

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

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President's Message

Time flies! After an eventful and, in some respects, sad year, we motor glider drivers are again in the midst of winter. If you are fortunate enough to live in an area which permits flying year round and you actually do so then, as they say in Oz, no worries!

However, if winter causes you to have an enforced stand down, you should run your engine regularly (at least monthly) without fail, whether you actually fly or not. If it is liquid cooled, you should drain the fluid between runs or ensure that it is of a specification that will not freeze. The alternative is to ensure that it is fully inhibited and winterized. Only by doing this can you avoid serious risk of a nasty and costly surprise in the spring.

If you don't, for whatever reason, keep current over the winter, then please be thinking ahead to what you will do when you re-start in the spring. If you own a two-place ship, consider making your first couple of flights with a qualified instructor. If you have a single place ship, what about a spring re-currency flight with an instructor? Get back up to speed with a safety pilot – how many times have you read or seen implied in an accident report that the pilot was flying a couple of hundred feet behind the glider? And lastly, we all become rusty about operating procedures and systems even when we fly regularly, if we don't re-read them regularly.

Before stepping in for your first flight of the spring, take time to sit down and review handling of your sailplane and its systems, and the action to deal with whatever emergency might arise.

Safe motorgliding!

Dean Carswell



The Nimbus 2M - Schempp-Hirth's First High Performance Self-Launching Sailplane.

Between 1974 and 1976 seven 20.3 meter Nimbus 2s were modified to accept a Hirth 650cc 2 cylinder 55hp engine. As such the powered Nimbus was the genesis of 871 powered sailplanes produced by July 2001. Seen above is D-KHKA piloted by Alois Obermeier. Note the unique retractable out rigger wheels. Image courtesy AIRWORKS magazine.

Editor's Note: In researching the Nimbus 2M's origins one always comes up with personalities and registration numbers. The beginning of a high performance self-launching series production motorglider started in the mid- seventies at Schempp-Hirth. There were three main players: Karl Abhau, his friend Willibald Colle and Klaus Hohlighaus. Karl was one of the leaders of competitive soaring events in Germany and Klaus a talented designer and producer of competitive sailplanes. Colle established some of the first world records for motorgliders. As one of the advocates of using power to self-launch, Karl Abhau attended the first U.S. national Motorglider Contest at Uvalde, Texas in 1988. He flew #4 Nimbus-2M, German registration number KLAD (AD). The story below is in Karl's words and as such is a valuable piece of soaring history. Some of his statements have been edited for English clarity. The rest has been left as submitted in Karl's straight forward, honest and sometimes frank statements. Karl currently owns and flies a Nimbus 4DM and a Taifun.

"Please forgive my poor English. Information about the 7 Nimbus-2Ms is below:

<u>S/N</u>	<u>Reg#</u>	<u>Comp#</u>	<u>Owners</u>
01	D-KHWC	WC	Willibald Colle: Mercedes Dealer in Limberg
02	D-KHKA	LO	Alois Obermeier: Cheese maker /Altenastadt
03	??	??	Alois Hingott: Limberg
04	D-KLAD	AD	Karl Abhau: A Window and Door Maker
05	D-KOLN	??	A group in Cologne
06	D-KROF	RF	Fritz Rueb from Schonstadt
07	??	??	Gunther Czichon :A teacher from Berchtesgaden

" Willibald Colle had a Scheibe SF27M fitted with wings from an 18Meter Cirrus. He also had a 2-place Scheibe Bergfalke. He flew 12 World Records in the Nimbus 2M WC. The term "WC" in German means water closet and Colle liked to say he owned the most expensive water closet in the world! "

Continued on page 10

**Schempp-Hirth Powered Sailplanes
Production as of July 7, 2001**

Turbos

Janus CT	16
Nimbus 3 T	24
Nimbus 3 DT	21
Nimbus 4 T	10
Nimbus 4 DT	6
Duo T	15
Ventus BT	99
Ventus CT	86
Ventus 2 CT	77
Discus BT	166
Discus 2 T	12
<u>Total</u>	<u>532</u>

Self-Launchers

Janus CM	37
Nimbus 2 M	7
Nimbus 3 DM	27
Nimbus 4 DM	43
Nimbus 4M	11
Ventus CM	107
Ventus 2 CM	110
Discus BM	8

Total 350

Grand Total 882

The Schempp-Hirth DUO Discus Turbo Design Concept

"In the design and construction of the non-powered DUO, one of our primary tasks was to produce an uncomplicated, user friendly, high performance 2-place sailplane. The world-wide success of this sailplane confirms this philosophy. In the DUO Turbo version, we wanted to continue down this path to develop the proven Turbo concept for this two seater. Our major concern was to bring safety and reliability into the club and training aspects and that is where the main points for the design become apparent. The 30 horsepower Solo motor drives a five bladed propeller at a gearing ratio of 1:1.56. Like all of our other Turbo systems, we decided against a starter. The motor is started from airflow alone. The optimized configuration of gearing and the enlarged diameter of the propeller allows, with the help of a decompression lever, a windmill start speed of about 100 km/h (62mph). Therefore a safe start with minimal loss of altitude is possible. Another plus for the DUO Turbo version is a very acceptable climb rate. This is due to the latest propeller design from Herrn Prof. Oehler. Due to the lower gear ratio and the optimized rpm of the propeller it has been possible to obtain maximum performance with minimal losses in horsepower. With climb rates of 0.8 to 1.3 m/sec (157 to 255fpm) means (under normal conditions) a safe climb rate for cross country flights without the risk of land out. The complex and relatively large exhaust and muffler system effectively reduces noise emissions. Due to the enlarged propeller with the proven asymmetric prop blade assembly and different length blades, at lower revs, it has also been possible to reduce propeller noise. We think that this is another very important step in the right direction in solving the problems of noise pollution. The engine control system is based on the proven system in most of the other turbo versions, using the ILEC engine control instrument. Excessive rpm from the motor is almost an impossibility due to the new rev limiter in the control box. The development of the DUO Turbo version has been proven in all aspects. We are proud that this concept is now able to fill yet another niche in the market of the gliding world."

Submitted by Bernd Weber, Schempp-Hirth



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

Powered Sailplane Instruction & Delivery

Dave McConeghey ATP, CFI Motorglider
davemcconeghey@hotmail.com
<http://www.angelfire.com/ks2/motorglider>
1507 Browning Ct. Andover KS 67002
Cell Phone: 316-409-9624

FOR SALE Grob Twin IIISL

1992 2-place Self-launching Sailplane with Cobra
Trailer. 600TTA; 200TTE, New poly paint, fully
instrumented. The best self-launch trainer for
commercial operators. More Info: Dieter Bibbig
970-925-3418 Aspen, CO

FOR SALE....DG-800B

1996, 500hrs TTAF, 50hrs TTE. Fully Instrumented
with GPS and O2 system. 50hp MidWest Engine. 15
& 18 Meter Wing Tips. Engine and gel coat in ex-
cellent condition. Cobra Trailer. \$105,000. Ed Shilen

903-887-9720 (TX)

DG-400 FOR SALE

Ser. No. 4-68; N409DM
Former owner: Dan Matzke, Palmdale, CA
Date of Mfg: 1984 TTAF 784 TTE 76
Good to excellent condition
15m and 17m tips Cobra trailer
Cambridge CNAV 50, Dittel 60M radio
Oxygen, National 425 Parachute
Headset, Aerograph Barograph
Complete covers (wings, fuselage, & tail)
Located in hangar at Mid-Atlantic Soaring
Frederick Airport, Maryland
Price \$62,000
Owner Al Blackburn Tel. 703-734-3843
Fax 703-821-3168

Email NIMBUS3@aol.com

For Sale DG-400

1986 S/N 189
TTA-900hrs TIE-0 after major overhaul
Complete Instrumentation
New Gap Seals
No Damage History
Cobra Aluminum Trailer
\$60,000 OBO
Terry Edmunds
319-624-2822 (Iowa)
email: terry-edmunds@uiowa.edu

The Schempp-Hirth Team

Founded in 1935 by Wolf Hirth and Martin Schempp, Schempp-Hirth Flugzeugbau GMBH is one of the most highly respected sailplane design and production firms in the world. It was in 1965 that Klaus Holighaus joined the firm as a promising young engineer from Darmstadt University. His first assignment was to redesign the Standard Austria as an Open Class 17-meter sailplane. This sailplane, known as the SHK, went on to win several world and national championships. The rest is history as many contest winning and records establishing sailplane designs continued to emerge from the mind of this talented aeronautical engineer. This includes the Open Class Cirrus, Standard Cirrus, Nimbus, Ventus and Discus Series and the Janus. Power plants in the form of sustainer and self-launching engines were incorporated in the already proven sailplane line starting in the mid-seventies. Klaus untimely death while flying a Nimbus 4M in 1994 was a severe blow to the sailplane community. The Schempp-Hirth team continues today under the leadership of his son Tilo assisted by Klaus wife Brigitte, Helmut Treiber, Joachim Krauter and E. Schott supported by a firmly established and dedicated design and production team.



Above: President Tilo Holighaus sits in a Ventus Turbo.

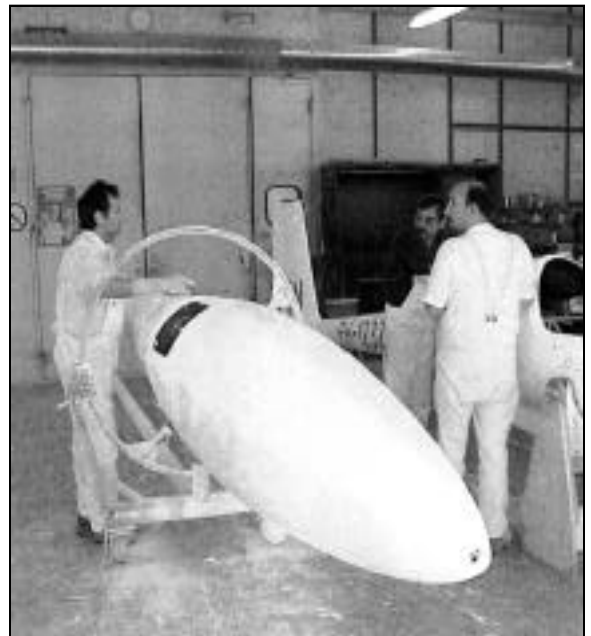
Right: Brigitte Holighaus is the Secretary of the corporation



Above: Klaus at Uvalde, Texas. He was a winning contest pilot and holder of several world records.



Left to Right: Holger Karow-World Open Class Champion; Helmut Treiber, who has been with S/H since 1972; Tilo Holighaus, President and a S/H employee.



Production finishing area

Schempp-Hirth's Self-Launching Fleet

A Nimbus 4M gathers speed for a self-launch. The water-cooled 63hp SOLO 2625 engine replaces the first 4Ms power plant which had a 43hp Rotax 505A. With engine stowed an L/D of 60 is possible.

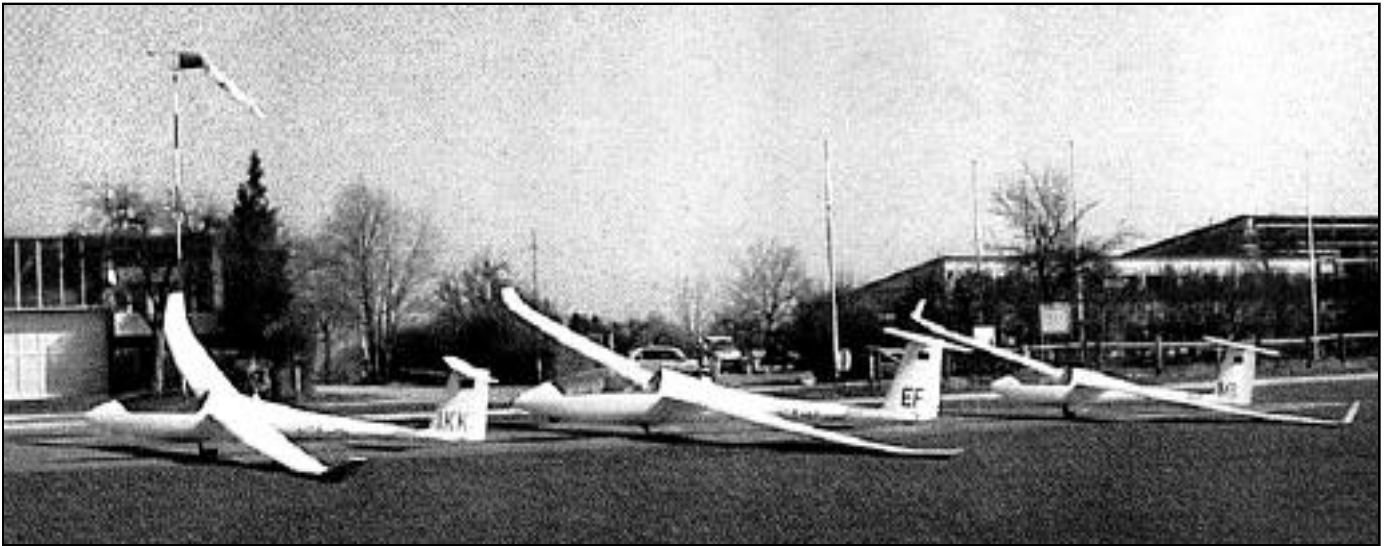


The 2-place Nimbus 4DM has the same SOLO power plant as the 4M. Earlier models had a 59hp Rotax 535.

A Ventus 2CM. Earlier models (seen on the right) had a 40hp SOLO engine and a 2-piece folding prop which allowed shorter engine bay doors. Current models have the SOLO 2625 50hp engine, a non-folding prop and longer engine bay doors. An L/D of 50:1 is possible.
As of Sept 01 there were 6 Ventus 2CMs in the USA.



Schempp-Hirth's Turbo Fleet



From left to right: Discus 2T, Duo Discus T and Ventus 2cT at the Hahnweide airfield flight testing site for Schempp-Hirth gliders.



Helmut Treiber, Chief Engineer, Tilo Holighaus, President and Joachim Krauter beside a Discus 2T. Krauter is the engineer who assisted Dip. Ing. Treiber with the Solo turbo engine installation in the Duo Discus T.



Solo 30hp engine installation in the Duo Discus T. The large muffler design more than meets the strict requirements for noise abatement in Germany.



Hans Georg Berger

Known throughout the soaring world as "Biggo", Hans is the Sales Manager for Schempp-Hirth. He has been an employee since 1978.

Bernd Weber

The majority of the Schempp-Hirth article's text and images were supplied by Bernd Weber of the S/H Sales department. Bernd is a relatively new sailplane pilot and has accumulated over 5,000 hrs in Hang Gliders since 1979.



Nimbus 2M continued from Page 1.

"Prior to building the powered Nimbus 2M, Klaus Holighaus had produced about 20-25 Nimbus 2 sailplanes which at that time (70s) were considered one of the best Open Class sailplanes available.

Jürgen Laude was the Schempp-Hirth engineer who made the modifications of the Nimbus 2 to accept an engine. The Nimbus 2M D-KOLN was returned to the factory for repairs. According to witnesses it was seen to emerge from a cloud inverted. Klaus said the wings had been subjected to a negative load. This glider was later owned by a Swiss pilot and then sold to Hans Elkmann in Germany.

Günther Czichon was a teacher. You know that most teachers are difficult and have two left hands. I think he made 2 or 3 crash damages to his glider.

After seven 2Ms were produced, the Hirth engine was no more available. Later I met with Klaus and asked him for a new motorglider but Klaus said "No" with both hands held up. I asked again later and he said "No" with one hand held up. Later I asked again and he simply said "No".

Hans Elkmann died in 1989 at 55. Willebald Colle died in 1990 at 72. Klaus Holighaus died in a Nimbus 4M crash in August 1994. Alois Obermeier is alive at 81. Hingott is now 75 years old and I am 76 years old".

Submitted by Karl Abhau.
See page 11 for Karl Abhau's
Pilot Profile



AMS Flight, the company that manufactures the DG-303 and the DG-505 series for DG Flugzeugbau GmbH, will begin production manufacturing of the Carat at the beginning of 2002. The Carat features a Discus wing with winglets and a Sauer 1800 E1S four-stroke engine. With good soaring performance, good engine on performance and the ability to hangar in a Cobra trailer, the Carat will appeal to many self-launching pilots in the USA. By Summer 2002 DG USA plans to have a number of Carats flying in the USA. Oliver Dyer-BennetDG-USA



The TST-9 "Junior", an Ultralight Motorglider from TeST

This classic single place motorglider has an engine off (unfeatherable prop) L:D about the same as a Schweizer 1-26. The short wing span of 40.6' makes it easily stowable in a hangar or it can be quickly derigged and placed in a trailer. Takeoff performance is a lively 885fpm under standard conditions. With full fuel, the payload is 236lbs. At 1.5 gal/hr and a cruising speed of 70-75mph, the range is over 330 miles. Construction is wood and some composites. All controls except the rudder are push-pull rods and the nose wheel is steerable. A 40hp air cooled Rotax 447 provides adequate power or, as an option, the 46hp Rotax 503 may be specified. Lead time for orders was 10 months at this writing. Approximate USA delivered cost of a completed TST-9 and Trailer is \$25-27,000.

Some Specifications

Span	12.4M
Empty Wt.	385lb
Wing Load	6.14 lb/sq/ft
Airfoil	Wortmann FX 61-184
Length	19.3'
Gross Wt.	661lb
Vne	112mph
Stall	39mph
Fuel Tank	6.6gal
Takeoff	328'
Climb	885fpm
Ceiling	16,000'
Glide Ratio	20 @55mph
Min. Sink	295fpm
G Loads	+4/-2



More Information: Zybnek Jaros, TeST spol s.r.o. Dobrovskeho 78-612 00 BRNO, Czech Republic <www.test.infoline.cz or jaros@infoline.cz>

Russia Motorglider Update

AviaStroitel has now been in business for ten years; I've been here for four. During my tenure as a dealer AviaStroitel has tripled their yearly output and introduced the definitive Russia models C and M of which I have sold over 60 combined. We have product committed and in the pipeline halfway through 2002. By the time motorglider #30 gets here we'll have over 80 Russias in the USA.

Bill Ard/Russia Motorgliders. Dateline: Nov 23, 2001

Pilot Profile-Karl Abhau



Photo above taken of Karl Abhau climbing out in his Nimbus 4DM with passenger Bob Hupe after self-launching from the Minden-Tahoe airport. Image by Pete Williams
Continued from page 6.....

Karl Abhau was a member of the Luftwaffe in WW2 serving as an aerial photographer in Dornier Do 17 and Junkers Ju 88 observation aircraft. As the Russians closed in on Berlin, he made his way on foot for many miles evading Russian troops to surrender to the Allied Forces. He was then sold by the Americans for \$50 to the French army and spent the next 2 years in a French Prison. According to him the food consisted mainly of carrots which he disdains to eat today. He has been flying sailplanes since 1940 and has 4,300 soaring hours and 2,178 flights. He was a leader in the German Soaring Club, officiating and flying in many contests. He holds 6 World Records, 8 German Records flying self-launching sailplanes including a 1016km flight in South Africa.. Karl has owned and flown 6 motorgliders including the Nimbus 2M, Ventus 2CM, Taifun, Grob Twin III SL, Nimbus 4M and Nimbus 4DM. Each summer he visits Minden where he bases and flies his Nimbus 4DM.



Photo on right taken at Minden-Tahoe Airport. In Germany Karl is known as one of the founders of the motorized soaring movement. He and his wife, Inge, reside in Meerbusch, a suburb of Dusseldorf, Germany.

Carl Herold Establishes U.S. Multiplace Motorglider 750km Triangle Speed Record

Flying out of Minden-Tahoe Airport on July 26, 2001 Carl soared his Nimbus 3DM around a 759.63 km FAI Triangle at an average speed of 84.63 mph. Cruising between 14-16,000 ft mostly under virga streets. His total time in thermals was only 33 min., 9% of the 5hr 34.6min flight.

Well done and congratulations Carl!

Ventus Bt FORSAIE.....

NDH, Cobra, instruments, oxygen, logger, winglets on 16.6 tips, new gelcoat, profiled. 970-898-4453 (CO)
<gjk@fc.hp.com>

EGT VALUES AND CARB NEEDLE SETTINGS

For DG Solo Powered Motorgliders

The data in the Maintenance Manual for the EGT values DG-800B is 640' +/-10'C. This value applies for the engine warmed up until the EGT values don't increase any further and is valid for an altitude of 100m above sea level.

If the carb's are adjusted at a higher location the EGT's must be *adjusted to lower values. Subtract 50 per 200m (656') altitude from the value of 640'C. So for an altitude of 1500m (4921')above sea level the limits are 6050C +/-10'C. With this setting the DG-800B may be operated at sea level up to min. 3000m (9842') above sea level.

We will include this information in the manuals with the next revision. The objective for the given values is, that we want to have smooth engine run at least up to 3000 m above sea level (about 5500C EGT at this altitude). If you intend to take off from higher airfields the fine adjustment screw may be turned clockwise to lean the engine. As the fine adjustment screw is a standard Mikuni part, it is not possible to allow more than the given 1/4 turn. If the 1/4 turn is not sufficient for very high altitude airfields, the fine adjustment screw cap may be removed and the needle turned in further, but with this setting the DG-800B can't 4w be operated at low altitudes!

Submitted by Wilhelm Dirks

ATTENTION NORTH AMERICAN TAIFUN OWNERS

I am pleased to announce that the Korff Company has appointed an agent for Taifun parts and service in the US:

Mike Shade, Grob Systems Aircraft Division 1070 Navajo Drive Bluffton, OH 45817 Tel: 419-369-1210 E-Mail: mshade@grobsystems.com

These folks have worked on at least 5 Taifuns (including mine) over the past few years and are efficient and exacting. They stock some Limbach engine parts and have direct access to Taifun parts and tech support from Korff. This should greatly simplify our communications regarding parts and service.

Joe Volmar, Taifunews

H6 Dimona Motorgliders

Plus Parts and Packages Available

We have seven Dimona H36 Motorgliders, as well as new and overhauled engines and a bundle of parts for sale. The Dimonas need refurbishing and the only ingredient is labour and thus making an excellent project for our club members. We are selling the Dimonas at very reasonable prices and including a package of usable parts and a new or overhauled engine for around US\$25,000 inclusive. Mailing address is Geoff Edwards P.O. Box 147, Spring Hill, Brisbane, Australia 4004.

Email: grumpy.air@bigpond.com

NORTH TO ALASKA!! ANY TAKERS??

My wife and I are planning a trip to Alaska with our motorhome and motorglider (ASH 26 E), from Mid-May to about the end of June. I'll fly as much of the way as weather permits; she'll drive the motorhome with the trailer. The anticipated route is through BC to the Alaska Highway, then on to Fairbanks, Anchorage, and finally return via the Alaska Highway, and probably through BC again, though the route through Alberta is being considered. We think it'd be safer and more enjoyable to have at least one other motorglider along. Anyone interested please contact Eric Greenwell (egreenwell@prodigy.net, or 509-943-9065).

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 Email: Utleyb@aol.com Annual Dues: \$20 USA, \$25 International

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Contributors are requested to submit hardcopy type-written 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!***

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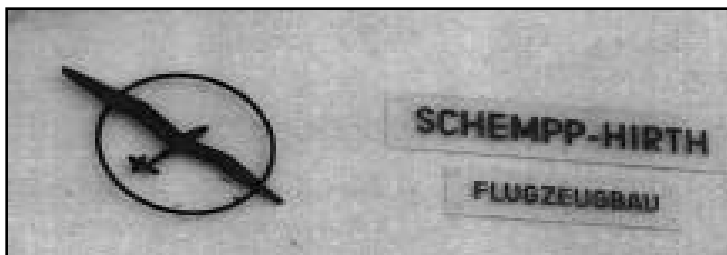
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Auxiliary-powered Sailplane NEWS

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