

Schempp-Hirth Ventus CM Self-Launching Sailplane



This 15 meter ship comes equipped with wing tip extensions to 17.6 meters. In this configuration empty weight is 661 lbs. Max TOW is 948 lbs with a wing loading of 8.76 lb/sq/ft. A SOLO 2-cylinder, 2-cycle aircooled engine provides 26 hp at sea level standard conditions. Prop drive is belt ribbed providing a 2.3:1 reduction for 6,500 rpm maximum takeoff rpms. Engine extension/retraction is via electric spindle drive. Due to the swing hinged vertical folding propeller, the sink rate with engine extended and not running is 200 fpm. Best L/D is 48-49. There is no electrical generator system, however an electrical starter is installed and two battery systems are used. One for the engine deployment and one for electrical instrumentation. On a standard day ground roll on a level grass runway is 919 ft with clearance over a 50 ft obstacle at 1,608 ft and at a climb rate of about 400 fpm. A paved takeoff surface shortens the takeoff by 13% according to the factory handbook. USA delivery price fully equipped including trailer is in the vicinity of \$110,000.

Self-Launching Sailplane Pilot's Assn. NEWSLETTER

JULY~AUGUST 1993

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Lead Acid Gel Cell Battery Characteristics and Upkeep...

Per David Foster, Sailplane and Gliding June-July 1993:

1. L-A Gel Cells do give off ignitable gases so do not enclose them in airtight areas.
2. Do not mix batteries of different capacities or ages.
3. Discharge rate is about 3% per month.
4. 1,000 charge cycles can be expected. If kept on trickle charge, the life span is 4-5 years.
5. Heat kills batteries.
6. The charging current should be regulated to a maximum of 13.5-13.8V (12V system). Continuous trickle above 13.8V will damage the battery.
7. Storing a L-A Gel Cell battery in a discharged condition will lead to an early death.
8. Solar chargers have constant voltage characteristics and can be used. If no regulator is used, place a reverse current blocking diode in the + line to prevent voltage feedback into the panel when the sun goes down.

Ed. Note: The positive plates of a battery tend to sulphate quicker if a constant trickle charge is used. To prevent this, turn the charger off now and then or use a charge regulator that automatically shuts off when the voltage reaches between 13.5-13.8/V. A Bobier M-2 solid state regulator is ideal for this purpose when using a solar panel to charge the battery. Or, the M-2 can be located downstream of a regular plug-in wall charger. The secret is to not let a battery be constantly trickle charged.

1993 Auxiliary-Powered Sailplane Championships Results...

Eight contestants flew seven out of 10 days at Hobbs, NM between June 20 and July 1, 1993.

| Final Pos. | Name/AC/State | Daily Standings | Final Pts. |
|---------------|----------------------|--------------------|---------------|
| 1 | Shilen/Ventus CT/TX | 2/1/3/1/1/2/1 | 6636 |
| 2 | Howell/Ventus BT/TX | 1/6/5/2/5/4/4 | 5661 |
| 3 | Estrada/Ventus CM/FL | 7/4/1/5/2/1/6 | 5482 |
| 4 | Pollard/Ventus CM/FL | 5/2/2/4/7/6/5 | 5415 |
| 5 | Nelson/Ventus CM/FL | 4/3/8/6/4/3/2 | 5257 |
| 6 | Utlely/Ventus CM/FL | 3/8/4/3/3/7/3 | 4898 |
| 7 | Clark/DG-400/17/GA | 6/5/6/7/6/8/7 | 3954 |
| 8 | Shurmeier/PIK-30/CA | 8/7/7/8/8/5/8 | 3624 |

Speed Only Post was flown six out of the seven days with Day 6 an assigned speed task of 157 miles. All sailplanes took daily tow except the DG-400 and the PIK-30. For next year's meet, discussion centered around holding the contest in Winterhaven FL in May or with the 15 Meter class in Livingston, MT July 27-Aug 6 or with the sports Class in Siskiyou, CA July 12-21.

Dehydration and the Sailplane Pilot...

Dehydration is a continuing threat to sailplane pilots. Consider a typical 3-4 hour flight:

1. At least 2 hours in the sun and wind prior to launch including rigging, preparation and some physical exertion.
2. A large canopy that lets lots of sun in.
3. Concentration on pre-flight checks, taxi, takeoff, climbout and establishing the ship in the first thermal.
4. Map reading and cockpit instrumentation management.
5. Cruising and looking for thermals.
6. Concentration during thermal entry and enroute climbs.
7. O2 management.
8. Communications management.
9. Final glide preparation and entry.
10. Final glide adjustments and revisions.
11. Pattern entry, approach, landing and rollout.

During the above events at least 2 quarts of water should have been consumed. If not, you are flying in a dehydrated condition. If you reach for a beer after the flight, you will be further dehydrated. What are the symptoms?

- a. You are not particularly thirsty and a small sip of water seems enough.
- b. Discomfort, fatigue, sleepiness, dizziness and a dull headache. If you feel overly fatigued after a flight, your body is in a state of dehydration. Alcohol, coffee, tea and soda cause dehydration. If you have experienced in-flight or post-flight cramps—suspect dehydration.

What to do?

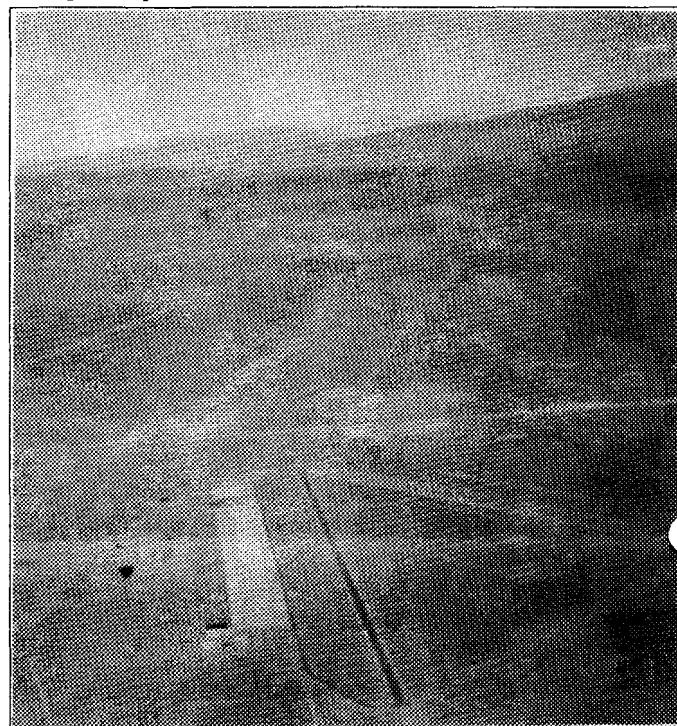
- A. Drink plenty of cold water the morning before the flight.
- B. Continue drinking water as you rig and prepare for the flight.
- C. Always wear a loose fitting long sleeve shirt and long trousers on the ground and in the air. Wear a circular bill cap that gives shade all the way around.
- D. Carry at least 2 gallons of water in the aircraft and drink regularly while in flight even if not thirsty.
- E. Remember O2 tends to cause dehydration and drink accordingly. An O2 cannula permits drinking.
- G. If a headache persists or you feel sleepy—terminate the flight and head home. Any loss of peripheral vision signals a form of

heat prostration. Tunnel vision and extreme sweating demands an immediate landing.

Once body fluid loss starts the dehydration process, it takes a large volume of fluid intake to replace the amount of fluid originally lost. When the fluid deficit reaches 3% (2 quarts), there is a 20% decrease in aerobic performance and a 35% decrease in tolerance to muscle fatigue. Drink 4-15 quarts of water a day. If you have not urinated at least once during a 3-4 hour flight, you are not drinking enough water.

SLSPA Flyin-Tonopah Nevada...

Twelve sailplanes including 6 motorized ships gathered at the Tonopah airport between 16-24 June.



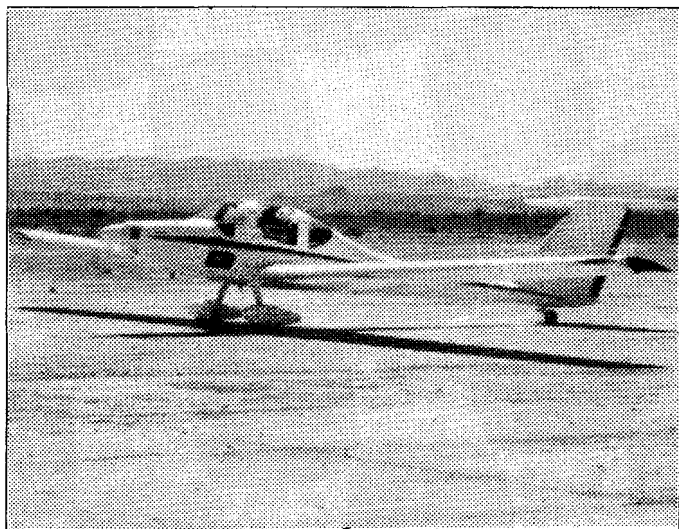
Aerial of Tonopah Airport Looking North. Large white concrete mat area is 500X500' and can be used for takeoffs and landings.

| <u>Aircraft</u> | <u>Pilot/Crew</u> | <u>Hometown</u> |
|-----------------|--------------------------------|------------------|
| DG-400 | Dan Matzke | Palmdale, CA |
| DG-400 | Pete/Charm Williams | Gardnerville, NV |
| PIK-20E | Wayne Martin/ Darryl Foster | Gardnerville, NV |
| PIK-20E | Bob Moore | Richland, WA |
| DG-600M | Bill Seed, Jr. | Hutchinson, KS |
| Grob 109B | Ted Off/Ken Clunis | Ventura, CA |
| Kestrel 19 | Tracy Carlson | Henderson, NV |
| Speed Astir | Ralph Biesemeyer | Las Vegas, NV |
| AWS-20 | Jan Driessen | Yreka, CA |
| Pegasus | Rich George | Whitmore, CA |
| BG-12B | Neville Robinson | Las Vegas, NV |
| Jantar 2 | Jim Madison | Las Vegas, NV |

The six pilots above were based out of Jean NV and members of the Las Vegas Gliding club. Rod Hicks crewed for all of them.

Bill Seed has been visiting Tonopah for the past 3 years and the Jean Nevada group regularly flies for a week out of Tonopah in mid June. Pete Williams has been flying at Tonopah for 2-3

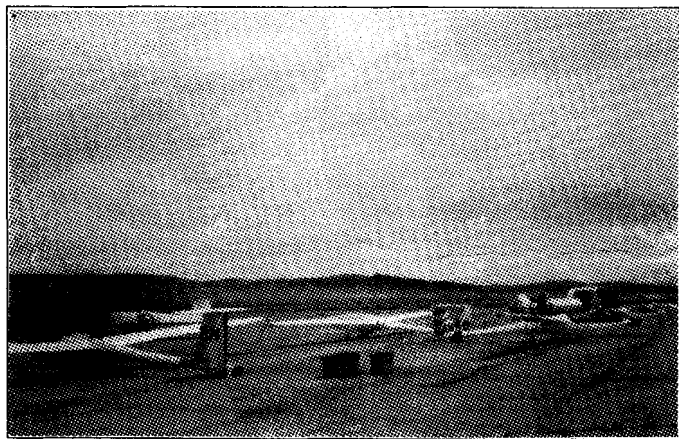
weeks in mid summer for the past two years. Dan Matzke soared into the airport from Tahachapi, CA and made the return flight without any problems and no engine use. Dan is a psychologist and professional photographer who soars with two cameras to record some great wide angle shots shooting across the cockpit. Hopefully we will have some shots of his flights.



Ted Off's Grob 109B

Ted Off and Ken Clunis flew the Grob 109B in from Ventura, CA (Camarillo) and soared a respectable amount of the route. Ted self-launches but always returns to the field as a sailplane with engine off and prop feathered. (One day, 40 miles to the north I found my DG-400 under the 109 in a thermal. We went thru 15,000' at over 9 kts and I have a new respect for the engine off climbing ability of this motorglider. Ken Clunis was flying the 109 at the time, Ed.) Ted gave just about everyone a ride in the 109 including airport manager Mark Peterson and several townspeople.

Bob Moore trailered in all the way from Richland, Washington. While he enjoyed the high, fast flights to the north, his trip was marred by a smoldering electrical circuit on the ground while solar charging his battery. No significant permanent damage done, as he continued to fly but he indicated his generator circuit may need replacing. Pete Williams and Wayne Martin soared in the 156 mi. from Minden.



Line area with five self-launchers.

The weather was somewhat windy with a broken overcast for a few days, but there were 3-4 days of excellent soaring with altitudes up to 18,000'. Williams returned to Tonopah in early July and on the 11th submitted a claim for a national MG speed record for 300km triangle at 85.56mph. Bill Seed will remain at Tonopah until early August to continue seeking record straight distance and speed triangles. (In comparing speeds attained for

a 300km triangle between Minden and Tonopah, I have found the Tonopah triangle to be at least 10mph faster. Cloud streeting is possible even if the sailplane is 8-10,000' under cloud base. The thermals are strong and rough. I saw 12.5 kts on the average. Ed.)

Tonopah is a user-friendly town and the soaring scenery on courses to the north is fantastic. There are thermal springs in the area, a championship golf course at Round Mountain (60 mi north) and excellent trout stream fishing north of the ghost town of Belmont. You know you are really away from it all when a coyote casually trots down the taxiway as you taxi out for a launch!

Rotax 501/505 Engine Overhaul Kit Available...

Bob Marshall, the U.S. Rotax Distributor advises he will offer both parts kit and parts and labor to overhaul subject engines.

The kit contains a complete new main crankshaft with connecting rods installed; piston and rings set; all new bearings, keys and seals for\$1,125
FOB Brentwood, CA

Bob is a certified A&P and will overhaul the engine including the parts kit above plus labor for\$1,500
(Engine boxing and shipping costs additional.)

Bob advises engine run-in is the user's responsibility and this O/H is for non-type certificated (Experimental Category) aircraft. An A1 signoff is required for type certificated aircraft. If the engine is returned to the factory in Austria, it will be dyno run-in and certified to comply with JAR 22 and as such is acceptable to the FFA as a type certificated aircraft. Turnaround time is 90 days minimum.

For more details contact Bob Marshall at 510-342-3878/CA

WANTED:

Partner for DG-500 motorglider arriving Spring 1994. Based at Montague, Truckee and Air Sailing (Reno). Contact David R. Volkmann 916-246-7559/Home or 916-223-2585/Work.

FOR SALE:

DG-400 S/N4-133 Airframe-500 hrs Engine 71 hrs. Full instruments and Cobra Trailer...\$62,000
Jim Miles 808-395-1971/Home 808-533-4128/Work

Nimbus 2M with Rotax 505 TTA 600 hrs Engine 10 hrs. Dittel, Rico, Ball, CHT, Tach, Tinted Canopy, Disc Brake, Steerable Tailwheel, Tip Wheels, Eberle Trailer. Experimental Cat. license. If you have ever wanted to get into a 48:1 powered sailplane at an affordable price, THIS IS THE SHIP at \$35,000! Bob Marshall 510-634-2310 (CA)

DG-400 S/N4-116 TTA 593 Engine 62 hrs. Original owner. Always hangared, Seldom trailered. Westerboer. Bohli, Wing fuel tanks. All TNs. Komet Trailer. New DG-800 coming.
Jake Van Dyke 314-821-5015 (MO)

Nelson Hummingbird This is Ted Nelson's 2-place ship in flying condition. 54' span; Nelson aircooled 45hp 2-cycle engine; complete electrical system including generator and starter, FFA approved. Climbs at 350 fpm at a takeoff weight of 1,200 lbs. L/D 29:1; \$50,000 or will consider trade for Cessna 182. Contact Tom Stowers at 702-782-4944.

DG-600M/18m June 92 manufacture; TTA 65 hrs/Engine 7 hours; VP6E/GPS; Dittel Radio; Aerograf Baro with Phototime Camera; Tinted canopy, Solar cells, Cobra Trailer and many extras. New DG-500 coming. FAX Van Caelenberg (Belgium) 011-32-53-7785