

Joe Richardson: This chronicle goes back to about 1930, when I happened to see my first model airplane, which was an ROG. I don't know if you were initiated into these little strange extreme terms, which means rise off ground. From that time forward, I pursued the gaining of skill in making model airplanes of all different types until finally in the early '30s I was getting rather proficient at it, especially at the type of model which in those days was known as the speed model. These were very high performance models even though they were rubber powered. It was just a matter of cramming more rubber into them and they would go. Man, I tell you they would get up 40, 50, 60 miles an hour, and you really had to be performing at the time.

Roy Houchin: When you put that rubber in there, of course they probably won't know what you mean. Did you just reloop it inside?

JR: Yes.

RH: From the propeller to the stock piece in the back?

JR: Yes, depending on the number of strands you put in would depend on how strong the motor was and how fast it would run out and all those different things. The less rubber the longer the propeller would run, but this airplane by the same token was a trade off arrangement. If you wanted speed, you had to cram rubber into it. We used to perform, by we I mean this was the Premier Model Club that was part of the organization which had been set up by the Los Angeles Times newspaper and the Los Angeles Playground Department. Each of the playgrounds had little clubs which taught how to build model airplanes, and so forth and so on, and air dynamics and all the rest of it. And periodically there would be contests and these contests would be for better builders who in turn were rewarded with various types of little pins that they used - the bronze, silver, and gold much like the Olympics, only they were very small. But they were much in demand of course, because they indicated their skill as a model builder. I can say that I achieved the honor of becoming part of the lead, top model group within this organization, along with two people which I'm sure most modelers have heard of before, namely Bill Atwood and Erwin Olson. I knew both of these people intimately. There were, of course, others in the club. There was a fellow by the name of Lynn Pratt, another one's name was Harry Lee. There was Gil Westfall. The whole airplane program was run by a fellow of the name of Elwood B. Chandley, who had worked for Jack Northrop one time. We were selected to put on exhibitions at a number of events, one of which was the 1932 Olympics, which took place in Los Angeles. The particular event that I am referring to took place in the Rose Bowl, which was the scene of the non-Olympic event which was ethnic

dances from countries all over the world. We also put on an exhibition there, because it was an evening affair. We were also invited to participate or to exhibit or to fly our models, to be more exact, at the 1935 Air Races, which was held at what was then known as Minesfield, which is known as Los Angeles International. At the time of the 1935 Air Races, the entire North side of the air field where all the terminals are now were nothing more than bean fields, and I think one or two little commercial establishments along Central Boulevard. Of course today you can't even drive along Central Boulevard, in fact the city's fathers are anticipating double-decking it so they can get more cars to run. But nevertheless, that's all beside the point. The point is we were a very top-notch group and my skills increased accordingly along with being part of this arrangement.

RH: What was the name of the group?

JR: They were known as the Gyrofalcons, which was a rather ephamistic name but it, nevertheless served the purpose.

It was in this period of time from 1930 to 1935, that Herman Olson started his model airplane engine business. I don't recall the name of the street, it was downtown L.A. He had a little store front where he would assemble the engines. He worked all by himself. He didn't have any crew or anything. All his work was placed by subcontracts. He would assemble these engines and he was retailing them and selling them in the store front. Of course, he was also wholesaling too - to various model wholesalers. I don't know what you call them, but people handling model supplies. We were just beginning to get started then. There was a few already in the business at that time. I bought one of his original early engines. It bears the serial number 1303. I'm fairly certain that he started the serial numbers on his engines at 1000, which means this was probably the 303rd engine that he had actually built. I still have the engine. It's still in pretty good shape, it hasn't been run very much. It's ingition type. It has a clamp on by pass - and so forth. It's one with a pretty good size prop; I think about a twelve inch. It's a 60, Olson 60. This was quite some time before he hooked up with Mr. Rice, who was an airline captain who went into partnership with him when they became Olson and Rice. This is a little side thing here. Olson and Rice made out very well during World War II because of the precision equipment they had accumulated in order to make the model engines was ordered and used for other purposes during World War II. And as a result, they probably made more off of that than they had made off of the engines. I'm not sure exactly how that all worked out. I might mention that some years back, there was a reunion of the Gyrofalcons and Erwin Olson showed up and he was

hardly recognizable to me because of the fact he had almost tripled in weight, body weight. And when I knew him he was a stringbean and when I saw him again, he was a rather rounded out person. He was also at that time in the Long Beach area of California, manufacturing - known for the trade of squibs. The squibs are the explosive devices such as used in spacecrafts and satellites and so forth. The panel has to be blown off the explosive base - these are called squibs. At least that's the business he was in at that time. I don't know what he's doing now. That's been quite a few years ago.

So, any way, this is more or less my credentials as far as model building is concerned. It goes back, like I mentioned before, to as far as 1930, to the year 1935 or 36 and almost up to World War II. Now, it so happens that when I graduated from high school, I went to work in shops and am financially well off and was a Douglas Air Pilot where I spent quite a few years. Towards the end of my shop experience with Douglas Aircraft I spent two and a half years in the model shop which was the wind tunnel section - the research and development section of Douglas Aircraft. We built the models which were used in the wind tunnel which was then located at the Cal Tech Institute of Technology in Pasadena and on several occasions I've gone - we always rotated the people who go up there. There was one such occasion they wanted off and saw the big lens of the Palamar telescope also under construction at that time, and it was in such a climatically controlled environment that no two people could be closer than four feet to any one plane because it would destroy it. It was a huge, huge thing - 200 inches in diameter. You can imagine how big it is. Some time later they took it down to Mount Palamar to the observatory. But any way, I learned quite a good deal about precision work in the model shop, especially when you get into supersonics. In those days that was really all you could do. All in all it was a very interesting time in my life in learning this. It was from the model shop that I made my final step from the shop to engineering where I spent the next ten or twelve years in aircraft design. All in all, I had a long and interesting career in the aircraft business and I finally graduated into the aerospace and a lot of that I had to start all over again. I went on to various things after that. Along the way I happened to pick up my private pilot's license with 200 hours, which is sufficient for commercial tickets although I never had any ambition to be a commercial pilot. I just liked to fly just for the fun of it. I also got side-tracked in the sports car tour and was involved with it for a period of time. I'm still involved with it to a certain extent. I'm not completely out of it yet. I still own three Alfa Romeos. I mentioned that I got into, I was in aircraft for quite some time up through and including the Korean crisis and at the time I was working for - this was 1951-52 - I was working for an aircraft company, hired as an engineer. And they were also involved in the experimental military aircraft - small, small ones - mainly to be used for ground support aircraft and things like that. There was an experimental aircraft developer, and one day the boss came to me and he said, "Well, we need someone to do all the buying

For all of this, somebody who knows airplanes. You know airplanes, so you're it. And we had rented space in a little private airport in the Sacramento Valley and had some space in a hanger out there to build this airplane. It so happened that I had a friend that had a PA-11 Cub, he parked at the same airport and he told me that any time I wanted to use it all I had to do was put gas in it and I could go. That made it very convenient for me. I would call up, around various airports in the neighborhood, and on one occasion the Helicopter Airport. We were out in the Sacramento Valley. It makes it a little distance to oh, somewhere around thirty or forty miles. I was looking for a particular type of fuel gage to use on an airplane and they happened to have them there. It was surplus type up there. I said okay and I gave them a purchase order number and ran out, cranked up the PA-11, take off, fly down to his airport, pick it up, and bring it back. You can't expedite any faster than that. I got a big charge out of it because I could do all of that during working hours. So, I also had a pick-up truck at my disposal with a two-way radio which I used quite frequently. I was also hooked up to a plant dispatch. We could talk back and forth in preference to using the telephone for faster action - so we could get a fast reaction. So, that was one thing and from this experience as a buyer I later became, when I got into aerospace I took some in-house training and procedures - purchasing procedures and one thing or another, and became rather proficient not only in this placing outside production - orders, purchase orders - but also subcontracts. They're an entirely different thing. You negotiate, you talk many of them through, and it all has to be approved by the resident government employer, the officer. And all such things as that. At one time, I was carrying more than three million dollars worth of top secret equipment and the particular thing we were working on at that particular time was the spy satellite. This was one of the early series and we pick up ground firings - rockets - by means of infrared protection. It was a classified arrangement and I carried a secret clearance. I negotiated with some people with very large corporations for their services and on one instance, there were only two people in the whole United States who manufactured the infrared detectors which at the time, were required for our operation. So therefore, in order to assure that we would have enough detectors, we had parallel orders - \$300,000 each - to produce these things. And that either of the two places that were making them - they only got a ten percent yield on all of these they made. And of the ten percent that they sent us, we would reject all but maybe ten or twenty percent. So you can see they were rather expensive little gadgets. Then, on top of everything else, half way through the program, one of our engineers decided to change the insulation on the wiring so they had to go back and start all over again. On another unit, which was a type that needed fully production dried. We dried it through a sealed unit, in other words. In satellites, certain portions of it have to be sealed off so that they can operate under normal atmospheric conditions, whereas if they were open to atmosphere - We're talking

about absolute vacuum, such that other conditions are sometimes detrimental to what you are trying to accomplish. This was a proprietary thing. It was owned by United Shoe Machinery Corporation, in Cambridge, Massachusetts. I wrote a contract for them that was - one was made for a straight delivery and the other one was for a frequency strength. I think that when I finished with all the papers that were involved with that, they had a document that told me - which was some where between a half and three-quarters of an inch thick - and when the contingency of the thing there was provisions and therefore - chartering a private aircraft and everything else, moved stuff around for delivery. I was really part of a big team. I was in this whole thing - very interesting thing, very exotic - everything was young and stable. We - nobody had ever made any of this stuff. That's the type of thing that I enjoy.

To go back to that period of time between 1930 and 1935, I may as well include some comments about the pilots of that time - which there were quite a few of them around Hollywood, who depended upon, mainly, the movies for their livelihood. They were such people as Garland Lincoln, Dick Grace, Paul Mance, just to mention a few. There were many others besides. They were of course, as everyone knows, a big depression going on during that time. There were a few of them who had accumulated down at Rogers Airport, which is now a quite large shopping center in the area of Los Angeles known as the American Park. They all managed to scrape together a few dollars and they bought a surplus Douglas M-3 mail plane which had a large cargo section and a place for cockpit in the front. And they soon got provisions for a single open cockpit pilot. The whole purpose of this particular airplane was that anybody who had a part of it or owned part of it was entitled to borrow it when he was absolutely flat broke and had to have some money. He could fly this M-3 down to Mexico and could return with one of two different cargoes. In the first place, the cargo section of the airplane would hold something like ten cases, which was at that time of course illegal whiskey or whatever, or it would also hold about four or five Chinese, who usually come up with a pretty substantial sum of money to be smuggled into the United States. That's when we had very tight quotas on immigrants. The Chinese were, you realize, more of a profit, somewhere around six hundred dollars profit a trip. Whereas with the liquor, even though it was much safer, you would only realize somewhere about four or five hundred dollars. Of course, that was to tie them over for a while any way. But the thing is that various things happened which only these people can relate because they were involved in it. I do know of one incident were this particular person, who is now dead by the way, so I think I can mention his name without causing too much of a hassle - his name was Charlie Bath. In later years he owned a surplus aircraft, supplied business out in Southern California. On this particular occasion he had elected to bring back some Chinese, but closer he got to the border, the more worried he became so he decided he wasn't going to take them.

across the border at all, landed in the dessert and told the Chinese that they were in the United States and that they were on their own. This one Chinese didn't believe him and pulled a knife on him. And as a result, Charlie Bath lost the use of his left hand. For the rest of his life he wore aglove on that hand. But that is a little side thing.

Then along came Howard Hughes and his desire to get into the movie industry by means of an epic World War I aviation movie called Hell's Angels. For the first time in a long time, most of your, even all of your movie pilots were eating regular because they all had regular jobs. A number of interesting things happened, they actually built replicas of German and French aircraft and British aircraft and actually flying replicas. Various places in the production the airplanes were shot down and so forth and so on. There was a lot of stunt work going on. Some of it was fakery, well most of it was because, after all, we hadn't used any pilots. There was one incident where there was supposed to use a German bomber. It was supposedly shot down and something went wrong. I don't know what it was, but the pilot was a man by the name of Roscoe Turner, who you probably heard of. For some reason or another he did not give the order to jump to one other crew member aboard the bomber. As a result there was some one in the bomber and was still in it when it crashed and was killed. As a result of this, Roscoe Turner was more or less ostracized by his peers and his co-pilots. They always turned their back on him and had no use for him whatsoever. Roscoe Turner was kind of an exhibitionist. He always wore military type of uniforms and a little military type of mustache. For a long time he was chief pilot for Gilmore Oil Company and carried this lion cub around with him wherever he went. He also attempted a couple of cross country records and one thing or another, but he never actually lived down the estigma of what happened during the filming of Hell's Angels. I don't know, I think he's possibly still alive. I haven't heard of his death. If he has died I don't know. He was a very colorful part of the Golden Age. There were others. There was Benny Howard who built racing airplanes. There was any number of backyard designers and builders who had more racing planes that they raced in the Pylon races. There were military pilots who were well known for their exploits. "Hap" Arnold was one of them. Richenbacker was another one of course. Most of them were famous people in their own right plus the fact that they also participated in these grueling events such as Bendies and the Thompson Races and so on and so on. Cross country races, closed course races, and you can name it, everybody was trying everything. The men who lost their lives were pioneers and this was something that was expected under the circumstances. There was the barnstormers that brought up the old surplus Jennys and put on air shows at the county fairs and what have you. I can recall an instant where an enterprising pilot wanted to take up people for rides at five dollars a head, which was pretty steep in those days. He always carried a little box of dirt. Whenever one of his prospects said he wanted to keep one foot on the ground.

SIDE TWO:

JR: ...one before in the rear cockpit the passenger sat, he said - you could keep one foot on the ground and one in the sky. So, all in all, the Golden Age of Aviation was really something - all kinds of things were going on. They were establishing endurance records and they were establishing altitude records, speed records, any kind of record whatsoever. Every so often someone would go out and try to beat it. Of course the thing that gave the Golden Age its real kick-off was Lindbergh's flight across the Atlantic. It caught everybody's imagination and made a new national figure out of him and gave aviation a tremendous boost.

As an additional fill in on the aerospace activities that took place in the 50s and 60s, this particular project I was working on when I got into aerospace as a subcontract administrator, was the Minus Program which was one of the early spy satellite programs - one of the very earliest that employed the use of infrared detection to detect any place in the world where a rocket was being fired, any to our knowledge. The whole idea of the thing was to buy something like thirty minutes of time on ICBM news to win back initiative. There were a number of other thing this particular project, off course this one had been classified for quite some time now. But at the time it was rated a secret project and the principles of it were not to be revealed in any manner. It was all very strictly guarded. And they went to the extent of putting up a building and contents which were strictly off limits to almost everyone except for those authorized to go in there which cost the government somewhere, or the airforce, somewhere in the neighborhood of two hundred dollars just for the building and contents alone. And it wasn't that large of a building and it wasn't exotic equipment at that time, and everything was going along pretty well as far as aerospace was concerned. Southern California was pretty much the center of that sort of thing as well as the airplane industry itself. All of a sudden there came a cancellation on the Sidewinder, which was an airborne missile, an air-to-air missile, and there was quite a bit of walk-off from that, some layoffs and one thing or another. Then the SST was shot down. Even though it wasn't a civilian project, there was government money involved in it. And there was a big stake in the aerospace industry was losing the money from that and the government was a big flop-out of material. It seems like having been involved in contract administration - government contract administration - is rather strange, remote. But when there is a cancellation of a government contract in anything, it usually costs more to cancel the contract than to pay off all the obligations of the contract. It usually costs more than it does to go ahead and complete it. To this extent, this is what actually happened on the B-1 contract as well. The B-1 is, in my opinion, a very necessary thing for the defense of this country. I hope we see it reactivated. But I have been to what is now Rockwell Industry, Rockwell Airport division, which was at one time

American Aircraft. I have been to their plant and I have seen the tons and tons of titanium material, that is very, very exotic and expensive material just laying on the floor that's been paid for by the government. Just sitting there. It now belongs to Rockwell to do whatever they wish to do with it. If they save it for the possibility of the B-1 being reactivated then they'll be in good shape, because they can rebuild from that material. But the way it stands right now, if they had gone ahead and completed the five aircraft which they initially anticipated to build in the B-1 contract, it would have cost less than the cancellation. Then the three or four they were required to build.

There have been other low-blows, so to speak, at the aerospace industry which more or less put the whole situation down the tube. As a result, we had engineering doctors pumping gas. There just weren't any jobs in that particular category. It was either that or starve. People with doctorates in engineering and physics, aerodynamics and all the rest of it - here they were out pumping gas. It's a sad, sad situation. It seems like, I don't know just how it all came about, but our particular government is the type for a long time they'll stick their head down in the sand and then somebody runs up, "Where is everybody?" It's a sad comentary on our times but then usually, somehow, they usually get their heads unstuck just about the right time to get started on the thing when it really becomes necessary. I think at the present time we're right at this point now where we find it's going to be necessary to continue with the B-1 and various other projects which have been shelved. A good deal of this of course is due to the student activists of the '60s, a very short-cited lot of people in my opinion, in that anything that had to do with war material or anything like that had to be avoided at any cost even if we had to be conquered by another country, it was to be done. Which to me, was a very, very sad way of looking at it. Of course all of this was brought about mainly by being in Korea and Viet Nam. I can understand the feelings on those two actions, but at the same time the entire picture was also going along with it. The whole thing is - I believe it was Washington, no Roosevelt, Theodore Roosevelt, he made the remark, "Walk softly, but carry a big stick." And Washington admonished after he became president he says, "Do not become entangled in foreign affairs, but always be strong in offense." I think that is about the best advice that anybody has ever given this country, but people seem to be pulling against each other and knocking their heads against each other and for some off retired thing which we're not increasing civilization and yet where we can actually do this. What I'm saying is that we really have some more developing to do yet before we get to the point where we can live in peace. It might take a hundred years, it might take five hundred years, but somewhere along the line it will come. Too many people and too many different ideas - too many people are grasping at power, too many countries are trying to shove other countries around. The big ones are

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shoving the little ones and trying to take them over and everything. The time isn't right yet. The only thing you can do is try to stay out of trouble, but be prepared in case trouble comes. That's the whole philosophy as I see it right now. I think aircraft can play a very vital part in all this. The idea that missiles alone are going to be running the next war is not true. Because, I don't care if you flatten whole countries by means of atomic bombs, in order to occupy that country you'll have to send people in. Send people in means ships, airplanes, what have you. You can't rocket troops in, it just won't work. So, those are more or less my observations on things in the future. Somewhere along the line this whole mess will get straightened out, hopefully.

END OF INTERVIEW.