The Implementation of a Dream

“In 1982, I drove our little Odessy motor home on a Toyota chassis back to the AMA Nationals (Nats) at Lincoln, Nebraska…”

Bob Dodgson

“Here’s a group picture from Bob’s 2019 induction into the AMA Hall of Fame in Wenatchee, Washington. A number of Dodgson fans and friends are in this picture. Left to right: Tom Nielson, Bob Dodgson, Tom Brightbill, Ron Lenci, Jim Pugh (rear), Shawn Lenci (front), Sandie Pugh, Dave Banks, Jim Thomas, Dave Johnson, and Ken Eaton.” (image: Jim Thomas)

This is the third and final part of a three part series. To get the whole story, you’ll want to read the first and second part (if you haven’t already) and then this article. Once again, we’re featuring author and reader photos of Dodgson Designs aircraft and we thank all of them for the opportunity to present them here. — Ed.

Well, the 100-inch Todi proved to be the first successful multi-channel competition glider kit in the United States. All of the other successful competition gliders had only rudder and elevator control while some some of them did have spoilers also.

The Todi used the first two-control mixer, the Dodgson Coupler, in the model glider industry to mix flaps and ailerons — producing flapperons. Moreover, the coupler incorporated an elevator trim bar to feed in precise amounts of down elevator as the flaps deployed to compensate for the trim change caused by the flap deployment. The Todi did not need spoilers to win contests all across the U.S. and Europe. In fact, half of our Todi and Maestro sales were overseas where our kits were heralded as the wave of the future and won many major and national contests in England, Germany, Norway, Finland, etc.

“Dave Banks holding his 1989 Nationals winning Pixy. Dave won 2-meter by far and he also had the highest score of any sailplane class that year.” (image: Bob Dodgson)

The Maestro series of gliders was introduced in 1974. The Maestros used the same control system as the Todi but added spoilers as well. They were larger

and most of the Maestro models had a wingspan in the 134-inch range. However, the Maestro Caliente had a wingspan of 99.5″ and could compete in the 100 inch class as well as in open class. The Maestro Megan could be built with either a 128″ or a 140″ wingspan.

All through the 1970s and 1980s most other competition kits still had polyhedral wings and used rudder, elevator and spoiler control systems only. Not so with Dodgson Designs kits! Toward the end of the 1970s, some of the competition flyers of our Maestro kits even started putting separate flaps and ailerons on them rather than using flapperons. In 1979, Dodgson Designs recognized this as a serious option for our kits even talking about it in our catalog.

Then, in 1980, we came out with the Camano to replace the Todi. It was the first successful thermal competition glider kit to come stock with separate flaps and ailerons. The early Camanos also had spoilers. I was still not completely confident in just using flaps for precision landing control.

“This is Steve Bowman’s Windsong Sorry to say we lost Steve a few years back — RIP.”
(image: Craig Christensen)

However, it was not long until Camano flyers like Dave Johnson discovered

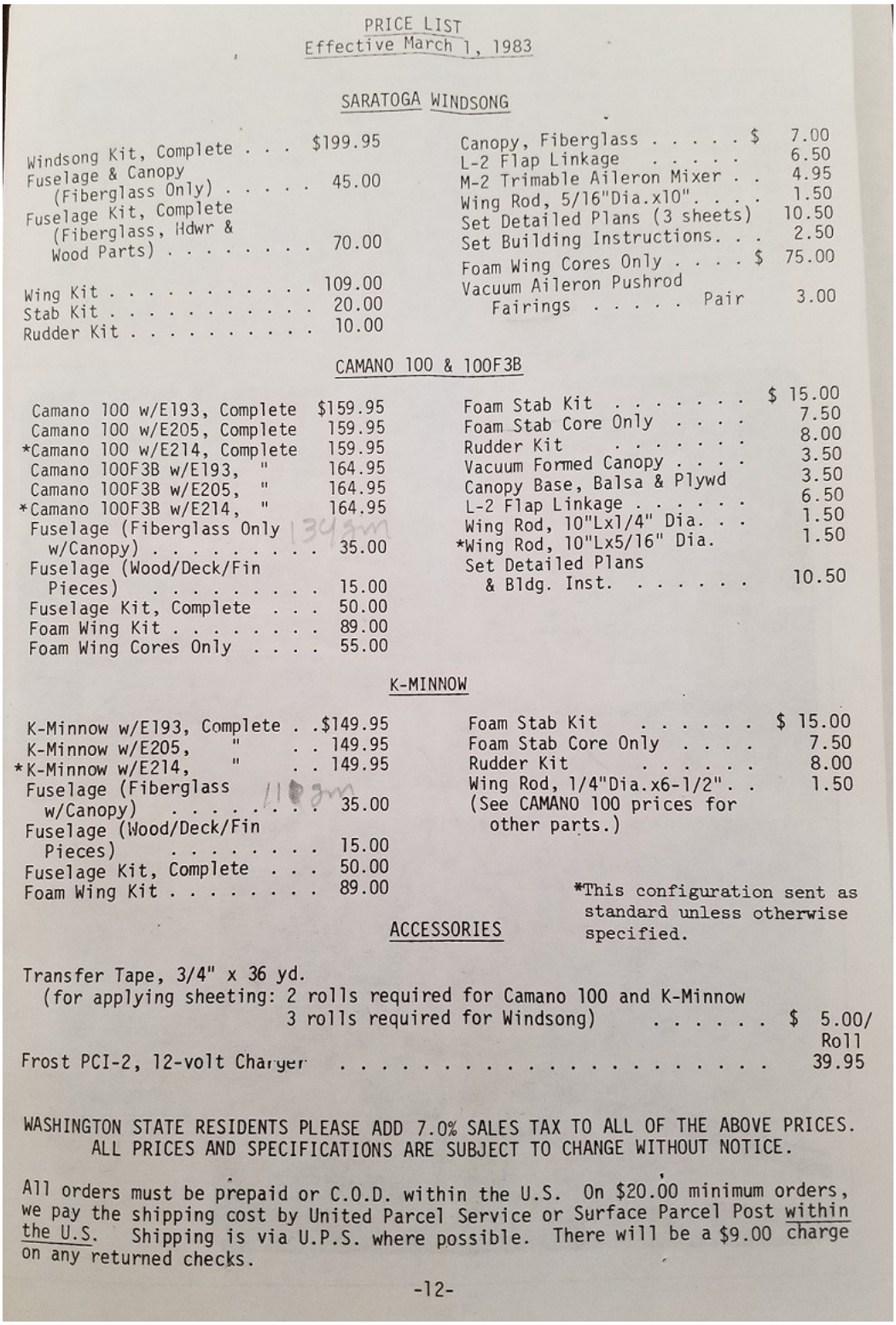
that 90 degrees of flap throw provided the best landing control around. Soon the spoilers came off the Camano and we went to foam core wings.

In 1982, I drove our little Odessy motor home on a Toyota chassis back to the AMA Nationals (Nats) at Lincoln, Nebraska. I was accompanied by several of the top flyers in the Northwest Soaring Society at that time including Tom Brightbill (multiple Nats winner), Tom Neilson (Nats winner), Dave Johnson (multiple season champion, etc.) and Tom Culmsee (Nats contest director). Most of us were campaigning Camanos and Maestros in open class and K-Minnows in two-meter class that year. The K-Minnow was a T-tailed version of the Camano with two-meter wings. It used the same revolutionary control system. We had recently pioneered the use of foam core balsa sheeted wings on the Camano and K-Minnow. These were the first successful competition glider kits to use solid core wing construction.

“Dave Banks spot landing his ‘song. Steve Cameron timing.” (image: Waid Reynolds)

On the long drive home, the Windsong concept was born in a kind of think-tank atmosphere. We all liked the size of the Maestro MK III with its 134-inch wingspan, but we wanted the more precise control system of the Camano

along with a higher performance wing, using the unheralded Eppler 214 airfoil. We also wanted a wing that would be easier to construct than the sheeted spar and rib construction of the Maestro, Todi and the first Camanos. The basic design concepts were pretty well solidified on that long journey home from Lincoln. However, I still had lots of decisions to make and details to figure out.



PRICE LIST
Effective March 1, 1983

SARATOGA WINDSONG

Windsong Kit, Complete	$199.95	Canopy, Fiberglass	$ 7.00
Fuselage & Canopy (Fiberglass Only)	45.00	L-2 Flap Linkage	6.50
Fuselage Kit, Complete (Fiberglass, Hdwr & Wood Parts)	70.00	M-2 Trimable Aileron Mixer	4.95
		Wing Rod, 5/16"Dia.x10"	1.50
		Set Detailed Plans (3 sheets)	10.50
		Set Building Instructions	2.50
		Foam Wing Cores Only	$ 75.00
Wing Kit	109.00	Vacuum Aileron Pushrod Fairings	Pair 3.00
Stab Kit	20.00		
Rudder Kit	10.00		

CAMANO 100 & 100F3B

Camano 100 w/E193, Complete	$159.95	Foam Stab Kit	$ 15.00
Camano 100 w/E205, Complete	159.95	Foam Stab Core Only	7.50
*Camano 100 w/E214, Complete	159.95	Rudder Kit	8.00
Camano 100F3B w/E193, "	164.95	Vacuum Formed Canopy	3.50
Camano 100F3B w/E205, "	164.95	Canopy Base, Balsa & Plywd	3.50
*Camano 100F3B w/E214, "	164.95	L-2 Flap Linkage	6.50
Fuselage (Fiberglass Only w/Canopy)	35.00	Wing Rod, 10"Lx1/4" Dia.	1.50
Fuselage (Wood/Deck/Fin Pieces)	15.00	*Wing Rod, 10"Lx5/16" Dia.	1.50
Fuselage Kit, Complete	50.00	Set Detailed Plans & Bldg. Inst.	10.50
Foam Wing Kit	89.00		
Foam Wing Cores Only	55.00		

K-MINNOW

K-Minnow w/E193, Complete	$149.95	Foam Stab Kit	$ 15.00
K-Minnow w/E205, "	149.95	Foam Stab Core Only	7.50
*K-Minnow w/E214, "	149.95	Rudder Kit	8.00
Fuselage (Fiberglass w/Canopy)	35.00	Wing Rod, 1/4"Dia.x6-1/2"	1.50
Fuselage (Wood/Deck/Fin Pieces)	15.00	(See CAMANO 100 prices for other parts.)	
Fuselage Kit, Complete	50.00		
Foam Wing Kit	89.00		

*This configuration sent as standard unless otherwise specified.

ACCESSORIES

Transfer Tape, 3/4" x 36 yd. (for applying sheeting: 2 rolls required for Camano 100 and K-Minnow 3 rolls required for Windsong)	$ 5.00/ Roll
Frost PCI-2, 12-volt Charger	39.95

WASHINGTON STATE RESIDENTS PLEASE ADD 7.0% SALES TAX TO ALL OF THE ABOVE PRICES.
ALL PRICES AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

All orders must be prepaid or C.O.D. within the U.S. On $20.00 minimum orders, we pay the shipping cost by United Parcel Service or Surface Parcel Post within the U.S. Shipping is via U.P.S. where possible. There will be a $9.00 charge on any returned checks.

-12-

“Man, those were the days.” (image: Kristopher Harig)

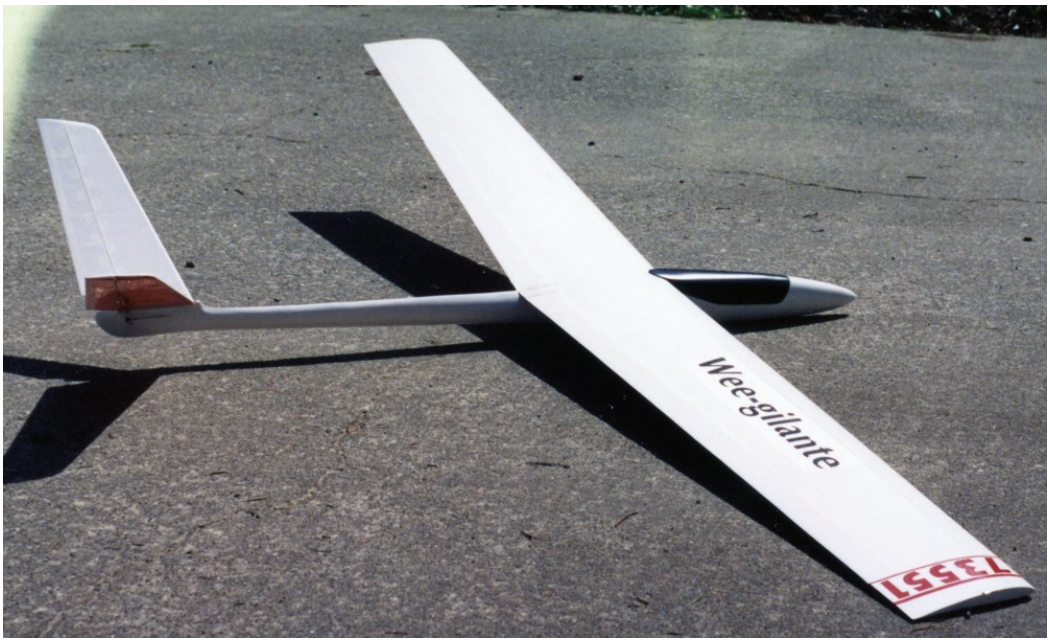
At home, I carved the plug for the first fiberglass Windsong “taco-shell” fuselage. This innovative idea, first used with the Camano, made it possible to have a graceful fiberglass fuselage that used spruce and plywood

reinforcing inside and balsa and plywood for the top deck. It was easier to produce, stronger and more heat-stable than an all-fiberglass fuselage of the day. It was decided to go with foam core, balsa sheeted wings to simplify construction. As first used on the Camano, I figured out an efficient spar system and used lightweight foam to come out with wings that were stronger and yet as lightweight as equal sized built-up thermal glider wings.

While I was building the first Windsong prototype, I heard of a new full-sized German glider that could reflex the ailerons to function as spoilers. This idea got me to thinking. I have always loved simple and elegant solutions to complex problems. So, I decided to not put spoilers on the new Windsong and rather use separate flap control and ailerons that could reflex. I wanted to be able to reflex the entire trailing edge (TE) for high-speed flight anyway, so I would already have all the necessary functions in place. I worked out all the mechanical mixing systems and had the prototype Windsong flying in a few weeks after the trip to Lincoln. Its performance was breathtaking. I had seen nothing like it! At the time there were no computer radios, but the mechanical systems worked great and having all four servos in the fuselage kept the weight forward and gave me a Windsong that flew at about 54 ounces. The aileron spoiler effect used in conjunction with positive flaps was a real crowd stopper. No one had ever seen anything like it.

“Modified Camano and a Pixy against the fence with an Anthem in the foreground.” (image: Tim Egersheim)

There it was in 1982, the control system, complete with ‘crow’ that many years later would become the industry standard and still is to this day. In fact, when computer radios started coming on the market in the late 1980s, they used the Windsong control system as the glider model that they were trying to emulate electronically. Even today the competition DLG gliders use the same basic control system that was introduced on the groundbreaking Todi in 1972.



“And the 2-Meter Wee-gilante.” (image: Bob Dodgson)

Also, with the Windsong, we learned that 90-degrees of flaps was about the best precision landing control and so seldom used the aileron-spoiler function except to help dethermalize. In what became known as ‘crow’, with ailerons up and full positive flap, the Windsong could be pointed straight down dethermalizing at a safe speed of about 40 mph! No other thermal competition glider could dethermalize so fast and yet so safely and so spectacularly!

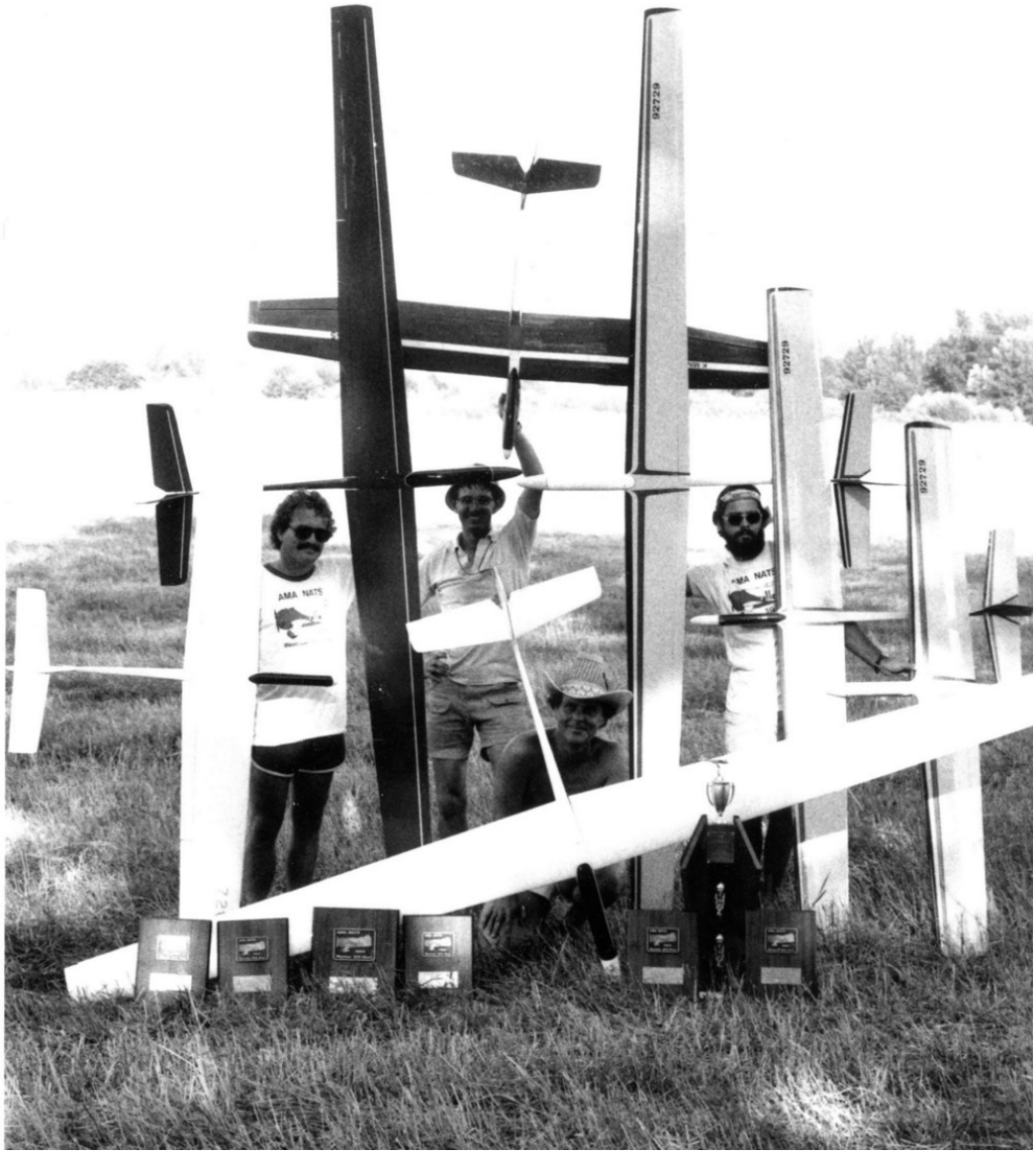
One of the most exciting sights that was unheard of at the time was watching Dave Banks regularly thermal out with his Windsong from a hand-launch! This is captured on our Dodgson Designs video tape that uses footage shot between 1983 and 1986. 134-inch multi-channel gliders should not be able to do this!

“Walt Volhard’s Dodgson Saber at 60 Acres Park, Redmond, Washington 1991.”
(image: Waid Reynolds)

Well, the Windsong, and its smaller brothers the Camano and two-meter Pixy, went on to win the Nationals many times flown by people like Tom Brightbill and Tom Neilson. Even I placed second at the Nationals with both the Windsong in 1983 and again with the Pixy at a later time.

The Windsong design evolved into the Lovesong that was a beefed-up version of the Windsong. We improved the mechanical control system too, using the Automatic Flap/Aileron Reflex Trim (AFART) devised by Windsong flyer Gary Brokaw.

Another interesting first for Dodgson Designs in the early 1980s was the introduction of the Pivot. The Pivot was the first successful thermal glider to utilize pivoting wings (wingerons) for aileron type control. This control system had been used some on the slope, but no one had come up with a successful thermal glider kit utilizing this simple control system. The Pivot was the first hand-launch sized thermal glider to use foam-core wings too! It won hand-launch as well as two-meter thermal contests and continued to be one of our most popular designs until we ended our kitting business in 1997. The Pivot could be taken apart easily too so that it could be carried around in its tiny shipping box to be a constant travel companion ready to do great flying at any slope or thermal opportunity.



“The Dodgson Designs planes that won a host of trophies at the 1983 Nationals Left to Right: Tom Neilson — K-minnow & Windsong, Dave Johnson — modified Sprite (I think), Bob Dodgson — Windsong and Tom Brightbill — Windsong, Camano and K-minow.” (image: Bob Dodgson)

In 1990, we introduced the Saber which had two firsts for a U.S. kit. It was the first thermal competition glider kit to use the SD7037 airfoil. This airfoil showed great promise from the wind-tunnel tests but had been passed over by designers and pundits — until the Saber. The Saber was also the first U.S. kit to use obechi sheeting for the wing skins. It was not long until the SD7037 airfoil became one of the most popular airfoils following the Saber’s

successes and obechi sheeting became an industry standard.

Soon after the success of the new Saber, we updated the Windsong/Lovesong using the Saber wing technology and airfoil and called it the Anthem. However, many folks still preferred the Eppler 214 airfoil that the mighty Windsong made famous, so we finally offered an obechi sheeted Windsong Classic and lastly the Windsong Silver in honor of Dodgson Design’s 25 years in the glider design and kitting business.

“Ray Cooper holding a Windsong — Dave Banks on right at 60 Acres Park early 90s.” (image: Waid Reynolds)

In the early 1990s, we replaced the venerable Camano and Pixy with the 98-inch V-gilante and the two-meter Wee-gilante. These kits featured Saber wing technology along with V-Tails. They used a new Mono-Seam fiberglass fuselage that I developed. This fuselage had the production advantages of the taco-shell fuselage but offered the kit builder the construction ease of a fully formed and joined fiberglass fuselage. These beautiful glider kits offered all the controls that the Windsong had pioneered. They were popular in their size classes until we ended our kitting business.

“Me and my Windsong in 2016.” (image: Bob Dodgson)

In 1994 I experienced a serious health problem called Churg Straus Syndrome. After recovering and with some minor lasting physical limitations I was able to continue the kitting and design business –but with more caution as all of the fiberglassing and foam cutting chemicals and the balsa dust

exposure might have been a factor in my getting sick.

Then, by 1997, it was evident that serious thermal competition glider pilots were going to expensive pre-built gliders using all space-age materials and they were being manufactured offshore. It was no longer profitable to continue designing and manufacturing high performance competition builder kits. So, I had an opportunity to go to work for Boeing in 1997 and I closed the doors to Dodgson Designs.

Jim Thomas, flying a Windsong (a 20-year-old design) that he had just finished building, placed third at the huge 2002 Visalia, California contest. He was in first place until the final flight where he lost 10 landing points by 3⁄4-inch and had to settle for third — showing that the mighty Windsong can still kick state-of-the-art butt!

When I was 70 years old I retired from Boeing after working there for 10 years plus two years of working at Star Aviation during a Boeing layoff. To my surprise, after we closed Dodgson Designs I did very little glider flying. I had lost my boundless passion for it — having turned my great hobby into my job for 25 years. I have since been enjoying other old hobbies like music. I was never musically talented but when I was kid my Dad gave me some singing lessons to try to help with my stuttering since I don’t stutter when I sing. Well that did not help my stuttering but it did improve my singing and pitch from awful to not too terrible. So, I have been enjoying singing along with my old guitar.

I recently saw a unique new opportunity since my Dad had an 8mm movie camera in the mid 1930s and onward and took a lot of good family movies. I have used some of those movies along with movies that Sandy and I took and even videos that we took after 1982 to put with songs of me singing with the guitar on my YouTube channel (see *Resources*, below). The channel also

has the shortened Dodgson Designs glider video that I made from old footage for my Hall of Fame Induction.

Needless to say the 2019 Model Aviation Hall Of Fame induction has been the highlight of my fun retirement years and I am still enjoying each day with my wonderful lady and titillating marital partner of 58 years this December. Moreover, I still thrill at the passion and the unique opportunity that so many wonderful glider flyers afforded me by building and flying my kits during our 25 years of the Dodgson Designs business. Thank you all for making my passion and dreams live for me and for my family. You will always keep my spirits soaring!

Resources

- The Last Troubadour (Bob Dodgson’s YouTube channel)

For those who have enjoyed entering the ‘turn back time machine’ with Bob, RCSD has obtained his permission to rerun articles from Second Wind*, the much-loved Dodgson Designs in-house publication. We look forward to bringing those to you in the future.*

Finally, RCSD would like to thank both Bob and the AMA History Project for permitting the use of the AMAHP document as a source for this series of articles in RCSD. In particular, we would like to thank Jackie Shalberg, Archivist and Historian for the National Model Aviation Museum, for the assistance in making these arrangements. — Ed.

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