

Auxiliary Powered Sailplane NEWS

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

Dean Carswell-President

ASA is a Division of the Soaring Society of America

ASA Web Site: www.motorglider.org

September-October 2001

Volume XIII Issue #82

President's Message

It is saddening to note that, despite all efforts to the contrary, we are still hurting ourselves and breaking our ships. The following food for thought is excerpted from a NTSB accident report from earlier this year.

The sailplane, 'which was taking off under its own power, reached about 30 feet above the runway surface [and] the canopy flipped open. Soon after the canopy came open, the aircraft pitched up and then nosed into the runway surface. According to the pilot, he opened and closed the canopy a number of times while waiting for departure in order to communicate with his ground crew. When he closed the canopy the last time, he did not get it fully latched, and a couple of seconds after the aircraft lifted off, the canopy was sucked open. The pilot's attention was then momentarily diverted to the canopy, which rotates to the side upon opening. When he again looked back straight ahead, the aircraft was just about to impact the runway in a nose-down attitude. It was later determined that the pilot had not reviewed his checklist just prior to departure in order to ensure that he had not missed any critical items.

The pilot was seriously injured, but fortunately is reported to be recovering. Nonetheless, the accident findings present a sad litany. **Do your checks, use a checklist and FLY THE SAILPLANE!**

Dean Carswell



The photo above captures the striking beauty of a Swiss alps soaring scene. It was taken by Roger Southworth at a field near Schanis, Switzerland. The DG-800B in the foreground is about to make its second ever flight. This newsletter issue contains extended coverage of the DG factory, their management and powered aircraft line. This is the beginning of series of articles covering each German powered sailplane manufacturer. The Jan-Feb 2002 Issue will feature Schempp-Hirth powered sailplanes. Image courtesy DG Flugzeugbau.

Has the Millennium issued in a New Breed of Soaring Pilots?

From my viewpoint, over the past five years, a new breed of pilot appears to have entered the USA soaring scene. In age profile this pilot was born in the Baby Boomer era with an age of between the late 40s to mid fifties. He is or has been a successful businessman. Many of them were quite active as Hang Glider pilots in their younger years. Their first sailplane purchased is a self-launching type although some have opted for the pure glider. They are an enthusiastic group who seem to truly appreciate flying within the confines of a small cockpit and enjoying an L/D far above the Hang Glider's. They appear very adept at locating and using thermals and after a few local flights depart on cross-country flights. They immediately pursue attainment of Badges and with the L/D available in the new ships, many are able to successfully complete 300k and 500km distance legs on the first try. They are also safety conscious and are methodical in learning all about the systems in their sailplanes. They also are more than willing to share information about their ships with other soaring pilots including hands on assistance to solve maintenance, upkeep and problems. These new pilots are a welcome addition to the soaring scene. Ed.

"A Plethora of DG's!"

by Jim Herd

Friday, 5/20/01, Minden, NV. It promised to be just another average week ahead at this Mecca of soaring. But, frankly, it was a little more than that!

It turned out to be "DG Week" - even if unofficially so.

Friday - Jim Herd DG-800B 300km Silver Badge

Saturday - Jim Herd DG-800B 500km Diamond distance

Monday - Steve Eddy, Dave Bingham, Pete Williams - all in DG-800B's - 500km Diamond distance (the only ones that day, I think!)

Tuesday - Bob Hupe DG-500M did the 500km "milk run"! (Again, for him.)

Wednesday - Rick & Rita Edris (Washington state) arrived directly from Port Hueneme with their brand new DG-808B

Thursday - Oliver Dyer-Bennett (DG U.S. Importer) showed up with a brand new DG-800-B in tow

Friday - Brad Hook (Hawaii) arrived to take delivery of that new DG-800B

Saturday - Brad took self-launch training with Tupper Robinson in his DG-500M

Sunday - Rick Edris took his self-launch training with Bob Davis in the new DG-505MB

And these are just the highlights! With a backdrop of various other DG's flying around each day. Bob Hupe in his DG-500M (soon to receive a new DG-808B), Pasi (from Finland) in Harm Garrelts' DG-500M, Bob Davis in his DG-303,And all this in a relatively quiet "preseason" week!

I don't actually live in or near Minden, but it is becoming a real magnet for us self-launch DG types! So where are all you other self-launchers flying??.....*Jim Herd*

DG Solo Users Group Formed

Jim Herd has established an ongoing email dialog with most of the USA DG owners. This group shares useful information about techniques and problems encountered while flying or maintaining DG 800/808 and 505MB models. Pilots interested in receiving or sending emails from/to this group visit web site:

<http://groups.yahoo.com/group/DGSoloUserGroup> or contact Jim Herd at <jherd@home.com>.

EXPERT AIRCRAFT ASSEMBLY & FABRICATION

Aluminum, Steel and Fabric. Aircraft Kit Assembly. 25 yrs experience
AERODORON INC Pho/Fax: 561-747-6705 (FL)

COMPANY ASSETS LIQUIDATION

6061-T6 materials, 4130 tubing, 2-stroke engines, glider canopies, manufacturing rights, tooling and more for Straton D-8 Motorglider. Send for complete inventory.
AERODORON INC Ph/Fax: 561-747-6705 (FL)

Parting Out PIK-20E

Rotax 501 with prop 97 hrs. TTE.
Complete Set of Covers. Fuselage smashed.
Wings repairable. Also parts for Schweizers and Blaniks. Contact Ron Percy at Rainbow Flying Service. Moses Lake WA 509-765-1606 Email: ronp@qosi.net

FOR SALE

Fournier RF4, Single-place, Aerobatic, 105mph, 1200cc VW. 1-800-660-0846
mcconeghey@mail.com
www.angelfire.com/ks2/motorglider



Powered Sailplane Instruction & Delivery

Dave McConeghey ATP CFI motorglider
6505 E 44TH ST N Wichita, KS 67226-1483
Home 316-744-9259 Work 316-523-2757
1-800-660-0846
www.angelfire.com/ks2/motorglider
mcconeghey@mail.com

CDI IGNITION SYSTEMS EXPLAINED

Chuck Rausch has prepared an in depth trouble analysis of the dual Ducati CDI (Capacitive Discharge Ignition) System used in 2-stroke Solo and Rotax engined motorgliders. This 4-page presentation is easily understood and covers everything you need to know about how the system works, the components involved and tests. A full page wiring diagram is included. For a copy of this document send a self-addressed #10 envelope with a 34 cent stamp on it to Pete Williams 1033 Dressslerville Rd. Gardnerville, NV 89410

FOR SALE-PIK-20E 2E

Low Time TT 252hrs, TET 38hr on Rotax 505. Full panel, Transponder, Parachute, PIK Trailer, Wing Covers, Solar Chargers.
\$48,500
Call Klaus at 719-539-7955
B&J Flying Service



FOR SALE: 1985 Moneri.

Builder David Green. 30hp KFM engine. Certified 6/99. Donated to EAA Chapt 52. Contact Don Griffay 916-744-1727 or P.O. Box 629, Clarksburg, CA 95612.

News and Views

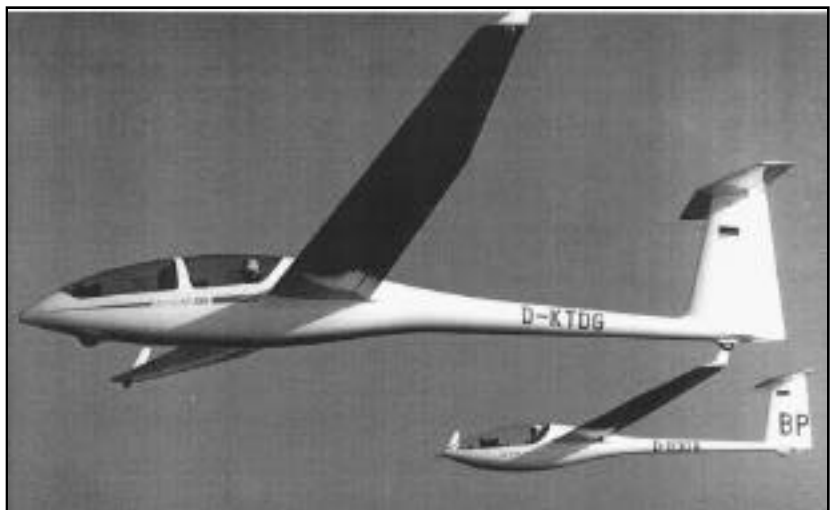
This view is looking North down runway 15/33 at the **Tonopah Nevada Airport**. The first ever soaring contest was held by Region 12 North here July 23-28, 2001. In 2002 (July 30-Aug 8) the 15-Meter Class Nationals will be held at Tonopah. Field elevation is 5,426 ft. The main runway is 7,162 ft long and 76 ft. wide. A closed runway 11-29 is in cloud shadow on the right but is landable in an emergency. The town is to the left (West) about six miles away. This was a WW2 B-24 Bomber training base as evidenced by the huge 500'X 5000' concrete mat seen to the left of the taxiway. Thermals can begin as early as 10AM. Out landing places are few and the normal cruise altitude is between 15 and 18,000 ft. If you are planning on flying here remember there is a Restricted Area to the South which contains the base from which the stealth fighter was first flown. Aircraft entering this area will be intercepted and directed to land at the Tonopah Airport. O2 and LL 100 fuel are available as well as a coffee shop. A Towplane is available. This is speed and distance record breaking territory with some of the most awesome scenery and topography in the USA.



A Lark IS-28M2/G Motorglider in soaring flight with propeller feathered. This 2-place 17-meter ship is powered by a 80hp Limbach 4-stroke engine. It is produced in Romania. Maximum speed under power is 110mph. VNE is 137mph. Min. sink is 1.15 m/s. US Dealer is Flite-Lite 803-356-8587 (SC)

Do
m.

A DG-800S flies formation with a motorized DG-505MB
Image courtesy DG web site.

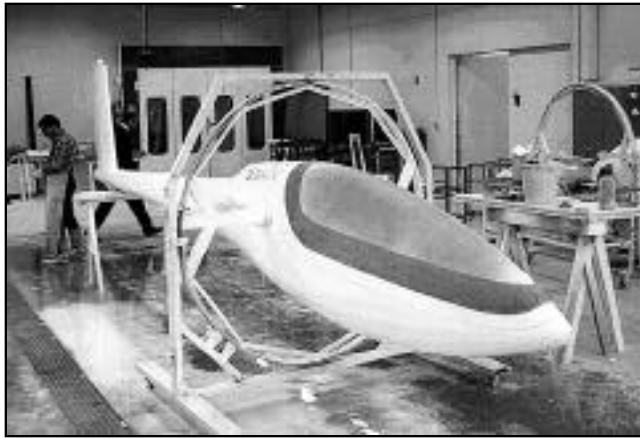


From DG-100 to DG-808B

The Evolution of a Motorglider

DG's modern new plant (right) with its nearby airfield and the following images span over 25 years of pioneering the development of high performance single-seat motorized sailplanes. Beginning with the Standard Class DG-100/101 followed by the 15-Meter Class DG-200 then the 17-meter DG-202 and progressing to the motorized 15/17-Meter DG-400 followed by the self-launching DG-600 15/17 meter. Next was the Rotax powered 15-17 Meter DG-800A followed by the MidWest or Solo powered 800B which is now called the DG-808B. Glide ratios have steadily risen from 36 to 50:1. Engine improvements have progressed from an exposed air-cooled Rotax to a buried liquid cooled Solo. Power outputs have risen from 24hp for the DG-600 to over 50hp for the DG-808B.

All Images courtesy DG web site.

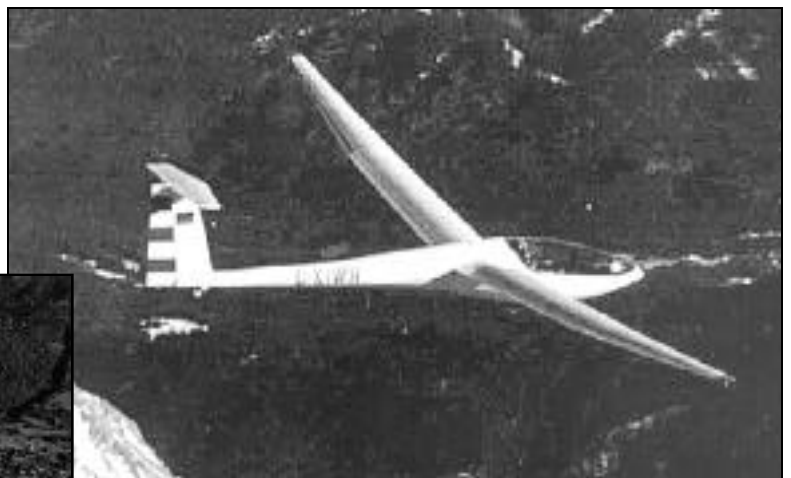


DG's production facility was designed from the ground up for maximum efficiency.



A 15-meter DG-202 touches down on the grass. More than 300 200s and 202s have been produced. The improved 202 was the first DG to have DG's famous forward opening one-piece canopy.

The DG-400 is perhaps the best known of all DGs. It was DG's first powered sailplane. 290 were produced and it has the reputation of being a very popular and economical used powered sailplane choice.



The 15/18-meter DG-800 series includes the non-powered 800S, the powered DG-800A and B and 808B. These are the flagships of the single seat DG line employing full span flaperons and winglets.

Continued on Page 5...

DG Management and Engineering



One of DG's original founders, Gerhard Wolff, is the design engineer of the DG aircraft line. Dirks is an active contest pilot and was a contestant in Germany's 2001 18 Meter Class competition held in Lüsse, near Berlin. Dirks flew a DG-808B.

He reports "I finished only in the medium ranks, but two of my friends finished at the top with their DG-800B's. Friedmann Küster #1 and Klaus Mühlenkamp #4. This was out of 44 competitors. The best pure glider was an LS6 at 3rd place. It was a high level competition and I am proud of the good showing of the 800B."

Below is Karl Friedrich Weber, shown here with his wife Eva-Marie. Mr. Weber has been the owner and managing director of the company since 1996. Gerhard Wolff is the co-owner. Karl has been instrumental in the development of DG into a modern production facility.

All DG Images courtesy DG web site <www.dg-flugzeugbau.de>



Pilot's Profiles

Rick Edris and his wife Rita took delivery of a new DG-808B in late May at the Minden-Tahoe Airport, Minden, NV. Both Rick and Rita come from the hang gliding scene with over 13 years experience. Rita was 7 years on the Hungarian Women's World Team. According to Rick, they met at 8,000ft while flying hang gliders just before the Women's World Meet in Chelan, WA. They have been married for four years. Rick and Rita took their glider training at Turf Soaring School in Phoenix last May flying a PIK-20D which was their first sailplane. Rita flies the PIK and will "graduate" to the DG-808B. He has 170hrs in sailplane and she has 85hrs. Bob Davis signed off Rick in motorgliders after instruction flights in a DG-505MB at Minden.

They are both enthusiastic about owning and flying a self-launching sailplane which will be based at Ephrata, WA when they are not visiting the Phoenix area or Minden. They live in Seattle, WA where Rick is a partner-owner-founder of Plastic Dynamics & Fineline Design. Rick has been a member of ASA for 5 years.



Above: Rick and Rita



Left: Rick is more than satisfied with the handling and flight characteristics of the DG-808B which is one of the first 808Bs imported to the USA.

Below: Taxiing out for the first self-launch



FOR SALE

2-Place Aerotechnik VIVAT

Motorglider

1993 L-135EH 175hrs Total Time

Transponder Mode C, COM, GPS III

Numerous Spare Parts, Trailer included, \$55,000

O.B.O. J.R. Owings 217-672-3729 (IL)



FOR SALE

1990 GROB 109B Motorglider.

Powered by 2500CC VW engine modified by Grob for aviation use (1296 total hours). Three position prop (Climb-Cruise-Feather). Cruise speed about 100kts. Climbs at 5-600fpm. Burns 5 gal/hr. Range using 26 gal. is about 500sm (800sm at 75kts). Glide ratio: 25-28:1 at 60kts. Glider License only. No Medical is required. Well maintained & flown regularly. \$60,000 OBO. Doug Off, 2161 Ventura Blvd. Oxnard, CA 93030, 805-988-0300

FOR SALE..... SUPER XIMANGO

N545X, 360 hrs., excellent condition, NDH, always hanged, demo flights Denver, CO area, delivery & training, specs/photos available via email. Health forces sale. \$88,000. Email: neditateco@earthlink.net, Cell:303-641-5190. (CO)

FOR SALE....DG-800B

1996, 500hrs TTAF, 50hrs TTE. Fully Instrumented with GPS and 02 system. 50hp MidWest Engine. 15 & 18 Meter Wing Tips. Engine and gel coat in excellent condition. Cobra Trailer. \$105,000. Ed Shilen 903-887-9720 (TX)

DG-505MB Systems Report Available

Since taking delivery of his DG-505MB, Chuck Rausch has:

1. Solved a control rod interference problem between the flap bracket and the spoiler rod collar.
2. Added a safety lock to the wing extensions.
3. Engineered and installed LEDs for Spoiler and Landing Gear positions including a pulse gear up warning horn.
4. Designed one-man handling equipment.

For a copy of his 4-page report and diagrams send SASE to Pete Williams

2001 Motorglider National Contest Results

Hobbs NM August 20-25, 2001

Due to weather, only four contest days were flown out of six scheduled. Landouts (Engine Started on Course): Day 1-4; Day 2-2; Day 3-1; Day 4-6.

Rank	Points	ID	Name	MotorGlider
1	3215	FD	Gross/Howell	Ventus bt
2	2721	9D	Whitesell	DG400
3	2445	EY	McAllister	S10-vt Stemme
4	2270	AF6	Smith/Maclean	S10-V
5	2264	PAP	Roberts/Petmecky	ASH25M
6	2252	WJ	Walsh	Ventus 2cm
7	2081	GS	Sanders	DG 400
8	1078	VO	McWhorter	Ventus CM
9	541	N2O	McKinley	ASW24 E

The National Soaring Foundation Hosted ASA's First Stand Alone Contest.

The Weather

It was not as hot as it has been at previous contests that I attended during early July, in fact it was pleasant in the mornings and evenings with the temperature in the mid 60's. We did lose 2 days to rain and winds, but the other 4 days were very good. Cloud bases were as high as 14,000 ft and climb rates of 700-900 ft/min were attained.

Noteworthy Flights

Al Whitesell was a new competitor this year and did not take long to go to the top of the score sheet. Al won Day # 2 and finished in 2nd place overall. We hope to see more of Al's good flying in the future. Russ Maclean and Mike Smith flew the Air Force Academy's Stemme to a personal best on day #3. They flew 236.77 miles at 74.27 mph (farther and faster than either had done before). Judge McWhorter also finished day #3 with a smile (62.24mph). Judge did have a failure of his data recorder on day #2, so it was great to see a smile on day #3. We played golf on Tuesday (wind and rain) and Judge won the award for "Best score with rented clubs".

Tasks

The tasks were set to take advantage of the best 3 hours of the day for all competitors. The glider's performance varied greatly from an ASW-24e to an ASH-25m. PST and Modified Assigned Tasks were used the first two days and Turn Area Tasks were used on days #3 and #4. The Turn Area Tasks are similar to assigned tasks, but the turnpoint radius can be expanded to 20 miles. The tasks that we flew had 20 mile circles that created a distance of 145 to 262 miles on day #3 and 175 to 295 miles on day #4. There was a 3 hour minimum time for the task, so the pilots had to fly only far enough into the circles at each turnpoint to fly for 3 hours. The Turn Area Task also made it possible to complete the task when there were rain showers near the turnpoints. A large area of rain was between Hobbs and Wink on day #4. I was able to fly 25 miles west of the course line in the sunshine and touch the western part of the circle at Wink before returning to Hobbs.

Next Year

The 2002 Aux-Powered Nationals are planned for Steamboat Springs, Colorado in mid June. Tim and Susan McAllister made a presentation that was well received by the majority of the competitors and we agreed to meet in Steamboat Springs next year. I spoke with Dean Carswell and he approves of the wording about next year's contest. We also feel that getting the word out early is very important.

Submitted by Rick Howell

Pilot Review

The Lightspeed QFR Cross-country Active Noise Reduction Headset

Submitted by Eric Greenwell

I've always used a headset during motor operation of my Schleicher ASH 26 E to protect my hearing and to hear the radio better. After reading the article, "Hearing Damage by Cockpit Noise in Motor Gliders", in the January 2001 issue of Technical Soaring, I decided to find a better headset, partly for additional hearing protection and partly for comfort. Hearing protection is important for any motorglider, but particularly for some models: for example, the ASH 26 E was rated at 103 dBA, the DG 400 at 110 dBA, and Nimbus 4 M at 117 dBA.

The "permitted exposure times" are, respectively (minutes:seconds): 7:30, 1:30, and 0:20! While my usual self-launch only involves 4 minutes of moderate power (taxi and warm-up) and 4 minutes of full power for the climb, I may run it as long as 20 minutes at full power, and sometimes more than once, during a self-retrieve. These times, I would appreciate more quiet!

Based on the article's measurements and the ratings for headsets, even the low cost units provide enough protection for short periods (5-20 minutes) like I typically use; however, since prices for headsets with ANR (Active Noise Reduction – a technique using electronics to produce sound in the headset that cancels the external noise) have dropped below \$300 recently, I looked for a suitable unit for me and the ASH.

I settled on the QFR Cross-country unit from Lightspeed for several reasons:

- A thin headband lets it fit under the canopy easily
- The relatively small size makes it easier to stow after engine use
- It has an remarkably high passive rating of 28.7 dB (ANR turned off)
- ANR performance of 12-15 dB was modest but worthwhile
- A low price of \$265
- Good reviews by aviation journals and users

Flying with ANR turned off revealed it is much quieter than my original headset, a Flight com 4DX (passive unit with 24 dB noise reduction rating). With the ANR turned on, there is an additional significant reduction in the lower frequency range. The propeller noise seems to almost disappear, leaving a semi-mechanical whirring sound. It's a worthwhile improvement for me. I didn't check the microphone performance, as I use the boom mike in the glider whether powered or gliding. There is an adjustment for the microphone output to match it to the radio, if needed.

Operational Considerations

The unit requires two AA cells that last 20-25 hours, or about two years flying for me – if I remember to turn off the power switch. I'll carry a couple batteries in the trailer just in case, but it's not a problem if the batteries die since the headset continues to function and there is still plenty of hearing protection with the excellent passive attenuation. A test switch and three LEDs check the batteries. A consideration for two seaters is operation with an intercom system. Not all ANR headsets are compatible with all intercom systems. Some people have reported problems with some ANR units causing noise in the radio if the squelch is set too sensitively. This isn't a problem for a self-launcher where the headset is used for a short time while the engine is running, but might be an annoyance on a motorglider like a Ximango or Taifun where the engine runs are typically longer and more frequent. Because there is a potential for compatibility problems and the differences between gliders powered by two-stroke and Wankel engines, I strongly recommend you "try before you buy" an ANR headset. I bought my headset from AvShop.com because they had a 30-day "like it or return it" policy.

Other Possibilities

- Just use ear plugs. This gives more attenuation than even the best passive headset, but it's likely you won't be able to hear the radio or the vario while using them. One pilot recommended disposable Howard Leight plugs, which are connected by a cord, so they're easy to hang around your neck until you want to use them.
- Use a good passive headset. These are cheaper than the ANR units, no batteries to run down, and offer sufficient hearing protection in most motorgliders. The passive QFR Solo would be my choice, since it has the same excellent passive rating as the QFR Cross-country ANR unit and is inexpensive (about \$140).
- Use ear plugs with a passive headset. This gives you a huge noise attenuation while still allowing you to hear the radio. Forget about the vario unless its signal is added to the headset input. Since most units are stereo, the vario signal could come in one earcup and the radio on the other without much wiring difficulty.

New Tail Wheel Steering Fork Available for DG-800B & DG-400



To reduce the lateral control forces in the DG 400, DG 800A and in the DG 800B up to works no. 8-218, DG has developed a new tail wheel fork. The old fork has a plain bearing in the fuselage. For the DG 808B from Works no. 8-219, the new fork incorporates a needle roller bearing which reduces friction. This new fork cannot be used in the older glider types. For this reason DG has developed a tailwheel steering fork for the older glider types, which incorporates additional roller bearings.

The lateral control forces of the old plain bearing were high since the strong springs of the steering mechanism caused high friction pressure. The new needle roller bearing design is a significant improvement. It is slightly heavier than the old one (approx. 300 grammes). This requires an increased minimum cockpit weight of 2 kg more, and the type placard needs to be changed. Technical Notifications have been written for the new tail wheel fork.

DG highly recommends replacing the old fork with the new one and retaining the old one as a spare part. DG still has a limited number of the old forks on stock. However, as soon as the new fork becomes available in September 2001, DG will only send the new forks out unless pilots specifically order the older fork. Price of the new fork is roughly 100 Euro more than the old ones.

Source: DG web site <www.dg-flugzeugbau.de>

FOR SALE:DG-505MB 20/22

New May 2001, 60hrsTTAF, 11hrs Engine. Dual L-Nav,GPS,O2, etc; Latest engine & options; Cobra Trailer. \$160,000 including checkout and MG endorsement if needed. Mike 775-782-1224 or soarmore@aol.com Minden NV



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, 1930 S.W. 8th St., Boca Raton, FL 33486-5205 Tel: 561-750-6876 Fax: 561-393-7458 Annual Dues: \$20 USA, \$25 International

ASA Officers

President: Dean Carswell972-775-1835
Treasurer: Eric Greenwell.....509-943-9065
Membership: Brian Utley561-750-6876
Touring/Safari: Marc Arnold.....314-721-5801
Badges/Records: Don Aitken.....415-851-7202
Publications: Pete Williams.....775-265-3877
Competition: Rick Howell.....972-245-0830

Newsletter published Jan/Feb;
Mar/Apr; May/June;

July/Aug; Sept/Oct; Nov/Dec

©2001 Auxiliary-powered Sailplane
Assn., Inc.

PRINTED IN THE U.S.A.

Newsletter Publication

Pete Williams.....Editor
Optimum Offset.....Printing and Fulfillment
Contributors please submit copy and materials to:

Pete Williams
1033 Dresslerville, Rd.
Gardnerville, NV 89410-8951 USA
Pho: 775-265-3877
Fax: 775-265-6179
email: ftb@pyramid.net

Editorial Policy

ASA Newsletter material is freely contributed by members. The accuracy of the data and validity of opinions expressed are the responsibility of the contributors. Other publications may publish material printed herein, however a credit is requested. Manuscripts accepted for publication are subject to editing necessary within the confines of space available. ASA is not responsible for lost or damaged artwork, photos & manuscripts.

Liability Statement

ASA, Inc. has made every effort to ensure the correctness and completeness of the printing and or publication of the material in the issues. ASA, Inc. has not investigated and makes no representations as to the accuracy or completeness of any information presented herein.

Publishing Information.....

Pete Williams, ASA Publications Manager, is the Editor, and Print Production Manager for the newsletter. As such, he supervises and coordinates with a printer located in Minden, Nevada. The Newsletter is mailed from Minden.

Contributors are requested to submit hardcopy typewritten or keyboarded text. 12pt font size is best for accurate scanning. If submitting text on a floppy disk, please advise the word processing program used. Text may be edited as required to fit the newsletter. The newsletter is produced on a Macintosh G-3 using AppleWorks word processing software. Photos are always welcome and will be returned promptly.

The newsletter is delivered to the printer the last week in Jan; Mar; May; July; Sept & Nov. ASA desires input on what the members want in this newsletter and we are doing all we can to keep it informative and interesting. ***It's your newsletter, so please let us hear from you!***

CLASSIFIED ADVERTISING RATES

50 cents/word, prepaid for 2 insertions.

Contact Pete Williams for Display Ad sizes and rates.



Auxiliary-powered Sailplane NEWS

Peter A. Williams, Editor/Publisher
1033 Dresslerville Rd.
Gardnerville, NV 89410-8951 USA

Wolf Hirth's Hi 20 in flight circa 1941. The Hi 20 is believed to be Germany's first self-launching retractable engine sailplane.



September-October 2001

Auxiliary-powered Sailplane Association, Inc.

Have you renewed your ASA Membership? It is due if you received a Pink Slip recently. Do it today!!



stamp

FIRST CLASS MAIL • ADDRESS CORRECTION REQUESTED
RETURN POSTAGE GUARANTEED