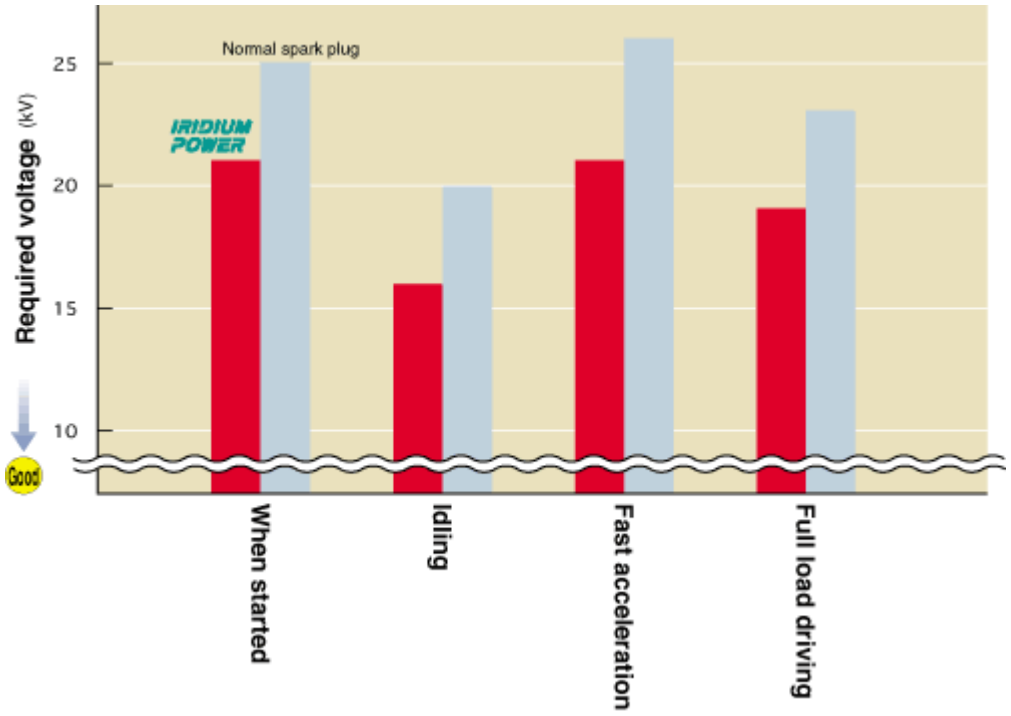
Prior to Platinum the materials in use required the large surface area to survive use in the engines due to the high temperatures. Platinum allowed shrinking the electrode diameter to 1.1mm.

The second big improvement was Iridium, which is the main purpose of this article. Iridium, believe it or not, isn't a material originally from this planet. Fifty million years ago, an asteroid composed almost entirely of the precious metal struck the earth creating the Gulf of Mexico. The resulting dust cloud from the explosion deposed a 2cm plus thick layer of debris bearing Iridium over most of the earth. The advantages of Iridium for spark plug manufacture are its properties notably the melting point - approximately 2450 degrees C, considerably higher than Platinum, and it's strength - approximately 8 times that of platinum.

	Iridium (Ir)	Platinum (Pt)	Nickel (Ni)	Gold (Au)	Silver (Ag)
Melting Point (°F)	4449.2	3216.2	2647.4	1945.4	1760
Strength (Kpsi)	159	19.9	96.5	18.5	18.5
Electrical resistance (μΩ♦in)	2-3/32	4-11/64	2-11/16	29/32	5/8
Hardness (HV,68°F)	240	40	160	25	26

While Iridium has been around for some time in use in high-end industrial applications it was only recently that new techniques have allowed its use in spark plug with an affordable price. Denso is the leader in this field and have produced the smallest electrode currently available at .4mm. In their manufacturing process a tiny Iridium tip is laser welded to the center post by computerized machines.

The voltage required to fire this plug under all conditions is significantly less than a conventional spark plug. Denso's estimate of service life even with this tiny electrode is 12,000 miles.



The only downside to Iridium spark plugs is their cost and my preferred brand Denso sells for about $11 each. While there are other brands selling for less they employ larger diameter electrodes negating some of the advantage.

Now the disclaimer

Before you rush out and buy a set with high hopes be advised that even though they are a much better spark plug they are not going to show much difference in a well-designed electrical system that is working correctly. They therefore would show the most improvement in a marginal system or engine operating with marginal air/fuel ratios. In my turbocharged motorcycle they picked up the idle speed by a couple of hundred rpm's which surprised me and is way more of a change than you should expect. For most applications they would be over kill but for our powered sailplanes where reliable engine operation is critical I believe it is money well spent. A spark plug brand cross-reference search tool can be found here at the bottom of the page here.

http://www.sparkplugs.com/denso/

Pacific AeroSport cont.

to learn to fly first in Texas, then Florida, earning a commercial license in 1980. For fifteen years he worked principally as a mechanic repairing German automobiles, flying when possible including some times as a ride pilot at the Calistoga glider port in California. In addition to fourteen years at DG USA, Mark used composites to build animatronic models for TV and the movies, restored wooden boats, salvage damaged sculptures for a museum, make carbon fiber motorcycle parts and even manufactured giant doors for garbage trucks. When the DG dealership moved north to Pacific AeroSport, Mark took the initiative to contact us. As good help is hard to find we could not turn down the opportunity to bring his composite expertise and DG experience on board.


Kris and Anea

For more information:
www.PacificAeroSport.com
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Kris Klix

Sports Class NationalsParowan 2005

Firehouse Barbeque at Ely -
Leaving for Parowan Soon

Brian Head - south of Parowan

Bryce Canyon - 40 Southeast of Parowan

Calf Creek Falls - off day
Thanks Gavin and Lucy

Cedar Beaks - 15 South of Parowan

Another Great Meal @ Parowan

RV-Dick Van Grunsven

FD on Tow

Winners Jonathon Gere - 2nd Lee Kuhlke-Tom Knauff -1st Ray Gimmey - 3rd

40Kt Salute - Save the Caps!

Photos by Rick Howell

ASA Mission

The Auxiliary-powered Sailplane Association, Inc. was founded in 1988 as a non-profit organization to encourage the design, development and safe us 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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PIK-20E

1979 454 TTAF Rotax 501 Oxygen, Factory Trailer, Parachute $38,000
303-790-1907

Scheibe SF-28A

1982 Tandeme-Falke motorglider, ~1200TT, 460 Engine (65hp Limbach 1700EA), custom covers, custom open trailer, Hoffman prop (recent overhaul), new canopy, new muffler and heater shroud. $47,500 Matthew Poleski, 815-544-3870, <matthewpoleski@aol.com>

Wanted

Sustainer such as a Ventus BT or Self-launcher such as a DG-800. Contact Bill Cotton: cotton@atmos.colostate.edu or 970-472-9926

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Stemme S10VT s/n 11-036
135 total hours All ADs, new prop, full panel, dual controls, folding wings, excellent condition. $210,000 Contact Raemon Polk: rpolk@mindspring.com or 404-435-3978

DG 400

Werner Baeuml seidenadler@yahoo.com

DG 400

Airframe 1480tt, Engine 14.5 since Binder Overhaul. Komet Trailer, Mountain High EDS oxygen, Cambridge 302, winpilot and ipaq. A whole bunch of spares. Spare prop,drive belt,prop sensor,tailwheel and fork, fuses,tools,goodies, single man rig system, 15 meter with winglets ....17 meter tips, wing wheel
Steve Hill - Steve@hillstamping.com