Birdworks MOG

Birdworks MOG, do's-n-don'ts, plus D/Sing thoughts Feb 2001

Hi folks

Well I just finished my Birdworks Mother Of Geek slope glider, or MOG, Steve has a real winner here in the durability catagory, its a 9+!
http://www.harborside.com/~birdworks/bwhome.htm

If your not familiar with this EPP plank wing plane, it's a 43" wingspan, tapered chord, all flexible EPP foam slope trainer and thermal ship that has incredible crash resistance... up to a point, and the problems I list are ones of my own creation so be forewarned. I will list the do's first.

Do buy the fiberglass spar, (hollow .370, from Into the Wind, mine is a composite carbon/glass of same diameter) if your even remotely considering a venture into the realm of whistling slope winds, and/or dynamic soaring. The reason being you can stuff the spar with .250 lead-on-a-spool from a tackle shop and keep the C/G intact if your Mog gets too floaty for conditions.

Do follow the instructions concerning 3M Super 77 and contact cement 'cause they don't mix. You might get a roll of cross biased strapping tape from The Bag Lady in Chico California, http://www.thebagladyal.com/, as they have some of the best tape for EPP gliders, 'specially for the leading edge.

Do use the balsa that Steve includes as it's heavy enough for the job, (see note in don'ts about covering) keeping this bird light isn't the problem.

A small detail but a good one, if you slope in salt air, like I do, get yourself a pair of stainless steel 14 Ga. bicycle spokes for push rods. They don't corrode and look lux...

Do attempt to make the nose cone Steve has the DIY for on his web site. The PETE pop-bottle one is the sturdiest. Still, I cracked mine good.

Make sure your battery pack is well made and has a proper strain relief. You might stuff a sliver of EPP in front of it for added crunch protection. Square pack AA's are what fits best. Nimh's would be great for long flight times.

Now for the Dont's

Don't fudge the instructions, Steve has worked all the bugs out in his design here. (he lives next to world class slopes, and is out testing his designs, nearly daily. 'cept the "~" has a lot of his time lately.

Key the tail spar like I didn't... it will stay upright and be stronger. I'm considering calling my MOG Keiko, 'cause the first crash put a swoop to the vertical fin and it now leans...

DON'T use mini servoes with nylon gears, second crash and I didn't notice that the gears were stripped until I landed hard the third time... HS 300 minimum for this use, metal geared standards would be a prerequisite for D/Sing I now have a ruined HS81 gearset.

If you make the electric version, you're weakening the fuse structure and the ship should not be sloped hard. I tried to make this into a composite Electric/sloper and it just cuts away too much important fuse foam.

Don't forget to use some sort of film-Loc on the balsa. A tail first rebound on a shale scree patch ripped the covering off the corner of my left elevon. Better yet use Super 77 and duct tape, the Fifth nuclear force holds this stuff on.

Don't hesitate to get Steve's treatise on flying plank wings.

Now some views on D/S

I've now met two E-zoners at Blanco, Joe from Florence and Eric Swenson, it was Eric who said that, " Slope stands for smash, lose or pulverize eventually."
.....
Think on this a moment, 'cause it really applies to dynamic soaring, big time.

I went to Blaco with a fresh, pretty, and what I thought, indestructible, slope ship....

I'm no D/S expert, I can make a couple of circuits in a row before getting clumsy, but when your standing there on the BACKSIDE of a ridge, lofting a plane into the windward side's lift to suddenly bank hard over and crank it down into certain destruction on the opposite side at speeds more than thrice the wind speed, your gonna dork it a few times. This makes EPP combat look tame. I had it so close to the grass on the backside that it caught a wing and cartwheeled six times, endo style. Tough bird.

I like D/Sing a lot, but it's gotta be costly if your doing it with glass slipper ships... It's not called the darkside for nothing. "Theres no dark side to the moon, its all dark". Guess that figures 'cause you have to be somewhat of a lunartic to like doing this. Still, its way too much fun, and fun like this should be taken in small amounts, at least in my case.

Anyone else want to comment on The MOG or any of the Birdworks planes...?

Old Jul 30, 2001, 04:05 PM #2

I threw my MOG off the slope yesterday for the first time. I can vouch for its durability but not its flight performance as I definitely have a few kinks to work out. A broken control horn ended my day prematurely but the ship went in nose first twice and suffered no major damage. The first time I threw it off the slope with the recommended reflex (cg at 2 inches behind the leading edge)it immediately went nose up and looped behind me straight into the slope nose first (bounced about 2 feet after it hit which was worth a laugh). I reduced the reflex by 1/16 of an inch with marginally better results as it did fly for several seconds (before becoming uncontrollable) although it was very tippy and wasn't penetrating worth a darn. I was flying in fairly heavy winds at the coast of probably 30 mph so perhaps I needed ballast? Any other recommendations appreciated and how do I get Steve's treatise on plank wings?

Thanks, Greg

Old Jul 30, 2001, 04:52 PM #3

I guess I'm waiting on Steve to chime in with when his paper will be available, as I've not checked my e-mail it's probably in the inbox as I write...

One thing Steve has mentioned time and again is to keep your throws down,and to especially keep the elevator rate lowest, the reason he has the DIY for the Focus 3 TX's elevator dual-rate modification, on his website. I'd speculate you'll need more weight, possibly more forward weight. A friend who was with me and flying his MOG for the first time, was having an apparent tip stall problem that may have been due to c/g slightly back, Mine was 1/8" forward, but we were flying in 19 to 25 mile winds.
If you do add weight in the hollow spar remember to add some nose weight, as it will creep the C/G backwards. A more forward C/G will help with 30+ mph winds.
Looee
Greg

Old Aug 07, 2001, 12:30 AM #4

As an ex owner of a MOG, it is in brush 8 - 10 ft high; got to darn low after making a bunch of loops from up high and ran out of slope lift I'll find it someday

or get another one to practice DSing with after I complete a build of a couple other planes (a DAW P51D and a Filip E T tail from Sal). When talking with Steve he mentioned "add a 1/2 oz of weight to the nose when the wind came up". I had flown the MOG in 25-30 kt winds prior to it's loss with just the 1/2 oz of additional nose weight Steve recommended. Never did need to add any ballast in the FG spar or on top the wing for this amount of wind, but when I find it and get it to Parker to DS maybe I'll get the chance
Herb

Birdworks Super designs by Steve Hinderks.
The R/C Gull, Zipper, Mog, etc.
Trick R/C Maker of the famous Zagi: Boomerang Wings