Auxiliary-Powered Sailplane *NEWS*

The Official Publication of the Auxiliary-powered Sailplane Association, Inc.
Dean Carswell-President • Bruce Templeton-Vice-President
ASA IS A DIVISION OF THE SOARING SOCIETY OF AMERICA

Issue # 72 Vol. XII January-February 2000

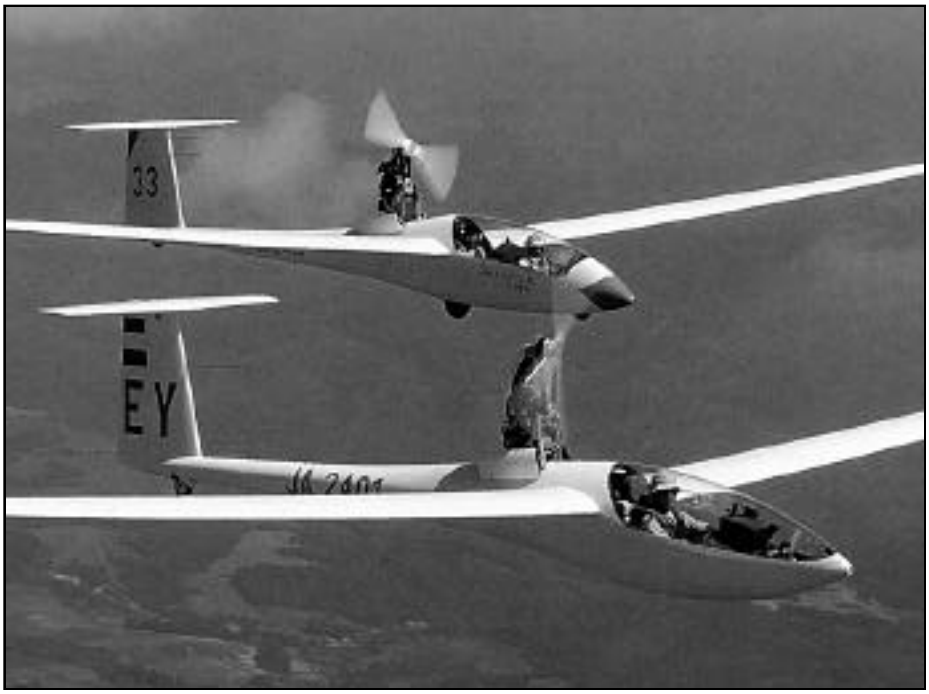
President's Message

As reported in the previous issue of *Auxiliary - Powered Sailplane NEWS*, I have been honored by being appointed President of ASA. As I reflected on that, and more generally on what draws us into and keeps us involved in our sport, I came to the conclusion that, beyond all our individual reasons, the most probable common denominator of the whole thing is that it must be fun. The corollary to that is when it stops being fun, it's time to quit soaring and take up sailing, fishing, or some other activity.

Every year a few of us have serious incidents or accidents with our sailplanes. At that point things very quickly stop being fun, even if those involved are still around to tell the tale. Put another way, Being Safe = Fun. When things cease to be safe, it stops being fun. If at this point you are saying to yourself "Darn! - another safety lecture coming up", and are starting to turn the page. Stop! If you haven't done anything positive or specific recently to promote your own safety, please read on (I know the rest of you will anyway).

We all have engines; the largest group of us have mast mounted retractable self-launchers or sustainers. I want to focus on something practical you can do next time you fly your ship, even if it's in the depths of winter with no lift in sight. Mast mounted retractable engined sailplanes all have one thing in common. With engine off, they are really two different sailplanes in one. One is a nice sleek forty-something to one or better sailplane; the other is a draggy piece of plastic with a performance similar to an early primary glider. The latter is you, immediately after you have wound your motor out, but it fails to start. An engine is great to have, but it can give a false sense of security - a safety net with a gaping hole!

Continued ——————►



This image, courtesy of AIRWORKS Magazine, captures the excitement of flying a self-launching high performance sailplane. A Janus CM flys wing on a DG-400 somewhere over Japan. With engines stowed both sailplanes are potent performers with glide ratios of over 40:1.

When was the last time you intentionally practiced a pattern and landing with the engine out and off? If the answer is not recently, or never, why not try it? That way, when the inevitable happens, you are not attempting to make a landing in a completely new aircraft in which you have only a couple of minutes flying time and experience.

Give it a try - start overhead, and stay in close until you have worked it out. Prepare for this nasty experience, and keep having safe and fun soaring.

On a different subject, the annual meeting of members of ASA will take place in conjunction with the ASA Breakfast at the upcoming SSA Convention to be held in Albuquerque NM on Saturday March 18, 2000. I hope you will be able to attend, and that I shall see you there.

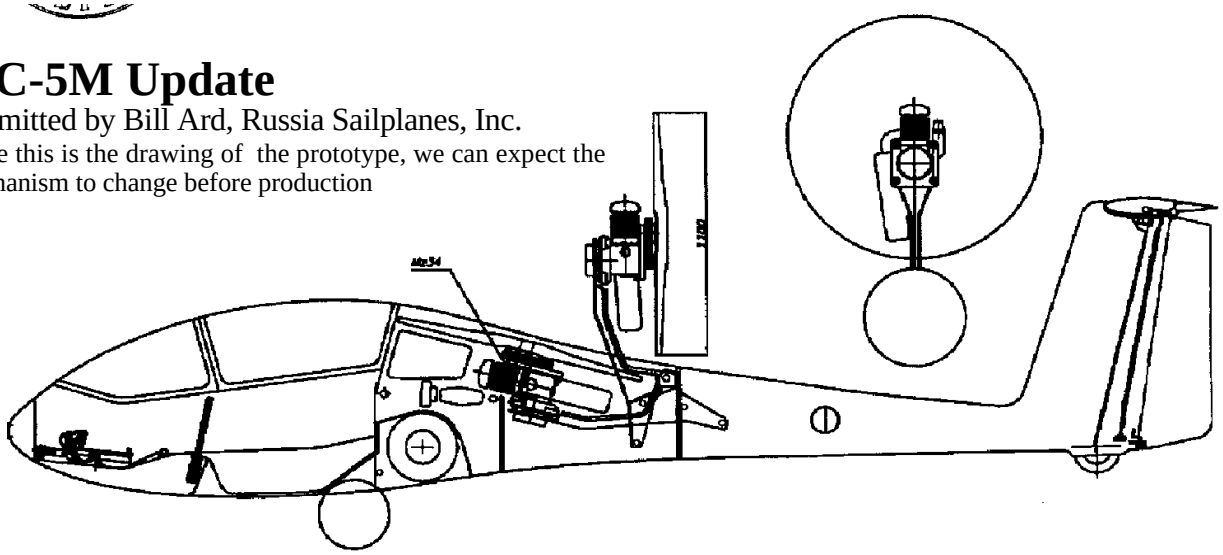
Please see page 3 for the details of the ASA Business Meeting at the SSA Convention. All ASA Members are urged to attend.

Dean Carswell

AC-5M Update

Submitted by Bill Ard, Russia Sailplanes, Inc.

Since this is the drawing of the prototype, we can expect the mechanism to change before production



A RETRACTABLE LANDING GEAR

THE CARBURETED MZ34 engine from Zanzottera rather than the fuel injected MZ35i. The reasons are cost and complexity. The MZ34 is a little over half the price of the -35, with a loss of only four horsepower; also the fuel injection system is complex and requires the fuel lines to be pressurized to 53 psi.

A REDUCTION GEAR DRIVE to greatly increase thrust efficiency. Zanzottera offers 1: 18, 1:20 and 1:22 for various configurations of the MZ34 and the choice will most likely depend upon the prop design. The prototype plans call for a 43 " diameter prop.

FUEL-5 gallon tank, representing about one hr. 20 min. engine run time.

A NEW WING CONFIGURATION- Because of the weight and aft positioning of the engine, it was necessary to reduce the Russia's forward wing sweep by two degrees (hence the new AC-5 designation). This will probably reduce the allowable pilot weight range (without ballast). A new angle of incidence on both the wing and the tail to reduce the drag penalty in the 75-85 knot range and make the Russia a better cross-country penetrator.

5M Specifications

Span-41.3 ft (12.6 meters) ; Aspect ratio-20.6; Est. Empty Weight-352 lbs; Wing loading -(175 lb pilot)- 6.3 lb/sq/ft; Stall-41 kts; Min Sink-150 fpm (43 kts) ;Best Glide Ratio-35:1 (52 kts); Sink Rate @ 70 kts-280 fpm ;Vne-119 kts; Est.Take Off Distance-700 ft Est.Climb Rate-600 fpm; Engine- 313cc Zanzottera MZ34 2-stroke single cylinder , electronic ignition,;Output-26hp at 6250 rpm. Cost-$30,000 delivered to Russia Sailplanes/ USA (Includes airspeed, altimeter, compass, Borgelt Electric Vario, Engine Controls and instruments, shipping and insurance, inspections, documentation and FAA paperwork necessary to fly).

For More Information contact Bill Ard, Russia Sailplanes at:
phone:(406) 586-1560 email: soarmontana@mcn.net
website: http://www.mcn.net/~soarmontana/russia.html

Erratum: In the Jul/Aug 99 Issue we mentioned a certain Mr. Wolfgang Beyer as the designer of the DEI unit installed in all DG powered sailplanes. Wilhelm Dirks reminded us that the DEI is a design by Mr. Utz Schicke who formed his own company after working for DG in the early DG-400 and 500 days. Mr. Beyer designed the BEA automatic extract/retract system for retrofit on the DG-400. He also produces wiring sets for DG sailplanes.

SELF-LAUNCH BOOK AVAILABLE

Over 1,000 of Pete Williams new book Self-Launch! Retractable Engine Sailplanes have been distributed since its 1998 printing. Copies are still available at $29.95 pp USA from FTB 1033 Dresslerville Rd. Gardnerville, NV 89410. 775-265-3877; ftb@pyramid.net

!2000 Motorglider Nationals!

19-26 July, (Practice 17 & 18)

The11th U.S.MotorgliderNationals will be held at Midlothian, Texas (near Dallas) in conjunction with the 1-26 Nationals. The contest will use GPS scoring using national FAI Rules with minor additions for auxiliary-powered sailplanes. Handicaps will be used. Please contact Rick Howell for more information and rules suggestions. Call 972-245-0830 or you can Email Rick at: PatRick HOWELL2@compuserve.com

Time for the Spring Checkup!!

Y2K is here and its time to start thinking about preparing yourself and your bird for the soaring season. Have you:

1. Scheduled your bi-annual flight?
2. Scheduled the Annual Inspection?
3. Checked your tires?
4. Changed plugs and fuel filters?
5. Looked closely at your propeller.
6. Inspected both ends of the brake cable?
7. Had a physical checkup lately?
8. Looked closely at all bungees?
9. Drained and flushed the fuel tank?
10. Reviewed your Check Lists?
11. Checked all pneumatic connections?
12. Made sure the battery is up to par?
13. Reviewed all TNs and ADs applicable?
14. Reviewed your aircraft insurance?

START YOUR PREPARATIONS LIST TODAY!!

Pilot Profile

RUDY ALLEMANN

ASA member Rudolph T. Allemann is a retired Chemical Engineer who lives in Richland, Washington with his wife Mary Ann. He currently flys a DG-400. Rudy soloed in a 1-26 in 1957 and made his first self-launch in 1989 in a PIK-20E. He has 5,900 pilot hours: 5,000 in pure sailplanes, 800 in motorized sailplanes and 100 in power aircraft. He is checked out in twenty different types of sailplanes and won the Standard Class Nationals in 1971 in addition to being the Region 8 Champion several times. He also holds Washington State records for Out & Return Speed and Distance. His most memorable flight was a 540 mile flight out of Marfa, TX. His reason for flying a powered sailplane is the flexibility to soar any day there is lift available.

Auxiliary - powered Sailplane Association
Annual Meeting of Members
Saturday March 18, 2000

NOTICE is hereby given that the ANNUAL MEETING OF MEMBERS of the Auxiliary - powered Sailplane Association will be held at the Doubletree Hotel, 201 Marquette Street NW, Albuquerque NM on Saturday March 18, 2000 at 8.30 am. All members are entitled to attend and vote at the meeting.
(Signed) Bruce A. Templeton, Secretary

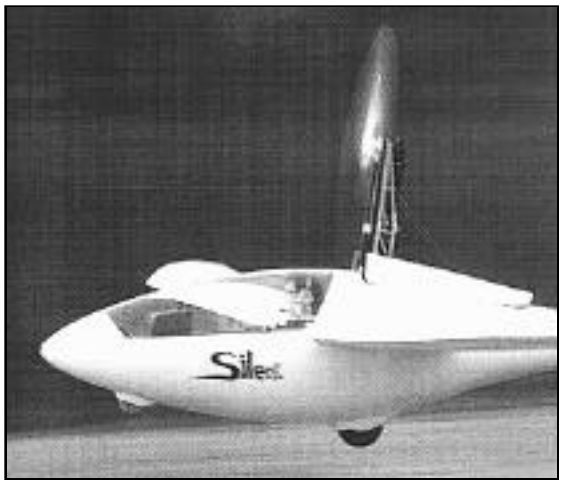
Note: (1) The Meeting will be held in conjunction with the ASA Breakfast at the SSA Convention; members do not require to go to the breakfast to attend the Meeting.

(2) The business of the Meeting will include the election of Directors in place of those retiring. If you wish to nominate a person for election, please make the nomination in writing to the Board of Directors, Auxiliary - powered sailplane Association, c/o 8041 Jordan Lane, Midlothian TX 76065-5956, USA.

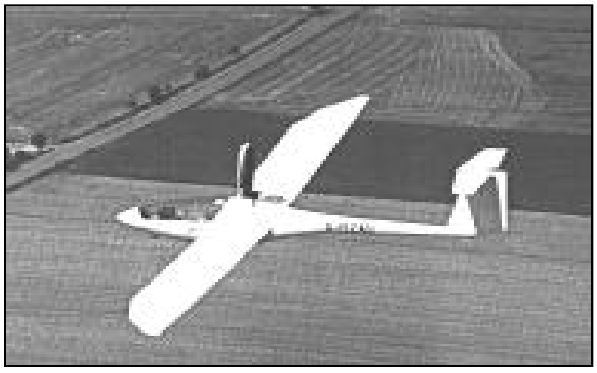
Alisport's Ultralight Motorized Sailplanes

From Italy comes three new ultralight, low cost powered sailplanes, all using the same wing profile with a span of 12 meters (39.37ft). Based on the original Silent UL, a pure sailplane with an L/D of 32:1, Alisport offers a removable engine version, Silent-oP, a retractable engine version Silent-in and an electric powered version Silent-ae1.

Silent-oP: L/D 24, 328' takeoff run, Climb Rate-590fpm, Empty Wt-363lb Max Wt-639lb, 4-cyl Konig engine, folding propeller with ground adjustable pitch, Vne 124mph.



Silent-in:L/D 32, 492' takeoof run, Climb Rate-492fpm, Empty Wt-375lb, MaxWt-639lb, Engine-Single cyl 28hp 2-stroke Zanzottera, Single blade propeller which retracts into the aft fuselage, Vne-124mph.



Silent-ae1: L/D 32, 492' takeoff run, Climb rate-492fpm, Empty Wt-440lb, Max Wt-639lb, Motor-13kW electric, Vne-112mph, battery power provides for a climb to 1950'agl. Battery recharge on ground-20 minutes. Prop mast fully retractable.

More on Silent sailplanes.....Page 7

RECREATIONAL SOARING NOW WITHIN REACH OF MORE PILOTS

" I am not a newcomer to soaring. I have had a power license since 1948 and a glider rating since 1966 and have been reasonably active in both endeavors over the ensuing years. It seems to me that the soaring fraternity has had an emphasis on competitive flying in recent years with very expensive machines priced out of reach of most of us.To me the essence of soaring is simply the joy of finding and centering a thermal then experiencing the sublime pleasure of watching the earth fall away as I quietly levitate higher and higher. The feeling is one of pure elation.

I have now launched into a new adventure and made my first payment on the tst 3 tm motorized sailplane which is now under construction in the Czech Republic with delivery slated for April, 2000. I have been dealing directly with the half owner of the manufacturer via e-mail and am very comfortable in embarking on such a deal. The price is reasonable and the glider is slick in appearance, of medium soaring performance and the motorized performance appears to be very good. The trailer is also reported to me to be very nice. To those who may be interested, I am more than willing to share with my experience in regard to the current building phase, the FAA registration process and the initial flight experience."

Steve Warner
Email: srwarner@aol.com

Steve arranged for complete details to be sent to ASA on the TeST motorized sailplane line. A digest of this information follows.

TeST Powered Sailplanes

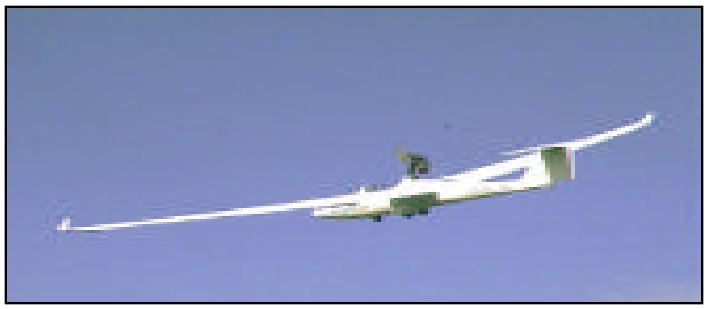
TeST builds 2 models of both pure or powered sailplanes: The Alpin TM & DM. They also offer three Ultralight powered aircraft. The sailplanes are designed to JAR 22 criteria.The basic structures of the fuselage, wing and tail are wood and plywood. Fiberglass is used for the cockpits of the sailplanes and the winglets. Fixed landing gear are used in all aircraft. TeST
offers a wide range of flexibility for the prospective buyer. He can order
a kit or the finished aircraft. He can select the engine to be installed if within the confines of
space, CG, weight and structural limits.

Continued on page 7.....

TST-3 Alpin TM (factory image)

TST-6 DUO Ultralight. (factory image)

TST-8 Alpin DM above and below (factory images)



a safety net with a gaping hole!
Continued

An ASW 24E lifts off from a field in Germany. Designed by Gehard Waibel, it was Schleicher's first self-launching retractable engine 15-meter sailplane.It is powered by a Rotax 275 single cylinder engine and has a glide ratio of 44:1.
All images this page courtesy AIRWORKS Magazine.

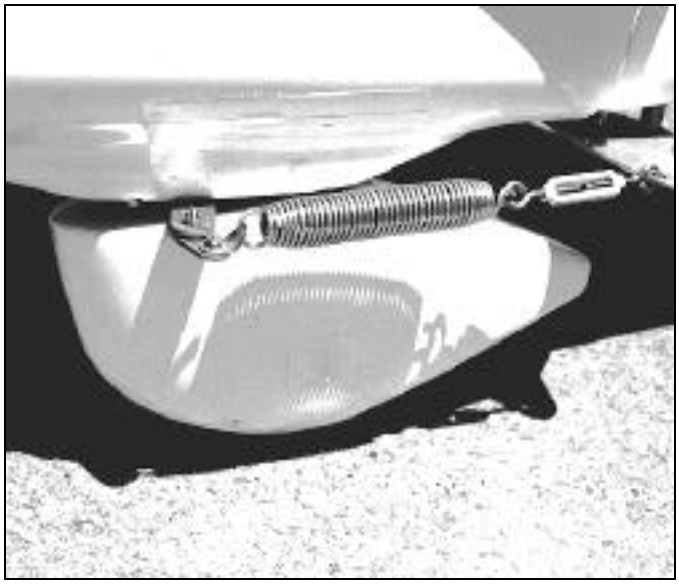
A PIK-20E launching from a field somewhere in Germany. A popular and reasonably priced self-launcher, the 20E has provided an entry point for many pilots to own and fly a motorized sailplane. A varient of the PIK-20B, it made its maiden flight in October 1976. 127 were built including ten 17-meter PIK-30 versions.

A squadron of Scheibe SF 25C Falkes. It can be ordered in various landing gear configurations including tail dragger, tricycle, or single fuselage wheel with wing wheel out riggers. Scheibe has been building motorgliders for over 25 years with over 1,500 Falkes produced. 25 gliding schools in Germany use the Falke as a basic glider trainer. It remains docile when taken to the extreme, is easy to fly, thermals well and has an L/D of 24:1 Prices vary due to engine selection and options but a well equipped Falke ex-factory runs about $78,000.

A Steerable Tailwheel for the Nimbus 3DM

by Carl D. Herold, S/N 15, N73AB

During the spring of 1997, I purchased a Nimbus 3DM, self launch two place motor glider manufactured by Schempp-Hirth. This glider comes from the factory with a non steerable tailwheel. Thus it can't taxi without a tail dolly and a wing walker. I fly it out of the Minden-Tahoe airport, where there are over 165 gliders tied down on the ramp during the Fourth of July.With so many gliders, my nearly 84 foot wingspan glider needs to depart early in order to miss the tangle and not block the staging area. This glider needed a steerable tail wheel which allows taxiing under power on the ramp without a wing runner. With the help of John Neel (designer) and Larry Mansberger (tail wheel fairing fabricator), I now have a motor glider which can taxi without much help from ground crews. The four 3DM motor gliders in the USA now have similar installations. We can each taxi and depart airports without a ground crew.



The photo shows the steerable tailwheel is attached by the same pin that held the fixed pneumatic tail wheel. The steerable tail wheel operates similarly to the Scott Tailwheel. There are two springs which drive the tail wheel from the rudder. When the side load gets above a threshold with a full rudder input, the tail wheel breaks out and becomes fully castering, a great ground handling benefit. In addition, I installed two Nimbus 4DM low drag wing tip wheels out near the wing tips. It took a few flight tests to determine the appropriate spring tension needed for 15 knot cross wind takeoffs. The minor drag addition is offset by having independence from ground personnel, especially during the week when few glider pilots or crews are available. When I want minimum drag for records, it takes about 10 minutes to remove and replace the regular fixed pneumatic tailwheel.

The glider will taxi, self launch, and land from Minden at 4720 feet msl with a cross wind component of up to 15 knots. I do not need a wing tip runner unless I am taxiing this 1820 pound glider in the staging area. Take off is just about the same as before, except the pilot must taxi forward about 25 feet to insure the tailwheel is aligned, locked, and tracking. When the tailwheel is tracking, this eliminates pirouettes on the runway. A last benefit of the steerable tailwheel is in the last several hundred feet during roll out and stopping, I have full control to steer the glider making 90 degree controlled turns. Once the tail is on the ground, one still needs to hold the tail down by maintaining back pressure on the stick, for maintaining positive ground steering. I have logged over 100 successful takeoffs and landings with this steerable tailwheel.

INTAKE FILTERS FOR THE DG-400

by Rudy Allemann

The Newsletter had some discussion in 1988 of the need for air filters on the DG-400 but as far as I know, nothing came of it. In 1999 I successfully installed air filters on my DG-400 and have observed no loss of power. The engine with the filters installed seems to throw much less oil onto the tail. I used two oval, offset K&N filters. Catalog Number RU-2450, part number 40-8456, available from a motorcycle shop. I brazed 3/4" long steel tubing risers to 1/8" steel mounting plates that were match fitted to the top of the Tillotson carburetors. The tubing I.D. was just slightly larger than the carburetor intake, and the wall thickness was about 1/16". Two 1/16" Teflon gaskets were also made and used. The filters are rubber based and clamp onto the tubing risers. Offset fore and aft - and since they are slightly tapered - they clear the engine mounting plates. The main problem in doing the modification was grinding away a little of the tubing and the 1/4-20 mounting screws to obtain enough screwhead clearance to mount the plates. The plastic intakes that were removed had molded insets to give this clearance.

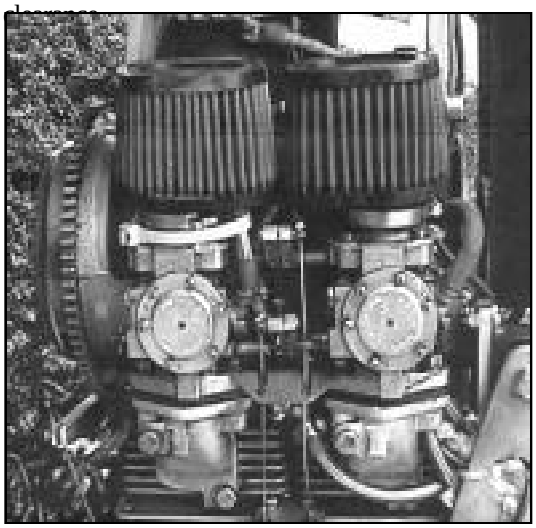


Image courtesy Rudy Allemann. For more info, contact him at 509-375-0722

Ventus 2cM Propeller Pylon Bolt Loss

During self-launch on August 8, 1999 at the Italian 18-Meter Championships in Rieti, the contest director observed the prop pylon on pilot Pasin's V2cM was swinging back and forth on the roll axis. He radioed the pilot to abort the launch which he did just prior to liftoff. Investigation found one of the two bolts that secure the pylon to the fuselage walls to be missing and was discovered loose in the engine bay. The oscillation at the pylon's top was about 10 inches causing damage to other carbon fiber parts. The pylon was held only by the other bolt and the steel cable. The manual says this bolt is to be secured by Locktite and paint marked.

Submitted by ASA Member Alvaro de Orleans-Borbon

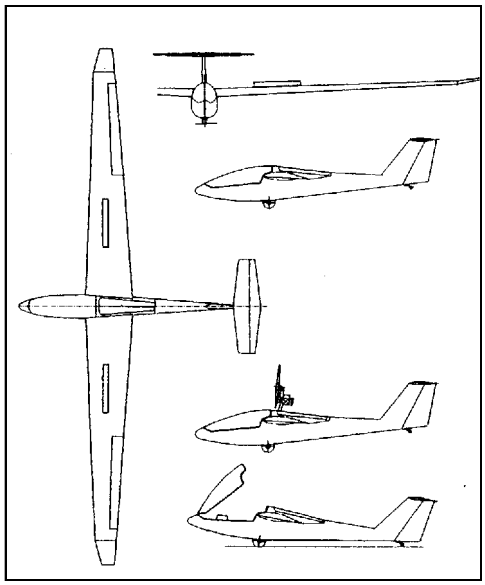
powered sailplane Association, c/o 8041
Jordan Lane, Midlothian TX 76065-5956, USA.

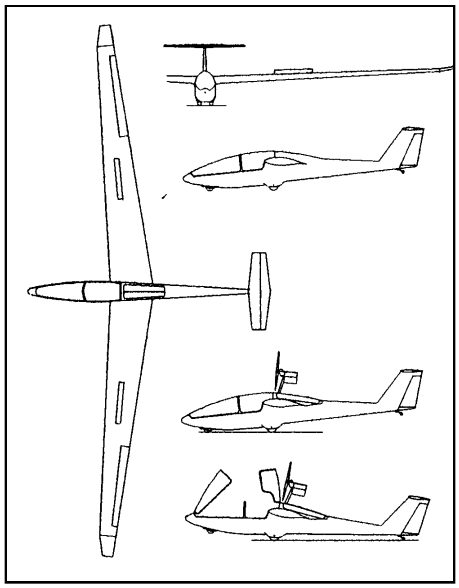
TeST Self-Launcher SPECIFICATIONS

	TST-3 Alpin TM	TST-8 Alpin DM
SPAN	45.3'	51.2'
SEATS	1	2
EMPTY WT	430LB	562LB
MAX WT	650LB	958LB
WING AREA	115.7 SQFT	142SQFT
Vne	112MPH	112MPH
GLIDE RATIO	33	28
ENGINE	ROTAX 447	ROTAX 503
HP/RPM	40/6500	46/-------
COOLING	AIR	AIR
TAKEOFF RUN	656'	820'
CLIMB RATE	590FPM	394FPM
PRICE*	$17,765	$26,190

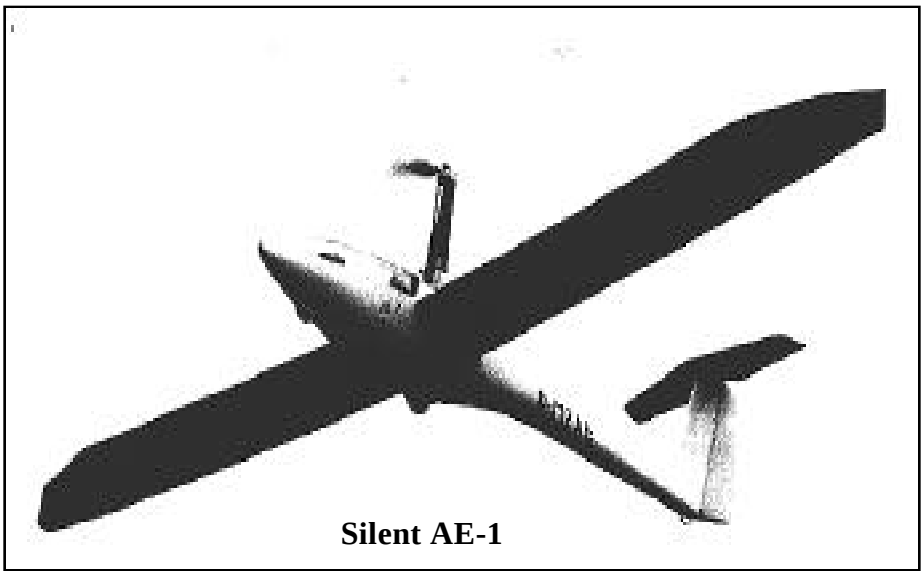
*FOB FACTORY. INCLUDES FLIGHT AND ENGINE INSTRUMENTS. WILL VARY WITH EXCHANGE RATE

ENGINE INSTALLATION IN THE TST-3
This is an aircooled 2-stroke Rotax 447 engine developing 40hp at 6,500 rpm. It uses a Czech-made membrane carbureter. orginally used in some Russian military device. Source: Zbynek Jaros, TeST.





For a USA pilot's viewpoint of the TST-3, contact Ted Ruminski 740-695-9496, (OH).
Email: ruminski@1st.net. FOR A DESCRIPTIVE BROCHURE CONTACT :
TeST spol. s.r.o. Husova 1559, 66601 Tisnov, Czech Republic
Tel/Fax: 011-420-5-749073: EMail: zjaros@chepos.cz



Silent AE-1

Silent Sailplanes

continued from Page 3

All models have fully automatic control hookups and are constructed of composite materials including carbon fiber. The Silent-in version's engine has an electronically controlled fuel injection system. The AE-1 electric powered version has a two-bladed 6.3'propeller driven by a toothed belt. Upon retraction, the propeller blades are folded down together. This is the world's first self launcher with a retractable engine which offers noise free launches. According to the factory all models are "unbeatable climbers" better than unballasted 15-meter ships.

For More Information Contact:
Alisport SRI, Via Confalonieri 22, Cremelia (LC) ITALY
Tel: 011-39-9212-128, Fax: 011-39-9212-130

ASA Mission

The **A**uxiliary-powered **S**ailplane **A**ssociation, Inc. was founded as SLSPA 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

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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!**

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Contact Pete Williams for Display Ad sizes and rates.

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January-February 2000 NEWSLETTER

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