



THE STYRENE SHEET TWO

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A Publication of the SVSM Chapter of International Plastic Modeler's Society, USA



Billy, Ray, George, Pete, Gordon & Jim Together, Make American Great

Welcome
IN THIS ISSUE –



Modeler & Historian Jim Lund Takes Us On Journey Across Time, America To End Up On A Keystone Note !
(Feature Article Begins on Page 3)

“ OUR PRESIDENT DID HIS PART – NOW DO YOURS – GET OUT AND VOTE BEFORE IT MAKES NO DAMN DIFFERENCE ”

Thanks to “Club Fed” President Ron Bell, we now have a HUGE OPPORTUNITY this summer to VOTE FOR CHANGE AND MAKE IPMS USA GREAT ! I am not playing here, I am writing to encourage ALL who belong to IPMS USA to read the material available online and in the latest IPMS USA Journal as to our CURRENT ELECTIONS OPEN NOW which include NEW CONSTITUTION in essence



*Ron Bell worked very hard in his first term as IPMS USA (“Club Fed”) President, with Executive Action taken right off the bat to **FINALLY IMPROVE** what others only talked and talked and talked about...(sound familiar?) to permit more rational and intelligent bidding processes for the IPMS Nationals. Now he has, as promised in an earlier editorial by him, completed a radical (in that it had to overcome 30 plus years of basic morbid Executive Inaction) revision of the IPMS USA Constitution to make it a **WORKING AND ALIVE TODAY** Document. This is now **AN ITEM TO VOTE YES OR NO ON** right now ! And if you don't get why I am pointing this out so emphatically, I like he, know that it takes a minimum of 15 percent of the membership **TO MAKE IT COUNT AT ALL.***

As President Bell stated in his latest editorial in Journal, unless at least 580+ of you IPMS Members vote one way or the other, all this work pointless So PLEASE don't be like the macrocosm surrounding you, an electorate where the minority acts to elect and the majority whines about their election

Join Ron and myself in voting (we went with YES, you may vote no, it's mostly important that YOU AT LEAST VOTE WHILE IT MATTERS !!)

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- 21) “A LEG of **GEORGE LEE's LAST FLIGHT PLAN: KEYSTONE B-4A ON DISPLAY AT NMUSAF** ” by *M Burton* (runs to 25)

Chapter 3: Scratch Building Big, The Keystone B-4A

Text & Photos: W.J. Lund

INTRODUCTION – PROLOGUE

A bit of history - People, aircraft and events leading to the government's decision to make Keystone bomber the choice for Army Air Corps.



1929 vintage: The very pricey Curtiss B-2 Condor.

NOTE defensive machine gun positions behind the engines, Tough gunners hold on for hours amid prop wash and roaring engines.

(Ardpol resin kit from Poland)

Here we have a depiction of Billy Mitchell posing with Martin MB-2 bomber in 1921.

A demonstration flight of these MB-2's sent a battle ship down to Davy Jones' locker.

ITC (Ideal Toy Company) Model kit.



Ouch! “*No good Deed goes unpunished*”.

In 1925, Billy Mitchell gets Court-Martialed and booted out by both Army and Navy higher ranking brass.

Just look at all of those medals.

Then he had the nerve to sink a battle ship with an airplane. That was a definite no-no. He wanted a real Air Force, not the Army Air Corps and this pissed off the Army. Also His Air Force saw no need for the Navy to mess with aviation, and this pissed off the Navy. *What was he thinking?*

On September 18, 1947, the United States Air Force became a reality. Mitchell had been dead for 11 years.

Now that the Admirals and the Generals are happy, let's get on with the story. The military industrial complex had not yet been formed. The Army Air Corps wanted a viable bomber force. Congress would satisfy that need. The lowest bidder would get the contract. It was a substantial order. 25 Keystone B-4A (with P&W Hornet engines), and 39 Keystone B-6A (with Wright Cyclone engines). The little guys won. Lobbyists were few and far between.

No more history – Let's have some model talk.

Ray O'Neill visits Jim Lund in San Jose, Sept, 2010.



Ray lives on the opposite coast, in Long Island, New York. This was the second time they got together on the West coast.

Both times were impromptu.

The phone would ring, and Ray is in town and would like to drop by.

Both times were serendipitous. Reason? Jim almost never hangs around home, waiting for a call. He carries no cell phone either.

Ray is a soul mate.

Jim would go to great lengths to get together.

Years ago, Jim made arrangements to visit him in New York. Dates were made, re-confirmed.

That's how Jim does it.

While in N.Y., they made a call to Apple Valley, California, and made arrangements with Mike Herrill (*Execuform*) to ship 15 of Ray's basswood patterns for Mike to vacform. This is how Lund got the makings for the Keystone.

Ray has carved out *over 300* basswood patterns. Years ago, he offered them for sale to enthusiasts.

There was too much bitching and moaning - Not enough parts or details and such.

Ray said, to hell with them and pulled his stuff off the market. The only way to get his stuff is to go to New York with stuff that he wants for trade.

Lund just had to have a 1/72 Keystone, and Ray had the makings. Jim had to swap some of his precious kits to make the deal.



Here is the late, great, Gordon Stevens. He is the man that introduced O'Neill to vacuum formed model kits. Here Gordon holds his model from Ray O'Neill's kit. Unlike Lund's model, of the Hornet powered B-4A, his is the Keystone B-6A with the Wright Cyclones. Incidentally, Gordon is the man that taught Jim how to photograph models with a 35mm SLR camera. ***"You must be outside in bright sunlight, with the f stop at setting at almost a pinhole. This takes care of the depth of field problem, That way when you get in close the entire model is in focus."***

Nowadays, the modern high resolution digital photography allows holding the camera at a distance and then crop it down for the closeup to overcome the depth of field problem. Gordon took Jim step by step on the 35mm SLR, by snail mail between England and the west coast of America.

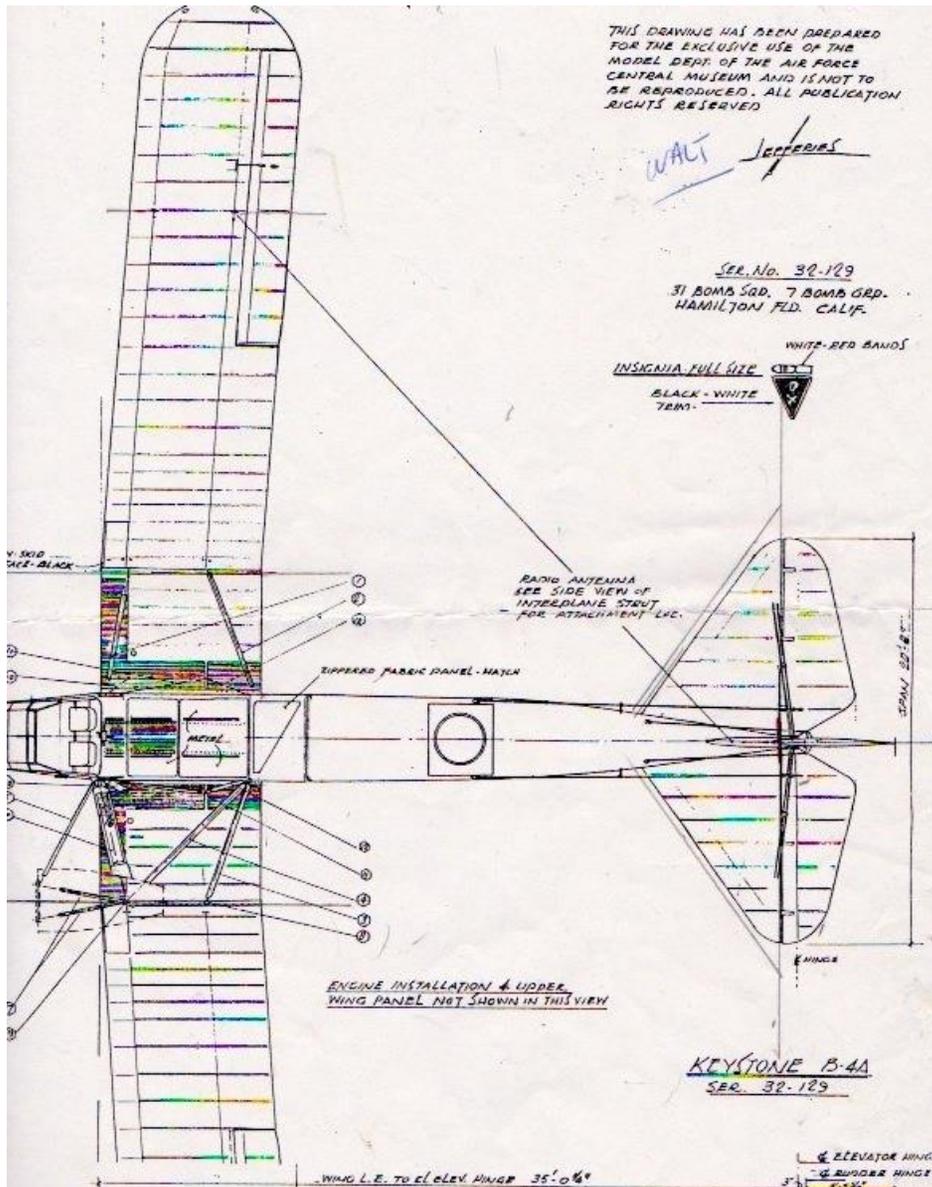
INSPIRATION:



There exists out there, a group of truly upper echelon scratch building modelers. Among them are: John Alcorn, Bob Rice, Harry Woodman, Bob Davies, Paul Budzik, Alan Clark, Bill Bosworth, Ron Cole, Arlo Schroeder and Peter Cooke, to name a few. It seems that all agree that the late George Lee (Bay Area resident) is the most revered of them all.

In no way is Jim Lund anywhere near the model maker George Lee was. His 1/72 scale model, inspired by Lee, is not a scaled down version of Lee's magnificent creation.

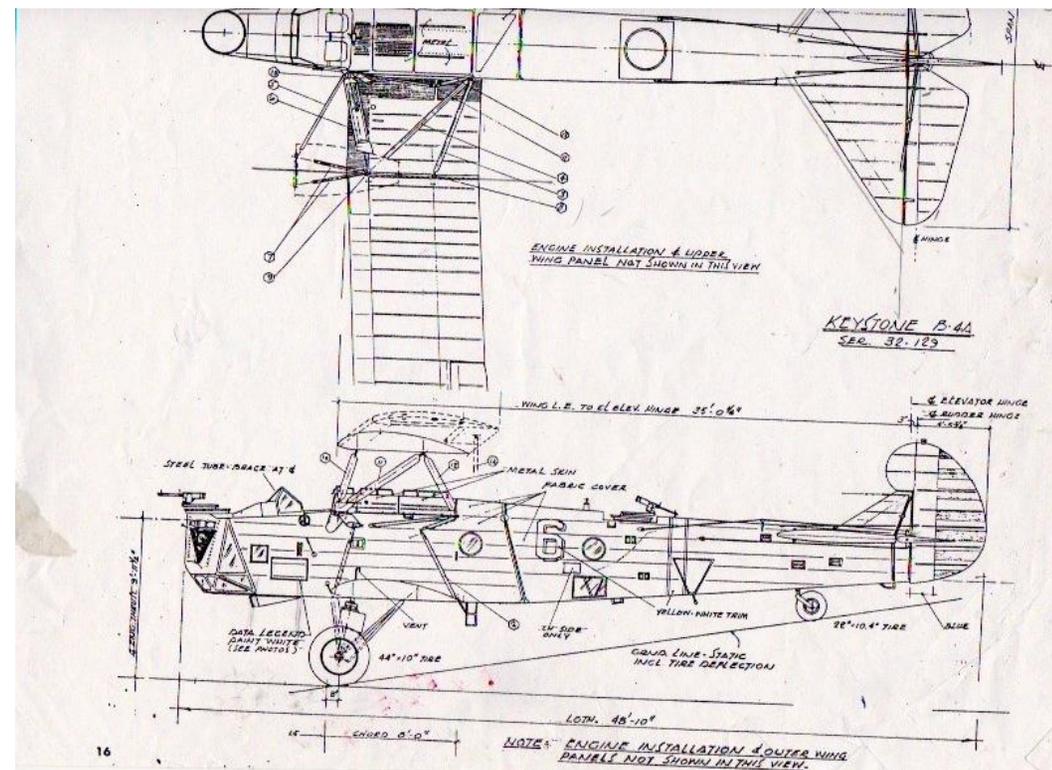
But with an eye on Lee's work, and the vacformed parts from Ray O'Neill, Jim feels that this is the best he has done.

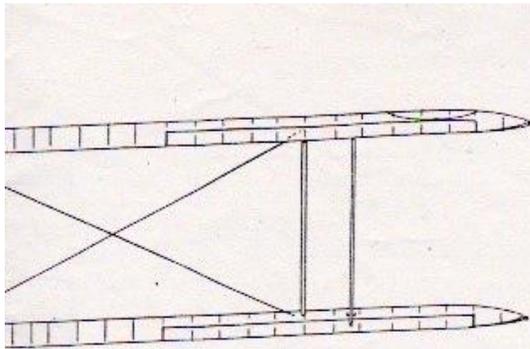


THESE DRAWINGS WERE PHOTO COPIED IN 1/72 SCALE BY RAY O'NEILL

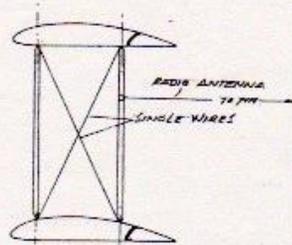
The statement on this drawing says it is not be reproduced...looks to me that it most certainly was.

I DON'T KNOW FOR SURE IF GEORGE LEE USED THESE PLANS FOR HIS 1/32 SCALE KEYSTONE, BUT I SUSPECT HE DID.

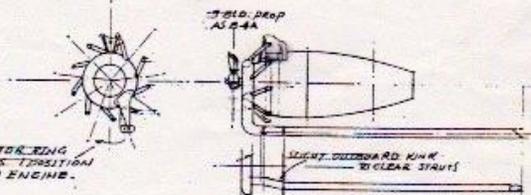




REAR STRUTS & WIRES
ONLY ARE SHOWN IN
THIS VIEW
TAIL NOT SHOWN

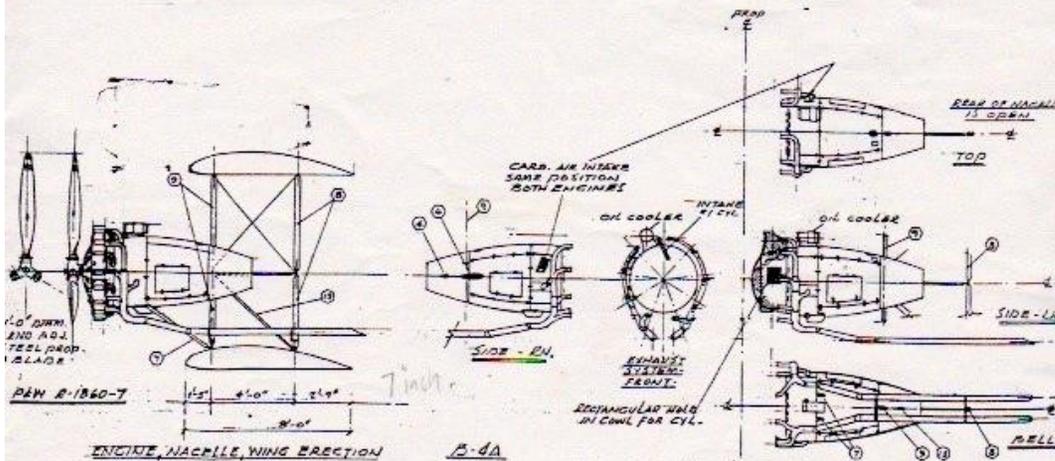


INTERPLANE STRUT ARRANGEMENT



COLLECTOR RING
ROTATES POSITIONAL
FOR ENGINE

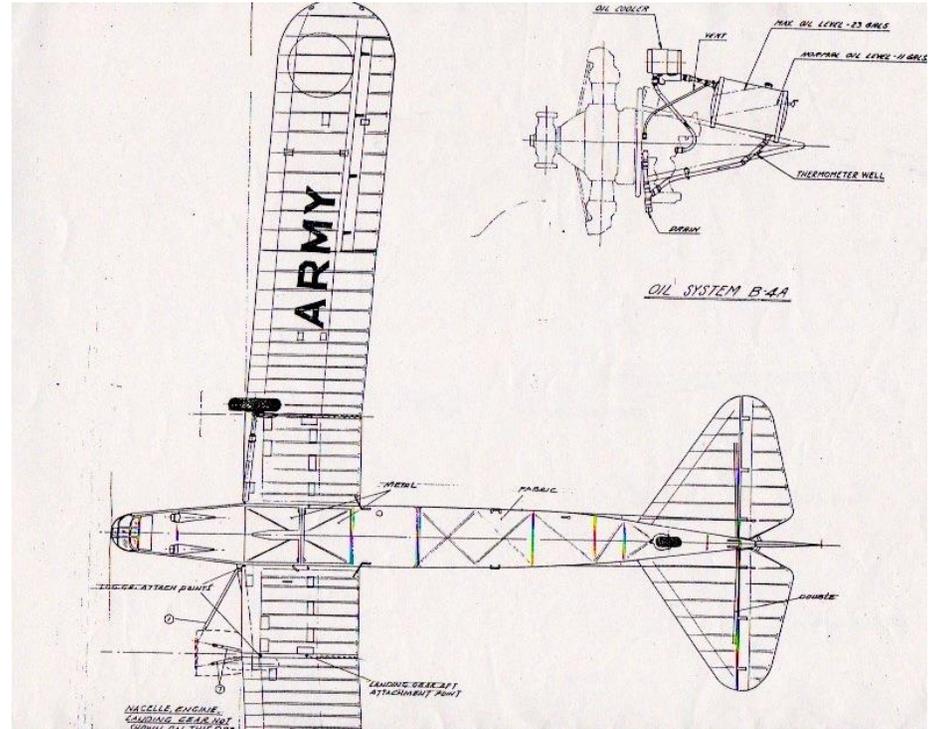
LH. EXHAUST SYSTEM
R-1820E H-6A
NACELLE SAME AS B-4A



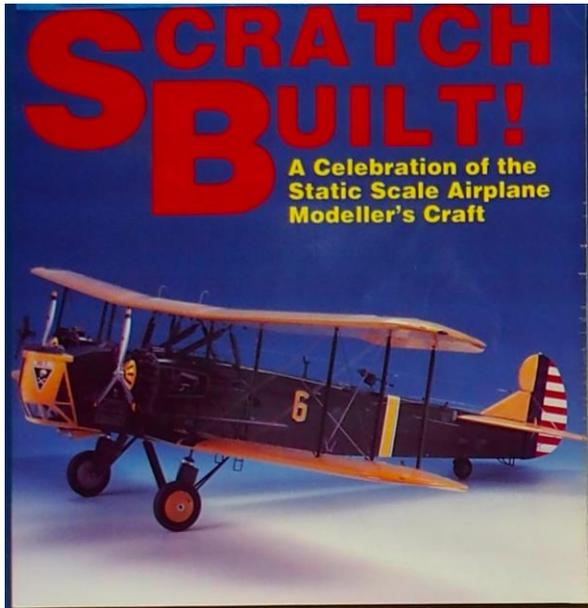
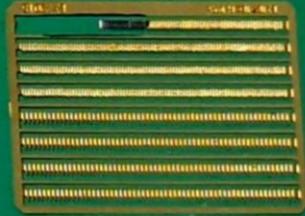
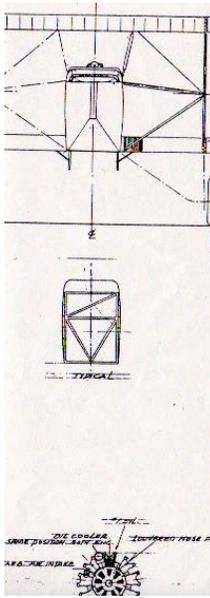
ENGINE, NACELLE, WING ERECTION

B-4A

NACELLE & EXHAUST COLLECTOR LH.
SQUARES IDENTICAL EXCEPT STRUT HOLES 4-6



OIL SYSTEM B-4A



White metal P&W Hornet engines, props, photo etched machine gun belts and gun sights. These were used with the O'Neill vacforms.

Inspired by George Lee's 1/32 scale master piece, sloppy Jim's 1/72 attempt doesn't look all that bad.
In truth, it's like comparing a diamond to a rhinestone.

(on cover, George Lee's 1/32nd B-4A, on the right, Jim Lund's 1/72nd B-4A)

JIM LUND's DETAIL SHOTS TO FOLLOW...



This shot is blown up to approximately 1/32 scale - here the crudeness is on display









LAST OF JIM'S DETAIL SHOTS. *NEXT WILL BE GALLERY OF JIM'S EXCELLENT "CONTEXT" PHOTOGRAPHY*
" Photographing your model is the greatest and happiest part of the entire effort of building it " - Jim Lund.



Here the Keystone B-4A is depicted on a visit to Burbank in 1936. The backdrop is a painting by Michael Boss.



Keystone B-4A from O'Neill vacform is depicted visiting Glendale, circa, 1936. Back drop is a painting by Mike Boss.



Keystone B-4A from O'Neill vacform.

Here we get another angle on the Michael Boss painting of the Grand Central Air Terminal in Glendale, California, in the 1930's



Keystone B-4 depicted on a visit to Moffett Field, when it was a U.S.Army Air Corps Base, Sunnyvale, (1935-1943). After the Navy traded for the Army's Rockwell Field in San Diego, 1935, Moffett Field became headquarters for the Western Flying Training Command and the home of the 82nd Observation Squadron... In 1943 it was transferred back to the Navy, for reasons concerning WW-2 tactics.

All of the work and effort to acquire the makings for the Keystone bomber has been relieved in today's model world. You can now purchase an accurate 1/72 scale B-4 resin kit, with all of the fine details and decals too.

Joe's Models in New Jersey, USA will send you this beautiful Choroszy kit for 96 bucks with free postage. This has been the story of my hobby life. Now everything seems to be available.

The one model that I have wanted right from the start, has been the Curtiss NC-4. Normally, I would have scratch built it. If I had done so, there would now be a kit on the market. For all these years I have resisted the scratch build and when my obituary shows up, somebody will issue a 1/72 kit of the Curtiss NC-4.

Author Jim Lund age 84, has been an active member of the Moffett Field Historical Society Museum since its inception and created a diorama depicting "The First Decade of Moffett Field", and also a display of USN aircraft 1911-1980. Of course, all models are in 1/72 scale.

- EPILOGUE

Here are Jim's original pages from his first (much earlier) rendering of the tale you just finished. Inside are some delicious enrichments of parts of the story (people and history) which this Editor felt were best read in context, in Jim's own words. (-mb)

By Jim Lund

BUILDING RAY O'NEILL'S VACFORM OF THE KEYSTONE B-4A

The U.S. Army Air Corps got it's first American designed and built bomber from the Glen Martin Aviation Company. Named the NBS-1 (night bomber short range). Billy Mitchell, the fire-brand Army Air Corps commander, used these machines to sink a German war reparationed heavy cruiser in 1921. Mitchell had set up the exercise to show the vulnerability of battle ships to aircraft. Mitchell wanted an Air Force separate from the Navy and Army. Army and Navy big wigs didn't want that. Mitchell's out-spoken honesty and lack of tact was taken as disrespectful arrogance. He was Court Martialed and drummed out of the service, but that's another story.

In the early twenties, the Martin and Curtiss companies were favored with government contracts, but in 1926 the tiny Huff-Daland Company won a contract for a single engined bomber named LB-1 (Light Bomber One) dubbed Cyclops and wound up getting all the bomber business until 1929, when the Curtiss B-2 came on the scene and again monopolized the bomber production.

Huff-Daland was re-organized and re-named the Keystone Aviation Corp. If you would call Martin the Cadillac of American Aviation then Curtiss was the Packard. Keystone would be the Model A Ford.

In the present times, when billions--yes with a "B", are spent on bombers with no real need, as with the Rockwell B1-B. That program was cancelled by President Carter, then brought back to life by President Reagan. Carter was right. The B1-B is one expensive dud. The next bomber contract went to Northrop for the B-2 "Stealth", which if made entirely of 24 karat gold, would be cheaper than the genuine article by far. You don't hear much about the B-2 these days, it's not too stealthy and and I thought too expensive to risk on the war on terror. I was wrong. Lately, I had the pleasure of meeting Bruce Hines, who was hired by Northrop to do the initial test flights. Since 1989, a lot of info has been declassified, and I learned that the B-2 had indeed been used in stikes on Afghanistan. Both Northrop and the USAF said the B-2 delivered ordinance were it was directed. By my reckoning, if they managed to hit an al Qaeda operative, we could call him the billion dollar man.

The corruption that pervades our congress was far less back in 1930-- the Great Economic Depression had given those good ole boys a conscience and they backed away from the costly Curtiss and Martins and awarded a big contract to Keystone for B-3's, B-4's and B-6's. A total of more than 136 Keystone bombers were produced between 1929 and 1932, and then the speedy, sleek Martin B-10 won the new bomber contract and Keystone was finished for good.

THE KEYSTONE B-4A MODEL

There were several personalities involved with this model, all of whom will be mentioned. Firstly, Walt Jefferies was commissioned to draw plans for the Keystone B-4A, for the model department of the the Air Force Central Museum back in the late 60's. In 1970 Kenn Rust, editor of the Aero Album series, was allowed to publish these plans in Vol 18 Summer, 1972. Pete Bowers contributed the text.

It was about that time that New Yorker Ray O'Neill came upon a model airplane kit that was totally different than any he had seen. Named RAREplane vacforms. The product was created by an Englishman named Gordon Stevens. Gordon had discovered a fast, inexpensive way to produce a plastic model kit. Vacuum forming styrene over a carved wooden shape. Ray said, "I can do this" and used Jefferies plans for a 1/72 basswood master of the Keystone. Ray loaned me this master and expert vacformer Mike Herrill made a copy for me.

I have found inspiration in the Great, Late, George Lee and his models. George was one of those guys who possessed modeling skills to the max. Lee built a 1/32 model of a Keystone B-4A that was stationed at nearby Hamilton Field. This model was featured in a book named "Scratch Built!" I admired this model and yearned to have one in 1/72 scale for my collection. The time had come to build it.

I relied heavily on the Aero Album info and the photos of Lee's B-4A in "Scratch Built!" I found wheels, Browning machine guns and True Details photo etched sights and 30 cal gun belts in my spares box. Aeroclub provided white metal Pratt & Whitney R-1860 Hornets and 3 blade props. I made the exhaust manifold and tail pipes from solid core aluminum solder. The rest, seats, controls etc. were scratch built.

This was not my typical quick build. Had to make assembly jigs, and for strength had to build struts around .015 steel wire. This was all fiddily work, but it had to be done. The fuselage, wings, tail and nacelles were airbrushed and decaled before assembly. It was then rigged with stainless steel wire .010 dia from Detail Associates, box 5357, San Luis Obispo, CA.

The result is that I now have 1/72 copy of George Lee's captivating Keystone. I know I'm not in the same league as George, but if you don't look too close, my B-4A looks just great. Also, I must not forget to thank the late Peter Bowers for his definitive article on the keystones. Pete's prolific contributions of text and photos have helped answer this model historian's many questions.

This chapter of BUILDING BIG # 3 is finished. - WJL fini

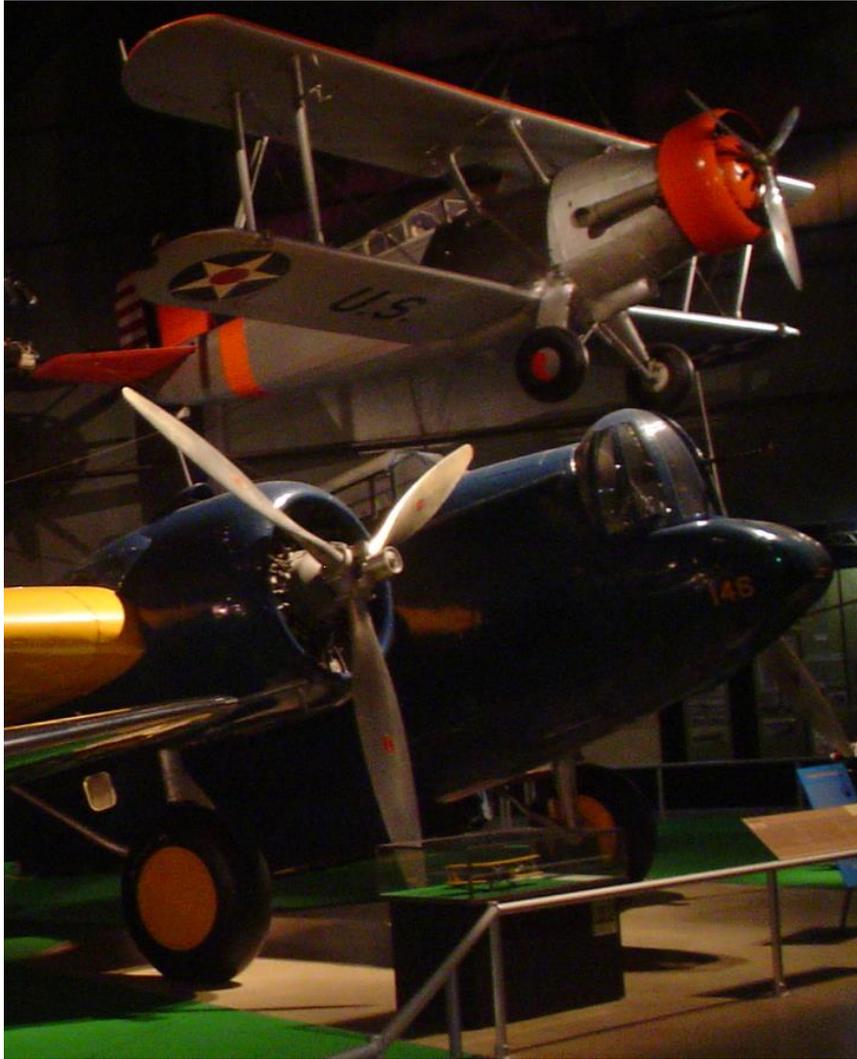
ADDENDUM

This Editor in Summer 2009, managed to visit for his second time the Dayton OH located National Museum of the US Air Force. Like his first time during the Summer of 1997, due to attendance of the IPMS-USA National Convention and Contest, “*he was in the area, so why not?*”. Unlike ’97, this time he came fully armed with two digital cameras at the ready and with two full days of diligent (albeit in his own way, lazy) effort, got pretty much pictures of most major exhibits at the time.

One of these he managed specifically to shoot enough to guarantee one day (such as this) he’d have a bit suitable material for was of course, the very model which inspired Mr Jim Lund’s effort. Yes, George Lee’s Keystone (Huff-Daland) B-4A in 1/32nd

At that time, it was easily enough located in the “between the wars” hall, in a marvelous wood/glass display case of honor, put in front of the “Martin B-10”, the USAAC’s “first modern bomber warplane”. Which, like the Keystone B-4A, actually wasn’t a survivor of growth pains of the nation. The “B-10” is a rebuilt export Martin 139WAA, courtesy of an Argentine Air Force ground crew training airframe which Argentine Government formally donated to the USA Government, in 1970. After being “restored”, the “B-10” went on display at NMUSAF in 1976. The Keystone B-4A joined the collection in 1997 as you will see.





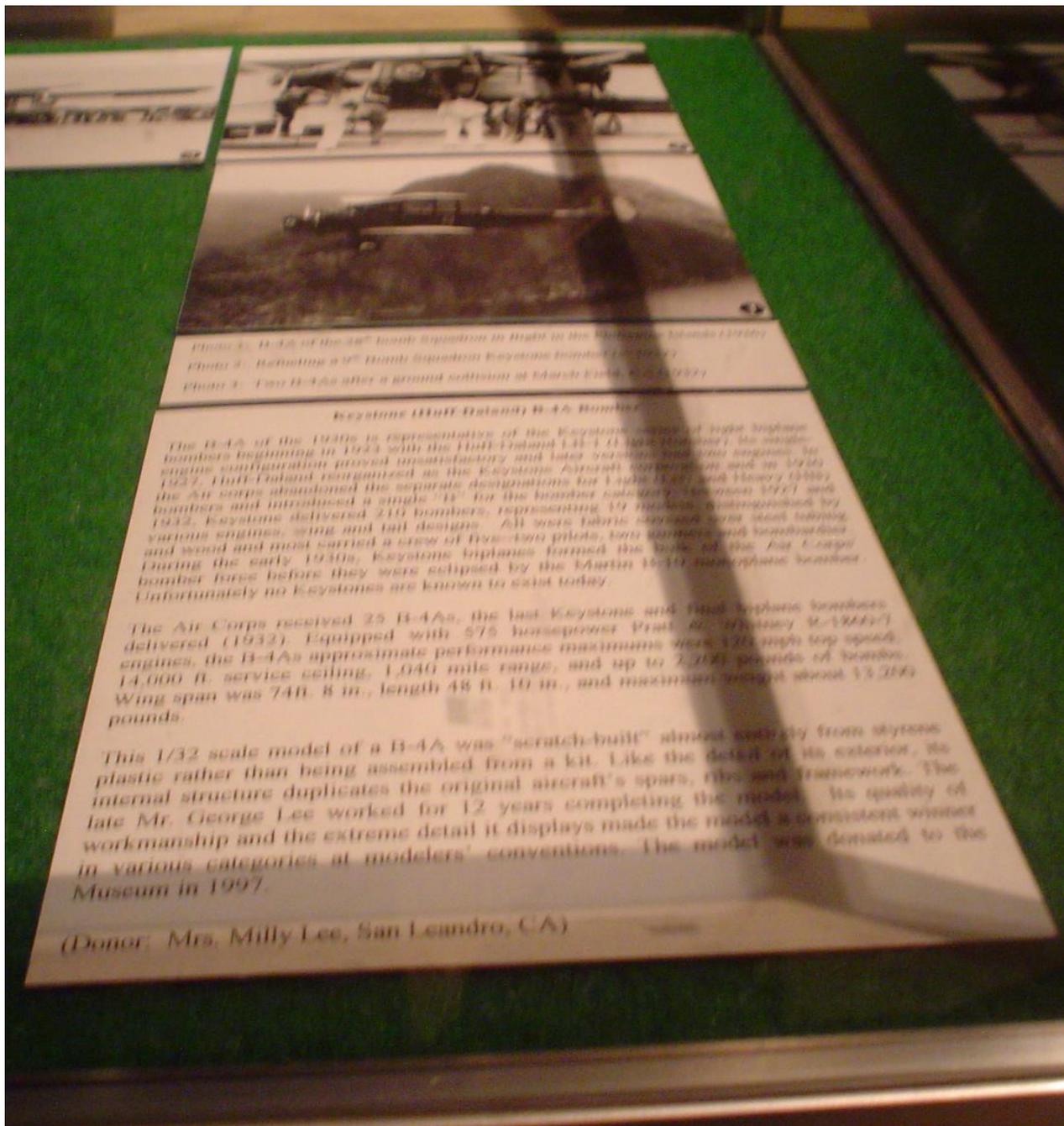
JUST TO MAKE SURE YOU CAN SPOT THE " DISPLAY " IT'S IN FRONT OF THE PROP BLADE "LEG" OF THE " Y "

JUST IMAGINE WHAT YOU SEE BEING 32 TIMES BIGGER FOR COMPARE TO THE B-10 WHICH OBSOLETE IT !

The following will of course be a more respectful and complete context shot of the full display case, right in front of B-10



And of course, there's a smartly presented briefing of the real aircraft with photos, history and specs, along with model bio, which is clearly visible on the right hand side of the display. With the identification placard leading your eyes right to this.



The last paragraph and final sentence prior to “tech specs & deliveries” Section which bridges to “model part”, I will reprise here.

Along with “model” paragraph in full, as it’s no easy read:

During the early 1930s, Keystone biplanes formed bulk of the Air Corps bomber force before they were eclipsed by the Martin B-10 monoplane bomber
Unfortunately no Keystones are known to exist today.

(tech specs & deliveries section)

This 1/32 scale model of a B-4A was “scratch-built” almost entirely from styrene plastic rather than being assembled from a kit. Like the detail of its exterior, its internal structure duplicates the original aircraft’s spars, ribs and framework. The late Mr. George Lee worked for 12 years completing the model. Its quality of workmanship and extreme detail it displays made the model a consistent winner in various categories at modelers’ conventions. The model was donated to the Museum in 1997.

(Donor: Mrs. Milly Lee, San Leandro, CA)

So, again thanks to the passionate efforts of a modeler who loved his subject, others now may appreciate “ that which survives ”



Much many thanks to Jim, Ray, Gordon, George, Billy and their kind. For that passion & perseverance is what makes for greatness and great living

- *mb fini*