



# SIERRA SILENT SOARERS

NORTHERN NEVADA'S R.C. SAILPLANE & ELECTRIC FLYERS CLUB

## LETTER FROM THE PRESIDENT:

MARCH/APRIL 2002

Hello all,

As promised, here is part two of my review of the Hobby People's WACO biplane. When last we left our intrepid flyer he was about ready for a test flight of the newly completed aircraft. On the weekend prior to the Mid Winter Electrics I took the plane down to the Stagecoach dry lake for its maiden flight. After taking a little time to screw up enough courage, I got the plane ready, advanced the throttle, started the take-off run and ground looped the plane resulting in a broken wing strut, broken battery tray, and bent/loose landing gear. Not bad for about 5 seconds of motor run time and less that 6 inches of altitude! Lacking the tools and glue for repairs, I put the plane back in the car.

When I got home I made some new struts out of some real plywood, replacing the wondrous wimpy wood that came with the kit. I also discovered that the aluminum landing gear was about as rigid as the wondrous wimpy wood used for the wing struts. I also discov-

ered that the area where the landing gear attached was also quite weak. So I bent the landing gear back into shape giving the wheels a little more toe-in and reglued the landing gear wood. It is now only one day before I was to leave for San Diego, so I took the plane out to a unused dirt road near my house. This time the plane took off and flew around with plenty of power. I did discover several things though. It had a pretty nasty tip stall and it wanted to fly pretty fast. And like a lot of biplanes, it glided a lot like the space shuttle. After about 3 minutes I lined up on the dirt road and came in for a pretty good landing which again resulted in slightly bent landing gear and broken wood around the landing gear mount. Arghhh!! This time I fiberglassed more around the landing gear area.

I did take it to San Diego but didn't fly it as it was pretty breezy and I didn't want to fly it into the crowd during take off. I did fly the Radar quite a bit until it was mid-aired by a 8 lb plane!! After the pieces fluttered to the ground, the plane I hit came in for a landing a ran over the pieces of the poor Radar!! The plane that clobbered me had only suffered a light tear in

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### S3 OFFICERS FOR 2002:

- President . . . . .Adam Kremers
- Vice President . . . . .Dave Hagander
- Secretary . . . . .Ron Marston
- Treasurer . . . . .Jim Brady
- Safety Officer . . . . .Lyn Disbrow
- Newsletter Editor . . . . .Ron Marston



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## LETTER FROM THE PREZ (CONT'D)

the covering and another small tear when it ran over the wreckage that used to be my plane.

OK back to the WACO saga. Well maybe the third time would be the charm. I took the biplane to Stagecoach just last weekend to give it another go. I managed to take off twice and fly around for about 5 minutes. I did discover that I'm not really fond of the plane's flight characteristics. I think it would fly much better if it was a pound lighter. On the third take off I ground looped AGAIN and bent and broke the landing gear loose AGAIN. I haven't looked at it to see what broke this time. It definitely needs different landing gear and a more thorough fibreglassing of the landing gear mounting area. So in conclusion.....does anyone want to buy a slightly used WACO?



Adam's ill fated project

Guess it's time to get the glider ready, remember our first contest is this month.

See you at the field.  
Adam Kremers

## TREASURER'S REPORTS

Period ending February 4, 2002	
Opening Balance:	\$1348.51
Income:	
2002 dues	\$18.00
Hagander donation	\$14.00
Total Income	\$32.00
Expenses:	
Reimbursement Lee Cox postage	\$15.00
M.O. terry Bratton Sapphire	\$300.90
\$300 to Ron Marston for Sapphire	\$300.00
Total Expenses	\$615.90
Closing Balance:	\$764.61

Period ending March 5, 2002	
Opening Balance:	\$764.61
Income:	
Raffle Ticket Sales	\$933.00
Total Income	\$933.00
Expenses:	
Round Table Pizza	\$175.00
Reimbursement Marston postage	\$66.00
Hagander reimbursed trophies	\$15.00
Kremers reimbursed for 010	\$142.00
Total Expenses	\$398.60
Closing Balance:	\$1299.01
Submitted by Jim Brady	

## MINUTES OF THE FEBRUARY 2002 MEETING

The February meeting was the Annual Awards Banquet/Pizza Party/Raffle. There were no minutes taken, because it was not an official business meeting, so here is an unofficial report.



The pizza party/award ceremony/raffle

The meeting was well attended, and everyone seemed to have a good time. Pilot of the year award was given to Dave Hagander, with 1st runner up going to Oliver Lieder. Most improved pilot went to Ron Madison, and three perfect



Dave Hagander gets Pilot of the year





Bill giving his Order of the Arrow trophy to Dave one year late

contest attendance awards were given to Lee Cox, Oliver Lieder, and Jim Brady. The Order of the Arrow award was given to me (Ron Marston) by Dave, who made a very cool "glider in a beer bottle" trophy. Dave also won the Wolf Herth memorial contest.

After much consumption of pizza, beer and soda, the raffle started. I can't remember who won every prize, but here are the big ones;

- Sapphire contest ship - Pete Casti
- Spirit Elite ARF - Jim Brady
- Astro 010 - Pete Casti and Andy



Pete Casti after the raffle, holding the tickets he didn't win with

There were tons of prizes, and lots of people won something, but Pete walked away the clear raffle prize king. Of course, I believe he did purchase \$100 worth of tickets.

All in all an excellent end of year party.

Ron Marston



Ron madison gets Most Improved Pilot

### MINUTES OF THE MARCH 2002 MEETING

Meeting was called to order at 7:44 pm.

Jim gave the Treasurers report (see above), and it looks like we actually came out slightly ahead from the party/raffle. Raffle expenses totaled \$765.00 and ticket sales totaled \$933.00, so we came out \$160 ahead.

Correspondence:

Chris Adams had some LSF info to pass along.

Old Business:

Adam sent charter and insurance info to Norm Evans, owner of the field in Washoe Valley.

New Business:

The 2002 contest schedule was set and CDs were chosen (see elsewhere in this newsletter).

Jim and Lee and ron Brown will pursue making new cables with connectors for the winch batteries.

The club needs new Business Cards. I will do the artwork and Bill will print. New posters to put up at hobby shops also need to be done.

More discussion about non-profit status.

Doesn't seem to be any reason not to go for it.

Meeting adjourned at 8:50 pm.

Respectfully submitted by Ron Marston



## MINUTES OF THE APRIL 2002 MEETING

Meeting was called to order at 7:35 pm by Vice President Dave Hagander, who was filling in for Adam, who was out of town.

Jim gave the Treasurers report for April 2002:

Opening Balance	\$1299.01
Income	\$507.00
Expenses	\$155.00
Balance	\$1651.01

Old Business:

Lots of discussion about a new trailer. Adam's friend Garth can help make a box trailer for about \$700. We will look into it further.

Jim's battery wires/connectors worked well. He will make one more set.

New Business:

Please keep personal emails personal (don't share with the rest of the club).

We discussed policy for rescheduling contests. All decided it should be up to the discession of the contest CD. Oliver made a motion to that effect and it passed.

Ron Marston and Bill will try to upload the S3 website to Bill's server.

Oliver suggested we purchase a 10' x 10' canopy he saw at Costco. After some discussion Bill made a motion to purchase it, Lyn seconded the motion, and it passed. Cost was about \$200.

Pete suggested we consider a club road trip to Black Rock or Los Banos. Seems like a good idea.

Meeting adjourned at 8:33 pm.

Respectfully submitted by Ron Marston

## AIRPLANE REVIEW BY OLIVER LIEDER

### **Smart Mini-Hotliner**

Smart Statistics, as Flown:

Motor: Aveox 1010/1Y with 4.4/1 planetary gearbox

Controller: Aveox L260C

Motor Battery: Sanyo CP1700 Zapped 10-cells

Static Current draw: 70+ Amps

Prop: Graupner Cam 14x9.5 folding

Servos: Aileron, stock; Ruddervators, CS20s  
Receiver: JR R600 with case  
Receiver Battery: Sanyo 720 mAh NiMH AAA 4-cells  
Aileron throws: 3/8" up and 5/16" down measured at the root of the ailerons  
Elevator throw: 1/8 inch up and 1/8 down  
CG: 1.875" from leading edge measured at the root (Tongue not included)  
Weight: 44.4 oz

### **Background:**

Background:

The Smart is an all molded mini hotliner with a wingspan of 54-3/4 inches. It is manufactured by Gerasis in the Czechoslovakian republic. Hobby Lobb sells the Smart for \$280 but they blew them out last year for \$180. At least three guys in the club got in on that deal. I paid the high price for mine since I bought mine two years ago. I bought the Aveox motor system for it about a year later and finally finished it a year after that. Good thing it was an ARF or 10 more years may have passed.

### **Construction:**

What construction? It's an ARF. Even the aileron servos come pre-installed. The only remaining things to do are to install the elevator linkage and servos, install aileron horns and linkage, put connectors on the pre-installed aileron wires, screw the motor into place, and connect the receiver and controller.

### **Setup Notes:**

Since the Smart did not come with instructions, I had to guess on the CG. I started it out at 1.875" (27% of the root cord) from the leading edge to be safe and found that this felt too far



Smart hotliner





Oliver working on his Smart at the March contest

forward. I'm going to move it back about 1/8 inch at a time. It feels like it can go back at least 1/4". The aileron and elevator throws that I've listed above are programmed as my low rates. My high rates, for more aerobatic flight, are set 30% higher for the ailerons and 20% higher for the elevator.

### 1st Flight:

Holy Bleeeeeep!!! Can you say ballistic? I think my first climb out to what appeared to be over 1000 feet took about 6 to 7 seconds. I launched the plane with the throttle set at about mid position because I feared torque roll. No problem. It immediately began a smooth level-winged climb and accelerated quickly. I fire-walled the throttle before the plane was even 100 feet from me and it leaped away as if I had set its tail on fire.

I was in awe and forgot all about being nervous as I marveled at its ability to climb vertically without any noticeable slowing. I kept watching for the plane to slow down because I thought it would run out of momentum. Well, momentum didn't factor into the equation, this baby just flat out kicked. I guess 3/4 horsepower at the prop is enough to pull 44 ounces straight up. I killed the throttle and rotated the plane over to horizontal to check the trim. I ended up pulling the elevator trim all the way back to keep the Smart from burning up on re-entry. Once trimmed, I found that it glides around at about 50 to 60 MPH and doesn't like to be slowed down. It doesn't indicate thermals well either. The glide appeared quite flat since it took a few minutes to loose about half my initial launch altitude.

I slowed it down to check its stall and found it was gentle with an almost predictable drop in

the nose or wing with a quick recovery. I only flew the Smart with the elevator rate set on low and found it to be sufficient for now. I'll experiment more with the elevator rate after I get the CG dialed in a little better. I performed rolls with the ailerons in both low and high rate mode. Rolls were axial and at a rotation rate of 540 degrees/sec on low rate and much faster on high. Both settings worked well, though I spent almost the entire flight on low rate. Loops were easy and clean. I ended up flying for about 15 minutes mixing aerobatics with cruising. I don't remember how many climb-outs I had, but I think it was around ten 4 to 5 second climbs.

On my final vertical climb the motor began to pulse even though I was still climbing vertically. This is a problem that I still need to address. The Aveox controller pulses the motor when it detects that the battery voltage drops by a certain amount from its starting voltage. The problem with this is that a battery that first comes off a peak charge is going to have a very high terminal voltage without a load present. When you're pulling about 70 amps from the battery, its internal resistance will cause its terminal voltage to drop and cause premature shut down of the motor even though you may have only used about half the capacity of the battery.

Landing had me a little worried since I was flying in an area with a somewhat confined landing area. I set up my approach with the Smart coming toward me about 500 feet down the field and 30 above the ground. I made a few S-turns to burn off energy and managed to get it to slow down to about 30 MPH before plopping it down in a nice area. I ran the battery down at partial throttle and found I had enough juice for another climb out or two. I checked the battery and found the temperature to be about 110 degrees F. Not bad, since I don't have any ventilation in the plane. I couldn't reach the motor so I don't know how hot it was but I couldn't feel any significant increase in the temperature of the fuselage surrounding the motor. I think I will plan to spend a little time cruising around when I fly the Smart so that I don't overheat the battery.

### Conclusion:

What's to conclude, the Smart is a keeper. I just hope that I don't get stupid and pile it in.

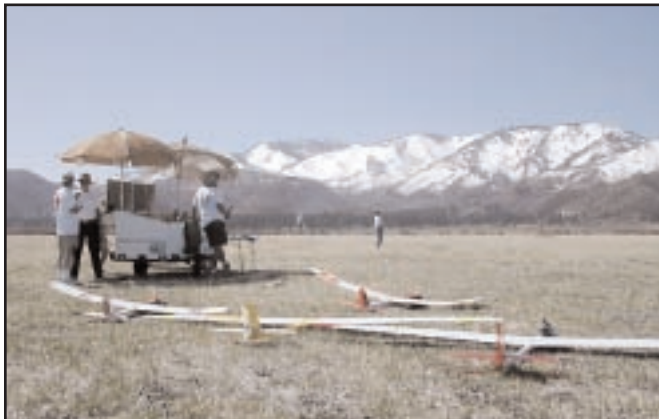
Oliver Lieder



## MARCH 2002 CONTEST REPORT

The first S3 contest of the year was delayed by two weeks due to poor weather conditions, but when we finally did it on Saturday, March 30, the weather was just about perfect. I think we had 10 pilots flying the contest.

Bill Gillis was the CD, and keeping with his reputation for non-traditional (and fun) formats, he went with a modified man on man contest. Basically, three pilots would fly a round at the same time (two winches were set up), with a goal of a 10 minute flight. The pilot that got closest to 10 minutes (without going over) got a perfect score for the round, and the other two pilots' flight times were scored based on the



A beautiful day for a contest at Washoe valley.

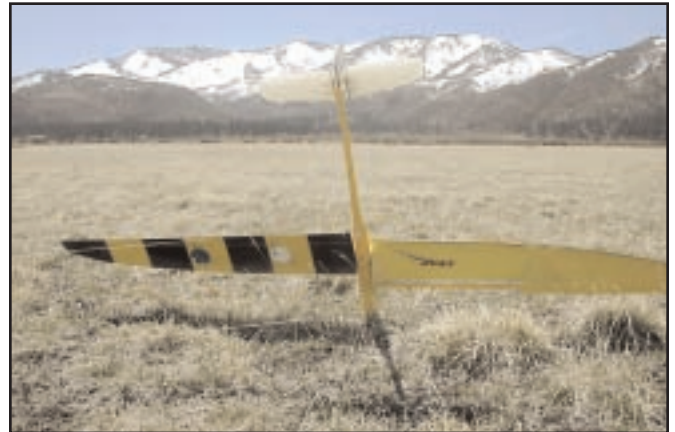
time of the perfect score. Landings were 50 points in or out of a very wide landing area. The contest scoring turned out to be mathematically challenging, and Bill is re-checking the totals, so they are not in this newsletter.

Maybe it was because this was the first contest of the year, or maybe it was just coincidence,



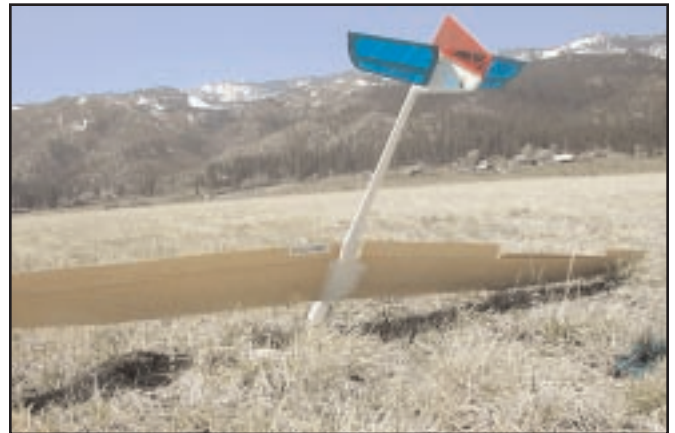
Pilots watch the sky for thermals, mid-air, and lawn darts.

but some major glider damage took place throughout the day. Before the contest started, Adam and Bill had a mid-air that brought both planes down. Adam's appeared to be a write-off. Bill was able to bring his down somewhat gently by modulating his flaps (he had no tail). Luckily, Bill had a spare plane to fly, and he let Adam fly it for the contest as well.



Lee's plane after losing a wing tip half way up the winch.

Halfway through the contest Lee's plane folded a wing tip in the winch, resulting in a lawn dart style descent. Then on Ron Brown's last launch his Sapphire slipped out of my (Ron Marston) hands before I wanted to let go of it and tagged



Ron Brown's Sapphire after an unfortunate launch accident

me on the back of the head as the winch tension yanked it into the ground at a high velocity. Sorry Ron.

Despite the carnage, everyone seemed to have a good time. Great contest Bill....  
(Submitted by Ron Marston)



## MISCELLANEOUS STUFF

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### BBQ AT ADAM'S

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Don't miss food, flying and fun at Adam's house on Saturday, April 27th.

It starts between 9-10 am. All members are welcome!

Here are directions to Adam's house:  
Coming from Reno take 395 north to Lemmon Drive. Turn right on Lemmon Drive and follow Lemmon drive approx 5 miles from stoplight to Waterash Drive. Turn right on Waterash and follow until it ends. Turn right on Chesapeake, then left on Matterhorn Blvd. Follow Matterhorn approx 5 miles to 10210 Matterhorn Blvd. It is an off white house with blue/green trim. If you get to Antelope Valley road, you have gone too far.



Adam's rocket glider was very cool and thermals well to boot!

Adam Kremers had his rocket powered glider out at the March contest. the engine is reloadable. It launched at about 20 degrees from horizontal, but quickly gained several hundred feet of altitude, then flew around and hooked into a thermal. He had to bring it down after 10 (?) minutes because the contest CD was bithching at people to land their planes.

### NEW MEMBERS

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S3 welcomes two new members:

**Arley Simpson** of Reno, and  
**Leonard F. MacKey** of Minden

**Phil Kalenowsky**  
Reno NV 89503  
Phone: 775 747 8941  
Fax.VM: 775 747 2803

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Phil@KitesPlus.com

### FOR SALE

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Tom Black is selling his Little Big Winch. It is new condition. Call Tom for details.

#### Radio Gear for sale:

JR PCM 9 Heli system - #J9C-4SHR PCM complete w/ 5 servos batteries and charger asking \$175

JR Max 6 -#J6FC2 MAX6 FM PPM fixed wing six channels, dual rates, reversing, etc. complete w/4 servos and manual asking \$75.00

Century VII PCM Heli system - #N7C-4SAH w/ 4 servos, batteries, manual, charger asking \$125

Call Chuck at 858-3000 Ext 297 after 6:00 pm



## S3 CONTEST SCHEDULE FOR 2002

MONTH	S3 CONTEST DATE/CD		SVSS CONTESTS (SAC.)
March	3/17	Bill and Dave (rescheduled to 3/30)	3/9
April	4/21	Ron Marston and Bill	4/13
May	5/19	Pete Casti and Ron Madison	5/11
June	6/16	Jim Brady and Lee Cox	6/15
July	7/21	Adam and Arley	7/13
August	8/18	Bill and Dave	8/10
September	9/23	Oliver and Ron Marston	9/14 (Lee Cox is CD)
October	10/21	Jim Brady and Bill	10/12

## OTHER FLYING EVENTS

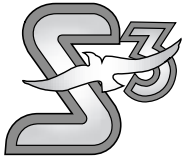
**SPRING FLING (SACRAMENTO)**  
**VISALIA FALL SOARING FESTIVAL**

June 22-23  
 Oct. 4-6

## 2002 S3 CONTEST SCORES

Pilot	March	April	May	June	July	August	September	October	Total
C. Adams									
B. Avery									
J. Brady	?								0
R. Brown	?								0
P. Casti	?								0
L. Cox	?								0
L. Disbrow									
B. Gillis	?								0
L. Green									
D. Hagander	?								0
A. Kremers	?								0
O. Lieder	?								0
R. Madison	?								0
R. Marston	?								0
H. McCluskey									
P. Russell									
H. Siegfried									
T. Stowers									





## SIERRA SILENT SOARERS

Newsletter Editor  
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Reno, NV 89509

ADDRESS SERVICE REQUESTED

### **NEXT CLUB MEETING:**

Tuesday, May 7, 7:00pm • Round table Pizza • McCarran and Mira Loma

**NEXT CONTEST IS SUNDAY, APRIL 21 BE THERE!**  
**ALSO - BBQ AT ADAM'S - SATURDAY, APRIL 27**



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