

Auxiliary-powered Sailplane Association

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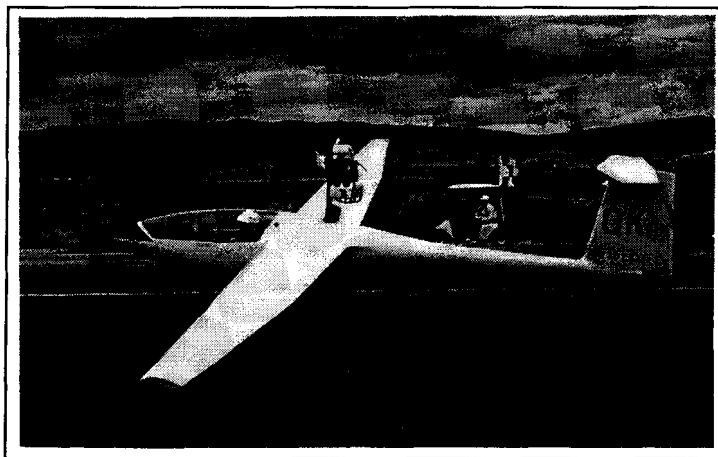
MAY-JUNE 1996 NEWSLETTER



NOTES FROM THE PRESIDENT

"SUN-N-FUN" --- Those of you who missed "Sun-n-Fun" '96 at Lakeland Florida in April missed a super show of the latest in general aviation, homebuilt, ultralight, hanglider, warbird engine and avionics, etc. development. Of particular interest to the ASA was the showing of the new SUPER VIVAT L13 Two Seat Motorglider by Moravia and distributed by Solaire North American LTD. (803-689-5251), the new Katana Xtreme HK36R distributed by Solaire North America LTD. marketed by Diamond aircraft, (1-800-268-4001), the CUMULUS Ultralight Motorglider by US Aviation (612-450-0930) and another ultralite, the Mini Straton D-7 by Aero Dovron, Inc. (407-747-6705).

The CUMULUS is featured in this issue and the others will be covered in the future.



Bud Schurmeier at Minden

the Cumulus and Swift, motor gliders such as Grobs, Taifuns and Ximangos, sustainers and self-launchers. Classes and handicaps would have to be established with the objective being to introduce pilots to the fun and spirit of competition soaring. Each class could have tasks compatible with the capabilities of the designs with many close-in turn points. By requiring the use of "Data Loggers" such as the Cambridge, the start gate, finish gate and altitude window could be eliminated, simplifying contest management and scoring. Please send you

comments on this concept to the President, ASA.

TAOS SOARING CAMP ---

The Texas soaring fraternity descended on Taos in early June for a great week of soaring and evening activities. An interesting insight into the change in the make-up of soaring was the fact that 12 of the total of 20 gliders were aux-powered. Three Stemme S-10s were there one day along with the designer of

the S-10, Dr. Reiner Stemme. Some of the aux-powered attendees were Stan Nelson, Ventus CM, Bud Schurmeier, PIK30, Bob Saxton, S-10 and Discus BM, Steele Lipe, DG600M, Jack McKenney, PIK20, Bernie Gross and Rick Howell, Ventus CT, Eric Greenwell, ASH26E and Dick Mockler in a Ventus CT. Between the social activities and great soaring a fabulous time was had by all. We thank the gracious hospitality of the Texas group for inviting a limited number of guests and to Steve Stanton, Airport Manager, for somehow finding room for everyone despite a field crowded with fire fighting helicopters who were busy with the fires plaguing New Mexico at that time.

AUX-POWERED U. S. NATIONALS. --- The National Soaring Foundation of Hobbs, New Mexico sponsored the Aux-Powered U. S. Nationals in conjunction with the Open and Sports Class Nationals. The contest was held at Hobbs, site of many regional and national contests and the 1983 World Soaring Championships. There were fifteen contestants, the largest field yet with two new excellent pilots joining the group, Dick Mockler and Phil Ecklund with their Ventus turbo's. The contest began with excellent, but very hot weather and continued for six contest days. Cloud bases were above 13,000 ft. MSL with two days exceeding 15,000 ft. Raw speeds were in the high 70's. Rick Howell was first in his Ventus BT followed by Eric Greenwell in his ASH26E. Complete results are in this issue.

ASA SPONSORED AUX-POWERED CONTEST --- The ASA could sponsor an Aux-powered Sports Class Regional in which all manner of aux-powered gliders could be invited. It could include ultralights such as

CONTEST FLYING IN AN AUX-POWERED SAILPLANE

Contest flying in an aux-powered sailplane can be a ball. With an aux-powered sailplane you almost never have a land-out and suffer the long and exhausting retrieve for you and your crew. You also don't miss the great cocktail parties and barbecues and you fly with a great bunch of friendly and helpful guys. Even if you aren't an all out competitive type, it is a good way to challenge yourself in cross-country flying that you probably wouldn't do by yourself. There are both Regional and National SSA sanctioned contests open to aux-powered sailplanes.

In Regional competitions you may fly in the regular unpowered classes; 15 Meter, Standard, Open and Sports as well as in a separate Aux-powered class if there are sufficient entries. At the National level, you may fly in the Sports Class or the Aux-powered Nationals. The rules for the use of the engine and the scoring for the FAI and Sports classes differ from those for the Aux-powered class.

In the Aux-powered Class you may use the engine for self-launch as well as to help you out of a hole and allow you to continue the task. If you do not use the engine during the task, you receive both speed and distance points. If you use the engine to complete the task, you lose all speed points and your distance points are reduced in proportion to the amount of engine use. You must carry a barograph that records engine use.

In the FAI and Sports Classes you may not use the engine for self-launch and if you do not use the engine during the task you receive both speed and distance points. If you start the engine during the task, the task is terminated and you are scored as if you had landed at the last validated turn point. The engine is sealed with an easily breakable seal prior to launch and you must carry equipment showing the time the engine was started relative to turn point times to receive distance credit to the last turn point. You may also land out and then use the engine to self-retrieve. If you have a landing witness verifying that the engine seal was unbroken when you landed and your equipment shows that the engine was not used until after the land-out, you will receive distance credit to the land-out point.

Submitted by Bud Schurmeier - Competition Rules

DG-400 CHECKLIST

Rudy Alleman sent the following :

Here's an item to add to your DG-400 checklist: See

that the engine retract breaker is in before takeoff, and check it in flight if the engine fails to retract.

This is what happened to me. I assembled and raised the engine and inspected it according to the routine, but I didn't notice that I had held the raise switch a bit too long and popped the breaker. After takeoff and engine shutdown the engine would not retract. I thought the problem was propeller alignment and tried several more times before giving up and landing with the engine in the raised position. On the ground I noticed that the breaker was popped. The next several flights have been without incident. I have added this to my pre-engine start/takeoff checklist, since this sequence is not brought forth in the DG-400 manual.

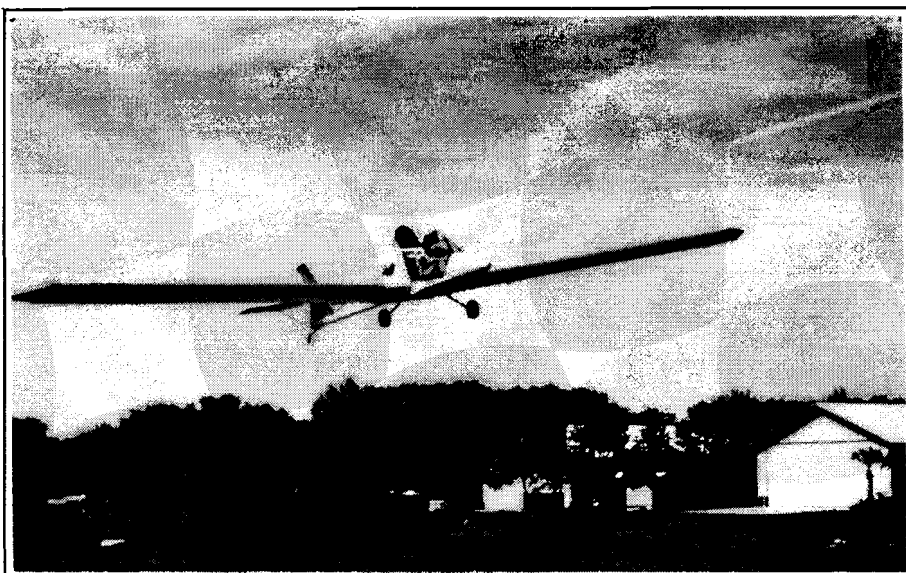
MOTORGLIDER NATIONALS RESULTS

Rank	Name	Plane	Points
1	Howell	Ventus BT	5200
2	Greenwell	ASH26E	5182
3	Pollard	ASH26E	4782
4	Nelsen	Ventus CM	4769
5	Estrada	ASH26E	4718
6	Aitken	DG400	4515
7	Dyer-Bennet	DG500M	4507
8	Mockler	Ventus CT	4385
9	Volkman	DG800m	4380
10	Perkins	Ventus CM	4243
11	Shilen	DG800B	4225
12	Barritt	DG500M	4154
13	Ecklund	Ventus BT	3691
14	Martini	Nimbus 3DM	3639
15	Walsh	Ventus CM	3419

CROSS-WIND TAKEOFF AND LANDING RETRACTABLE ENGINE SHIPS

None of us look forward to a takeoff or landing in cross-wind conditions. Usually the wind is varying in direction and velocity. Add "ground effect" which increases the tendency to float and you have a potentially dangerous situation. The following suggestions are not meant to supersede the handbook instructions which should be observed for the particular model you are flying. Be sure and check the handbook for the maximum Allowable cross-wind component.

Takeoff: (self-launch)



THE CUMULUS **An Ultralite Motorglider Kit**

A new motorglider made it's appearance at Sun and Fun. It is an impressive design that should have good soaring and power performance providing a good way to enjoy soaring at a modest cost.

The clean design with a low wing loading, high aspect ratio cantilever wing with spoilers and flaps should provide good control and thermalling performance. Adequate power and a good landing gear will make self-launch practical.

The CUMULUS is powered by a AMW/Cuyuna 35 horsepower, twin cylinder engine with gear reduction drive and electric starter. The engine, muffler and BRS parachute are fully cowled under a fiberglass skin, preserving a clean exterior. A fully enclosed cockpit version, which should have improved performance, will be available later this year.

It is only available in kit form with construction time estimated at about 150 hours. Kit features such as a fully welded fuselage and tail, pre-made spars, formed ailerons and ribs and ready to finish fuselage fairing simplify construction.

DIMENSIONS

Wing span * 43 ft
Wing area * 141 sq ft
Aspect ratio * 13.1:1
Empty weight * 320 lbs
Gross weight * 560 lbs

SPEEDS

Max speed * 85 mph
Econ cruise * 60 mph-1.5 gph
Stall (flaps) * 27 mph

PERFORMANCE

Min. sink * 190 fpm
 @ 34 mph
Max. L/D * 20:1 @ 43 mph
Rate of climb * 1000 fpm
Range * 200 mi w/o lift
Takeoff * 170 ft
Roll rate * 3.5 sec (45-45)

STRUCTURE

Limit load * +4.4/-2.0 G
F./S. * 1.5 X limit load
Wing and tail *. Fabric covered
Airframe * 6061-T6 al. and
 4130 steel
Wing loading * 3.97 lbs/sq ft
Fuel Capacity * 5 gal.

For added information, contact:
US Aviation
265 Echo Lane
South St. Paul, MN 55075
tel/fax: 612/450-0930

Notes from the editor

We would like to add a new feature to our newsletter -- a "Letters to the Editor" section. Please keep them concise and brief and we reserve the right to edit them if necessary while still retaining the intent of the letter.

In the January-February letter we added a comment following a reprint of an article from the British publication "SAILPLANE and GLIDING" regarding contest rules for retrieval. We incorrectly implied that our contest rules, approved by the SSA, prohibited self-launch retrieval. That was incorrect and we've included an article by Bud Schurmeier, the ASA contest rules representative, which clarifies the present situation. We hope this article will prompt some discussion regarding changes and additions to the rules which will improve the status of auxiliary-powered gliders in competition.

Corrections

The Auxiliary-Powered Sailplane information sheet included with the January-February newsletter listed some data which Geolard Waibel of AS requested we correct. The correct data are:

Alt/Gen are included on the ASW-24E, ASW-22BE and ASH-25E.

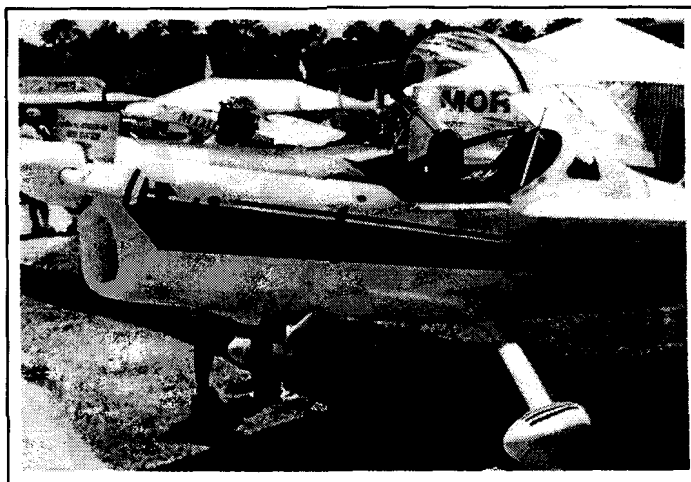
The ASH-25E engine is a ROTAX 275 and the performance on the ASH-26E is 581' take-off and 1116' over a 50 ft. obstacle.

David

AUXILIARY POWERED AT SUN-N-FUN



Katana Xtreme



Super VIVAT L-13



Cumulus



Mini-Straton D-7

DG-400 STARTER SPRING Rotax 505

One pilot reports that on application of power for takeoff the RPM dropped to 4000 rpm from over 6000 rpm initially. The takeoff was aborted and inspection showed scoring of the front face by the starter gear. A weak coil spring which retracts the starter gear was suspected. A stronger spring was fabricated and installed with no further problems encountered. Details of the spring are available from

Billy Stowers - High country Soaring
702-782-4944 (NV)

NEW MANAGEMENT FOR GLASER-DIRKS

On May 10, 1996, DG Flugzeugbau GmbH was

founded to take over Glaser-Dirks sailplane design and production operations. The new owners are Mr. Karl-Friedrich Weber and Mr. Gerhard Wolff. This new management has solved Glaser-Dirks liquidity problems and all factory operations continue as before at the D-76646 Bruchsal-Untergrombach location in Germany. Serial number orders, production, parts and service continues for the DG-303, 505 and 800 including the motorized versions.

On May 20 Wilhelm Dirks made the maiden flight in the DG800B with the new Solo engine, type 2625. Dirks reports a very smooth vibration free engine with outstanding takeoff and climb performance (up to 900fpm initial climb rate). The liquid cooled two-stroke Solo engine produces 55 hp at 2100 prop rpm. With an empty weight of 732 lbs, there is no increase over the Mid West engine version.

cross-wind (cont.)

1. If possible, begin the takeoff run on the downwind side of the runway to permit the aircraft's track to be more into the wind by a few degrees. This also removes some of the side load on the main wheel which tends to "scrub" sideways as speed increases. This wheel scrub tends to point the aircraft more into the cross-wind further accentuating the tendency to weather cock into the wind. Be alert to the amount of runway ahead to safely liftoff.

2. Check that the spoilers are closed and locked. (LOOK at the spoilers while making sure that they are LOCKED down). Use the flap position recommended by the handbook. A negative setting is specified for most ships for roll with a positive setting for liftoff. The upwind wing should be down and takeoff aborted if the downwind wing touches the runway. As power is applied, keep the tailwheel on the runway as long as possible and be prepared to apply more than normal rudder to counter the tendency to weather cock. Try to keep the upwind wing low (without tip wheel contact). As the ship accelerates, the side force of the cross-wind will cause some scrubbing of the main wheel.

3. If the aircraft has adequate rudder and aileron control, continue the run and apply positive flap at about 5-10 kts. less than rotate IAS. As the aircraft comes off the runway, the nose will swing more into the wind. This crabbing is normal. Be aware that gusts of varying velocity will be present and favor a slightly higher liftoff speed. Do not force the aircraft to liftoff.

4. Should the aircraft start veering into the wind and control corrections are not effective, reduce throttle to idle and abort takeoff. An attempt to salvage an uncontrollable swerve can result in the aircraft rolling off the upwind side of the runway.

Landings: (Engine stowed).

1. Pay close attention to the windsock as you enter the landing pattern. If it is steady, the cross-wind will be steady from that direction. If it is swinging and hangs limp between swings, gusty conditions will prevail. Select the runway that is nearest to the wind direction and adjust the downwind track to compensate for the wind direction otherwise your landing pattern will be too wide or too close. The wide pattern creates an angling approach while a close pattern results in an overshoot. A proper pattern will remove a lot of the problems on the final turn to the runway heading.

2. Check gear DOWN and locked. Crab into the wind on final approach to get a flight path parallel to

the runway and aim for the center of the runway. If conditions are gusty, carry extra airspeed on final and be prepared for airspeed fluctuations of ± 10 kts. Full landing flaps are suggested with minimum use of spoilers to adjust the glide slope. When within one wing span of the ground, lower the upwind wing and cross-control with opposite rudder to keep the aircraft centerline parallel to the runway. Be careful to check the airspeed and concentrate on a smooth transition to a 3-point attitude. Use spoilers sparingly.

3. Upon touchdown the aircraft's nose will start to swing toward the cross-wind. Compensate with rudder and keep the tailwheel on the runway. Move the flap lever to a negative setting and keep the controls applied against the cross-wind. Use wheel brake as needed. If the cross-wind is strong, arc toward the downwind side of the runway. This relieves the tire scrubbing. Keep the upwind wing low into the cross-wind. Remember to "fly" the aircraft all of the way to a complete stop.

Submitted by Pete Williams

FOR SALE

1982 GROB 109A, 250TT, ADF, KX155 w/VOR, transponder w/mode C nice but no time to fly-- \$35,000 (815) 434-4327 Chuck Whitmore

FACTORY REPORTS

by Pete Williams

According to European factory figures, the following numbers of aux-powered retractable engine sailplanes were produced and delivered between December 1978 and April 1985.

Factory	self-launcher	Sustainer	Total
Shempp-Hirth	200	351	551
Glaser-Dirks	440		440
Schleicher	122		122
Grob	51		51
Stemme	70		70
EriAvion (Pik)	133		133
Totals	1016 (74%)	351 (26%)	1367