Sierra Silent Soarers

Northern Nevada's R.C. Sailplane & Electric Flyers Club

Letter from the President: January/February 2003

Hello All,

Over the President's day weekend my wife and I traveled down to San Diego to attend the annual Mid Winter Electrics (MWE) held each year at the flying field of the Silent Electric Flyers of San Diego (SEFSD.org). This was the 5th year I had attended and it keeps getting bigger each year. There were nearly 100 pilots, about twenty vendors and probably 300-400 spectators each day. It is always interesting to see what new developments are going to be showcased each year. Last year, there were several large 3D aerobatic planes capable of hovering for extended periods as well as being able to perform the wildest aerobatics imaginable. This year they were back as well as some unbelievable helicopters. But the thing that was the most impressive this year was the demonstration of the relatively new Lithium-polymer battery technology.

Adam with his scratch built twin s400 plane

There were 7-10 pound, 900 watt airplanes using the new Li-poly batteries. As you may know Li-poly batteries hold 3-4 times the energy as Nimhs of the same weight. However, individually they are not capable of high discharge rates, but by combining the batteries in a parallel/series arrangement,

continued next page

In This Issue

S3 Officers for 2003:

President . . . . . Adam Kremers
Vice President . . . . . Pete Casti
Secretary . . . . . Ron Marston
Treasurer . . . . . Jim Brady
Safety Officer . . . . . Lyn Disbrow
Newsletter Editor . . . . . Ron Marston

Letter from the Prez (cont'd)

these packs were capable of discharging up to 50 amps! These planes and helicopters were able to do full 3D aerobatics for over 25 minutes! Of course this capability doesn't come cheap, my guess is that the packs that were used probably cost $300-$400 each, plus charging takes much longer than ni-cds or nimhs. However, with most everything in this industry, the prices are sure to come down. The time is very near where we will be able to fly all out for 20-30 minutes at a time, the slimers better look out!

Large Diablotin powered by a large geared Hacker motor running on the new lithium-polymer batteries. Capable of 25 min full aerobatic flight.

There were a couple of very large scale aircraft as well. A Kyosho Gee-Bee ARF flew very well as did some large Cubs and Taylorcraft. There was also a good showing of some scale war birds complete with retracts. I did manage to fly a little. I flew the Radar, Turbo Bee and my new twin design (which generated some interest and some strange stares).

A large 1/4 scale GeeBee racer landing. Powered by a big rotating can brushless motor.

Nice Super Cub (?) flying at MWE

The MWE has almost become a victim of its own success. The wait to fly could sometimes be 1 hour. But it is really the most fun just to see the new technology demonstrated each year.

That's it for now, remember our first monthly contest is less than a month away.

See ya,
Adam

Big meat hooks hanging from a line with cinder blocks wet with lighter fluid on the ground below. What sort of meniacal trechery is afoot here?

Treasurer's Report

Period ending January 7, 2003

Opening Balance:	$535.00
Income:	
2003 dues	$210.00
T-shirt sales	$30.00
Total Income	$240.00
Expenses:	
Refund on T shirt sale	$10.00
Total Expenses:	$10.00
Closing Balance:	**$765.00**

Submitted by Jim Brady

January 2003 Meeting Minutes

Meeting called to order at 7:43 pm

Treasurers report was read. (see previous page)

Minutes of December meeting were accepted.

Old business

Non profit status: 6-18 month processing time by the IRS once submitted.

Motion: Jim Brady should check Nevada Credit Union - they might give a free account with non profit status - If it's not free, he should find a cheap ($8-$10/month) account.

Motion was tabled.

Raffle: It was decided to spend $450 on prizes. Adam will pick.

New business

Winch carts: Lee has drawn up plans. Adam's friend Garth may do for $100 - $150 each. We can get them powder coated free. We're making 3 carts.

Motion: Move forward to build carts. Motion approved.

Jim mentioned we need membership cards. (Done! ~Ed.)

Gambler's Gala contest: AMA sanction has been approved - paperwork is on tis way. Insurance paperwork $25 - can be good for the whole year. Lee wants an ad put in the AMA magazine, only $16/month. (Done! ~Ed.)

Voted for most improved pilot.

Oliver asked that members use discretion when sending images via email (no nekid chicks).

Meeting adjourned around 8:30.

Respectfully submitted by Ron Marston

February Meeting Report

The February meeting was the annual S3 Raffle/Pizza Party/Awards Ceremony. The party was well attended as usual, with lots of members and non-members showing up. I guess it takes free pizza to get some flyers to participate in club events.

A pile of raffle prizes - some purchased by the club, some donated by members.

Pilot of the year went to Lee Cox, with runner up going to Jim Brady. Most Improved pilot went to Leonard MacKey. Congratulations Leonard!

Adam and his wife taking some of Phil's money for the raffle.

Order of the Arrow was given to Oliver Lieder by last years recipient, Ron Marston (me). I made a trophy with a little tomb stone on a grave, and a really small version of Oli's venerable 2 meter plane, which died on the

Oliver's Order of the Arrow award.

February Meeting (Cont'd)

same day his new Sapphire died. I put a small halo above the plane's head, signifying its ascent to a better place above.

Max walks away with a nice little molded pylon racer.

Some really nice prizes were won this year. I don't remember who won everything, but some of the prizes were: A P-51 foam sloper, a Thunder Tiger Lazy P-51 (Bill won), a nice little Biplane, several built up glider kits, a nice Cavasos slope racer (I think Lee won), a Radar, a nice 2 meter Omega electric glider (Bill donated it, Dave won it, then gave it to me, thanks Bill and Dave), a composite pylon racer (I think Max won), and the grand prize, a small motor glider called a Navaho, with a brushless Mega motor and controller, won by Mike Karpchuck).

Grand raffle prize winner Mike Karpchuck with his new toys.

As with previous S3 raffle parties, a good time was had by all.

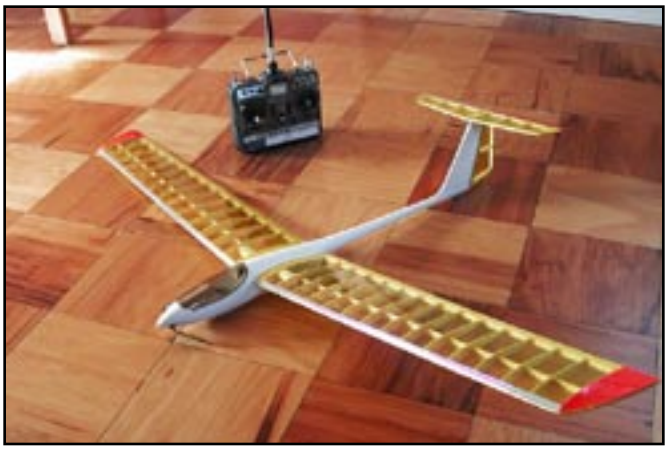
Submitted by Ron Marston

Kelly 1300 Review

By Oliver Lieder

What is a Kelly 1300? It's a small 1.3M (1300mm), ARF sailplane manufactured by Gebhart in the Czech Republic and supplied by Hobby Lobby. See http://www.hobby-lobby.com/kelly.htm for details, specifications, and a link to another good review of the plane http://www.liftzone.com/articles/2002/oct/kelly/kelly.shtml. :-) I'm not going to go into detail about the construction of the plane since it is detailed in the on-line review, but I will tell you this…

I received the kit for Christmas/birthday from a couple of great friends. They bought me one after I showed a lot of enthusiasm for Ron Marston's, which he purchased from Hobby Lobby for 20% off the day after Thanksgiving. That's the day to log on and purchase stuff from them because they do it every year. Ron paid about $84 for the first one and $105 for mine.



Kelly 1300. A beautiful little motor glider. (Photo is of Ron's)

Kit

The kit is very complete and requires minimum time and materials to get it in the air. You supply the glue, radio, and motor system if you plan to electrify it. It comes as a pure sailplane with the option to cut the nose off and motorize it. The fuselage is very pretty white fiberglass with integral vertical fin. The wings, rudder, and horizontal stabilizer are built-up and covered with transparent yellow covering.

Kelly 1300 Review (Cont'd)

As Built

I used an Astro 010 Brushless motor with On/Off controller, Robbe 6x3.5 folding prop, (2) CS-20 servos, JR R610M 6ch Micro receiver (about 0.4oz without case), and an 8-cell 720mAhr (AAA) NiMH pack. The flying weight came is 12.5oz. Static current draw is about 4.6 amps at 5000ft altitude (ASL).

Mods

At first I thought, this might be the first airplane that I've ever built where I didn't modify a thing. Nope, it didn't happen this time either. The pushrods that come with the kit are steel wire within plastic sleeves. I quickly realized when looking at the plans that the bend radius for the elevator is much too small and there would be too much drag. Just to be certain, I inserted the pushrod into the fuse and held it in the position that it would be operating. There was so much drag the servo would use most or all of its power to overcome the friction and would also suffer from poor centering. I immediately replaced the steel wire with the small flexible Sullivan cable and it worked great. I tested the rudder pushrod in the same way and found that it worked very well and I didn't need to change it. I took extra care to make sure that the rudder pushrod was run as straight as possible. Instead of putting the rudder servo on the left side of the fuse I placed it on the right side. The other end of the pushrod exited where the plans indicate on the left side of the fuselage. This made for a nearly straight pushrod installation.

I didn't use the supplied servo mounting rails. Instead, I carved some small filler blocks from balsa and glued them to the side of the fuse with epoxy and then glued the servos to the balsa blocks. I also mounted the servos about midway between the front-to-back hatch opening. This is further forward than is indicated on the plans but provides greater mobility for the battery and allows me to move it forward far enough to get the CG located in the correct position. (The 010 motor system is lighter than the Speed 280).

I squeezed the receiver in between the servos and attached it with Velcro to the side of one of the servos. The receiver wouldn't fit with the case on it so I put heat-shrink around it. This worked very well.

I made my own motor mount from an epoxy-glass circuit board because I felt the balsa unit supplied would not work well with the screw attachment of the 010 motor. (The Speed 280 motor that is recommended for this kit is glued to the back of the balsa mount).

I didn't cut the supplied vents into the fuselage because I new that the motor and battery system were low power and efficient and would therefore produce little heat. I checked the temperature of the motor and battery after my first flight and confirmed that both were only slightly warm.

I tinted my canopy with dye. I prefer canopies that can be seen. Ron's came pre tinted but mine arrived clear. I didn't use the rubber band canopy attachment because I find them cumbersome to use and it would interfered with the placement of the radio gear. The recommended glue for attaching the cockpit to the tray failed to hold properly. I'll probably use odorless CA to fix it.

For the most part, I followed the instructions for the remainder of the building process. As easy as the kit is to build, some cautions should be observed. Use epoxy sparingly when installing the wing-joiner tubes in the wing. I used a thin balsa plug CA'd into the end of the tubes to prevent epoxy from entering. When I pushed the tubes in there was nowhere for the epoxy to go and the excess oozed into the wing. (The tubes fit snug). I had to trim about 3/32nds of an inch from the carbon wing rod. It was supplied too long.

Flying

I arrived at the field with a partially charged battery and calm and cool conditions. After assembling, I checked to make sure that all

continued next page

Kelly Review (cont'd)

functions were working in the correct direction. With everything checking out well, I gave the Kelly a hand toss to check the trims. It flew smooth, straight, and far. I picked it up checked the motor operation and then throttled up and tossed it gently forward. It wasn't a hotliner, but it climbed with decent authority at about 500ft per minute, which I felt was decent. After about 45 seconds I shut off the motor because the Kelly was starting to get small. It continued with this climb rate throughout the flight until the battery began to fall off. I found that I had to hold the stick forward a little to keep the Kelly from climbing too steep. I'll be adding a little down trim to the throttle stick so that I don't need to do this in the future. I'll also move the CG back a little to reduce the amount of speed-related pitch change.

I flew about 60% of the time performing mild aerobatics and 40% just cruising around. The Kelly had a very good glide ratio considering its size. Stalls were very mild and the one roll I performed nearly made my pants wet. Next time I'll perform the roll with more speed and perhaps with the motor on. The rudder has exceptional authority and I'm certain that decent rolls can be performed with sufficient speed.

As for speed range, the Kelly didn't have a really high or low speed. It liked to fly around at about 20mph (estimated). Top end speed was 40ish with the motor on and higher of course with the motor off. Minimum speed was probably around 10mph.

I didn't try any inverted flight and I'm not certain that I will because pulling the Kelly out of a high-speed dive is likely to fold the wings.

I landed the Kelly 20 minutes after I launched it. This airplane has the ability to fly a very long time on a charge. With a full charge, I'm sure that I could have flown in excess of 25 minutes, flying as I was. If I were just cruising in dead air, I'm certain that the Kelly could fly for 45 minutes or more.

I found the Kelly very relaxing to fly and I will keep it as a relaxation flyer. An aileron version with a little more power would be a real kick. For future flights, I will add color to one of the wings so that I can tell which direction the Kelly is flying. Several times during the flight I found it difficult to tell which direction it was flying. I thought about adding a proportional controller to the motor but I don't think I would use it much.

Conclusion

This kit is first rate in quality. I wouldn't recommend the kit to a beginning modeler only because of the issues that I described above. However, I think it would make a good airplane for a novice pilot who has developed the basic skills of flying. The Kelly can be built as a pure sailplane and would likely come in about 4 ounces lighter and float on a gopher fart. The fuselage would make a great platform for a mini scale ship since it has a very scale look. I'm tempted to put my Hacker B20S geared motor with some 1100mA NiMH cells in it. It would add a couple ounces, but it would also double the power. With a stronger wing, one could make a mini hotliner at the expense of relaxation. Maybe I'll ask for another one next Christmas.

2003 S3 Contests

The 2003 Contest schedule will be determined at the next S3 meeting, on March 4th.

The first S3 contest of the year will be March 16.

Membership Cards

Be sure to get your new S3 membership card. If your name is grayed out on the next page, you haven't paid your dues yet! This could be your last newsletter.

Sierra Silent Soarers
Newsletter Editor
1653 Westfield Ave.
Reno, NV 89509

ADDRESS SERVICE REQUESTED

Next Club Meeting:
Tuesday, March 4th, 7:30pm • Round table Pizza • McCarran and Mira Loma

Pay your Dues!
Check the member list on the last page to see if you're paid

First Contest of the Year: Sunday, March 16