

PREMIER ISSUE

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CELEBRATING 50 YEARS OF MODEL ROCKETRY



SPACE AGE LEGENDS:
EXCLUSIVE interviews with
VERN and **GLEDA ESTES**
and **Centuri's LEE PIESTER**







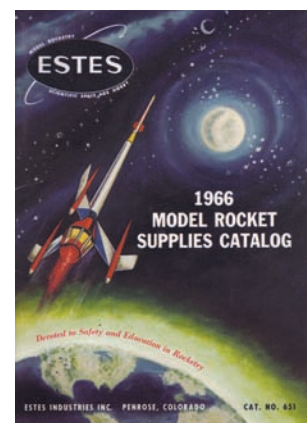
SPACE AGE LEGENDS

VERN AND GLEDA ESTES REFLECT BACK ON THE HEYDAY OF MODEL ROCKETRY

It has been nearly five decades since Vern and Gleda Estes founded what has become the most famous model rocket company in the world. At the height of its popularity in the late 1960s and early '70s, Estes Industries had more than 1 million customers—most of whom ordered their kits though the mail.

The firm was known for outstanding service to young modelers, who eagerly awaited the debut of every rocket and counted down the days until the new annual catalog arrived. It was a time before home computers and the Internet, before DVDs, before iPods, before cell phones and before video games. It was the space age—and model rocketry allowed kids to be active participants in it.

The Estes family long ago sold the company, but they remain active in model rocket activities, particularly in their support of the National Association of Rocketry. From their home in Canon City, Colorado, they took time this summer to answer a wide-ranging number of questions from Mark Mayfield, editor of LAUNCH. ➔



Estes catalogs, like the 1966 version above and the 1967, '69 and '71 versions, left-to-right, below, have become collector's items. Opposite: Vern and Gleda Estes pose for a Smithsonian Museum portrait. Vern is holding his favorite model, the Big Bertha.





Vern Estes explains cluster ignition procedures to young rocketeers during a meeting of the Astron Rocket Society in the late 1960s.

Launch: Vern, 2008 will mark 50 years since you invented the first automated model rocket engine manufacturing machine—which you named Mabel—and founded Estes Industries. Your name became so synonymous with the hobby that many people began referring to all flying models as “Estes rockets,” whether they were manufactured by Estes or not. And not only that, but your models are now in the Smithsonian museum, some of your customers became astronauts, and frankly, you were more famous among a lot of kids growing up in the 1960s than any sports or film star. Did you ever think it would lead to all of this?

Vern Estes: No, when I hear this from credible sources I still have a hard time believing it to be true. I think our success had a lot to do with the way we treated our young customers. They were the future of our country and it was important that our programs and efforts helped them keep all of their body parts intact and their brains focused on how they might participate in our future space activities. Of course, many of our customers came along, flew a few rockets and then moved on to something else in their lives. A large number, however, went on to be directly involved in our space program or in other related business or scientific endeavors. I get a lot of satisfaction in knowing we helped, at least in some small way.

I know that model rocketry has provided a lot of enjoyment to many rocketeers as I have seen the expression on the faces and heard the “WOW” when they built and launched their first rocket. It is the expression that comes from seeing that rocket zoom sky-

ward and knowing that it was his own creation and effort that made it happen. Just as I remember my amazement when G. Harry Stine demonstrated his Aerobee Hi to me almost 50 years ago, most rocketeers will remember the feelings they had at the launch of their first rocket

Launch: How soon after you watched that first flight did you begin designing “Mabel?” How long did it take to build “her?” And how many years did Mabel operate?

Vern: I first met Harry in May 1958 and began building Mabel in July. She was completed and ready for initial production in December of that year. Mabel I met all of our motor production needs from December 1959 until Mabel II came on line in 1967. She did a good job and kicked out millions of model rocket motors before her retirement.

Later Mabels (II, III, IV, etc.) took advantage of the “experiences” of the original Mabel and were faster, safer, and more reliable. As these new machines came on line they first added to the production of Mabel I and then took over completely when Mabel I retired. Production capability caught up with demand about the time of the Damon acquisition, permitting her retirement.

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Launch: Those rocket motors that Mabel made were reclassified by the metric system in the late 1960s. Any particular technical reason for that, or did it have more to do with the push in America, at that time, to move toward Metric?

Vern: The initial efforts to make changes to the metric system were instigated by G. Harry and the NAR. I agreed the changes were desirable and followed their lead. I believe the immediate need to make the changes was related to the internationalization of the hobby.

Launch: In the 1960s and '70s, you must have received thousands of letters from young people who were obsessed with model rocketry. You also had a unique rapport with them through your “Notes from the Boss” column in *Model Rocket News*. I understand you’re writing a book about all of this. Can you tell us a bit about it? And when will we see it published?

Vern: I began the book about 10 years ago and at that time completed an outline and a preliminary draft of the first three chapters. Other events in my life then came along to delay the project. My



expectation now is that I will be able to finish and have it published in a couple of years, maybe sooner.

The proposed title for the book is *Dear Mr. Estes*. This title comes from the use of many original letters, excerpts of which begin each chapter. My responses to these letters then take the readers through some events in my early life, the founding of Estes Industries and our subsequent efforts as we worked with our customers to establish model rocketry as a popular hobby in our society.

Launch: Gleda, were there any letters from rocketeers that you remember that gave you an instant smile, or laugh? And any that brought you and Vern to tears?

Gleda Estes: There were so many letters that I would have a hard time picking out just one. Many young rocketeers wrote about their pet mice, which they launched as payloads, or their rocket that didn't do what they expected, and the ones they could not find after they launched them. Sometimes they wrote just to tell us how much fun they were having. I think the one I remember as both bringing joy and tears was from a mother of a terminally ill young son who had found an outlet for his creativity and a lot of joy in building our models and then flying them (with help). His mother was very thankful to have this rewarding and challenging activity available to her son during his final months.

Launch: As I understand it, you two were the first employees in the company. How long did it take for everything to catch on with young rocketeers?

Gleda: I can't say exactly how long it took to "catch on." I know that by mid-1960 we felt it was definitely a business venture to hang our future on and try to grow the company. The Sputnik launches were certainly an incentive for our teens to want to launch their own "space vehicles."

At left, local rocketeers look on as Vern offers tips on rocket finishing in 1969. That same year Vern presented an Estes Industries Saturn V to Colorado Governor John Love, at right, upon the signing of Model Rocket Day Proclamation.



Vern: Actually, with all the interest in space I think our customers were looking for *us* as much as we were looking for them. What a wonderful combination to begin a new business venture.

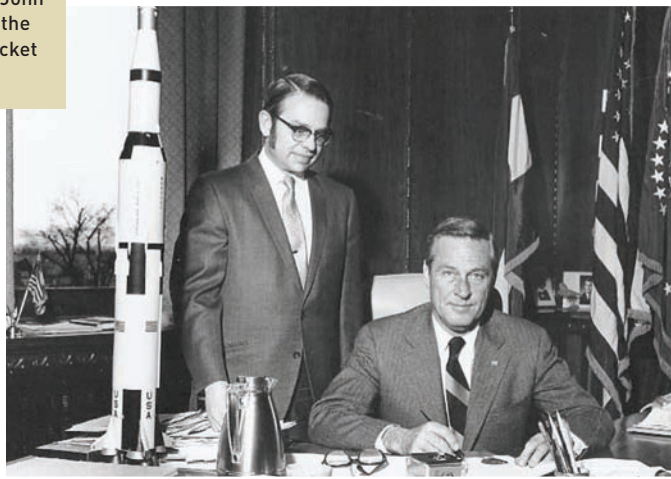
Launch: Gleda, there is a legendary story about you actually stitching together Version 1 of the first booklet-style catalog, #261. This was the version that had a Denver address on it (before the company moved to Penrose, Colorado in August, 1961. Is it true you stitched it on your own sewing machine? And are you amazed at the prices that particular version commands now at auction?

Gleda: It is true that I stitched thousands of catalogs on my personal sewing machine—including all the Denver editions of No. 261—and trained another lady to take over the job when too many other things demanded my time and attention. Had I had any clue that these stitched catalogs would become so valuable to collectors, I would have kept a hundred or so as an investment.



Launch: Do you two still have copies of all the catalogs?

Vern: We have a complete set of our early catalogs except for that Denver edition of the #261 catalog—the first one that Gleda stitched on her sewing machine. The Denver version is very rare. I had a chance to bid on one at an NAR auction several years ago and quit bidding when the price got into the \$70 range. Later, the buyer was kind enough to make photocopies for me. Perhaps I will spot an original on eBay one of these days and have a second chance to complete my collection. I am sure the bidding will make that \$70 price look like the bargain of the century (well, actually, that occurred in the last century). Oh, if I had only known.



Launch: Speaking of eBay, are you amazed at the prices some of the vintage Estes kits bring today at auction?

Vern: Absolutely amazed. I occasionally take a look at what is going on and see rockets selling for many times the original prices. I have thought of offering some items, but so far have avoided the temptation.

Launch: Even before the #261 catalog appeared, you were already producing sales sheets for the new company. Can you tell us how it began?

Vern: Our first in-house publishing effort was in 1960 using a mimeograph machine. This began in Denver when we needed a way to reproduce sales information and instruction sheets. The procedure involved laying out the desired sheet[s] using a Royal manual typewriter that had small 14-pitch type. I then drew or pasted illustrations onto the layout sheet. The finished sheet was then sent out to a local provider to have an electronic stencil made. The first upgrade in our "publishing department" was acquiring a mimeograph machine with an electric motor, which also had the option of printing color—no more Gleda standing there turning the crank. After we moved to Penrose the mimeograph quickly gave way to a Multilith offset press, then several AB Dick presses and later a five-color Heidelberg was added for doing fine color work. Beginning in 1965, our catalogs were printed in Denver by a large publishing company, A. B. Hirschfeld.

Launch: It seems like you ultimately had one of the largest publishing operations in Colorado, in addition to being the largest model rocket company in the world. True?

Vern: We never had more than 10 to 15 people working in the printing department, just a drop in the bucket for all the printing going on in Colorado.

The main focus of our in-house printing was instruc-

tion sheets, *Model Rocket News*, *Launch Pad*, which was an in-house publication for our employees, along with technical reports, order forms, educational publications, and all the day-to-day printed materials needed to meet our customers' needs.

Launch: Why did you decide to move the firm in 1961? And why Penrose?

Vern: Our move from the sparsely populated residential area near Denver was to find a more suitable place to build our business. For the most part we were doing OK but some next-door neighbors were complaining about the explosives we kept on site. They also expressed personal safety concerns precipitated by two explosions that had occurred in our engine manufacturing operation.

Our move to Penrose was the outcome of looking at several possible locations. We wanted suitable isolation but still have access to things needed to build a business. John Schutz was our Mabel operator and knew we were looking for a new location. His wife, whose father was a real estate broker in nearby Canon City, suggested we take a weekend to visit the area and look around. We were shown a small farm in Penrose, located on US Highway 50 that met our needs. It had a house to live in and was within our rather restricted price range. The elderly couple that lived there agreed to monthly payments and so the deal was sealed. Our new address would be Penrose, Colorado.

Launch: I understand that the post office in Penrose was scheduled for extinction until your company began receiving hundreds of thousands of orders that had to be processed. And a lot of us who were kids in the '60s got a thrill every time we saw that Penrose postmark on the letters and boxes we received from Estes. Is it true you saved the post office?

Vern: The post office in Penrose was indeed

A two-room cabin, at left, was transformed into Estes Industries' first office in Penrose, Colorado in 1961. The company's success was marked by its completion of the new main office complex, in the photo at right, taken in late 1968. Grand opening was in January 1969.





Among the Estes rocket archives at the Smithsonian are designer John Schutz's original boost glider, held by Vern in this portrait; the Astron Scout, Big Bertha, and Space Plane from Estes kits.

However, perhaps half of these would have been customers who placed an order from one of our ads and we did not hear from them again. It was our policy to closely cull our mailing list. We did

not want to be sending out catalogs and publications to those no longer interested. Usually, if we had not received a follow up order from a new customer within three months, out they went. A customer that had placed regular orders would not be culled from the list as rapidly.

At our peak we had that official postal annex at our plant. Instead of sending large bulk mailings (like our annual catalog) to the local post office, direct shipments were made to mail distribution centers around the country. A story in *Launch Pad*, accompanied by a photo of a large semi-trailer backed up to our postal annex, explained it this way:

"Last month several Rock Island Trailers were loaded with outgoing Estes catalogs from the Penrose Post Office Annex here at the plant. Lawrence Heid, postmaster, stated, 'the trailers carried 42,000 pounds each and were driven to Colorado Springs where they were loaded on a rail flat car for piggy-back ride to the east coast.' They were shipped to various east and mid-west terminal points. From these mailing points the individual sacks of catalogs were distributed on to their final destinations."

"Penrose became the fourth city in the state to use the piggy-back concept towards mail operations.

scheduled to be closed and the local residents put on a Star Route out of Florence. The post office was located in the front room of Postmaster Charlotte Coffman's house with only a limited amount of space devoted to the post office itself. As our business grew, so did the demands on the post office. Soon we were shipping more boxes and parcels than the postal facilities could handle. Instead of closing the Penrose post office the decision was made to build a whole new postal facility. Later, however, when our business continued to expand, an official postal annex was included at Estes Industries itself.

Launch: At the height of Estes's popularity, how many customers did you have?

Vern: Reviewing one of our old *Launch Pads*, I noted that in 1968 we were in the process of stuffing and mailing over 260,000 catalogs. At the peak of our mail order business we serviced about 1 million customers during the year.



The Scout, here in Vern's hand, was the first rocket offered for sale by Estes Industries. Right: A 1960s version of the kit as it was marketed to rocketeers.



Piggybacking the catalogs not only saved time in transit but also greatly reduced the handling of the mail.

The first group of large trailers was supplied by a government contract between the Penrose Post Office and the Rock Island Railroad Company."

Launch: Gleda, how crazy did it get back then when you two were so heavily involved in the industry? Were model rocketeers ringing your phone at home?

Gleda: I will have to admit, there were many occasions when things were hectic. And yes, some of the phone lines were forwarded to our home phone after the switchboard closed, or the second shift went home. Things were a bit more hectic when I worked the night shift to do our bulk mailings to avoid disrupting the mail processing of orders during the day.

Launch: You sometimes worked the night shift?

Gleda: I never asked any of the 100-plus employees in my division to do anything I would not or could not do. I spent a lot of time working with them and also training them. In the early days I opened mail, checked orders, packed kits, worked on printing, collating, folding and MRN/catalog production, shipping. If we were short-handed on any shift in any of my areas of responsibility, that is where you would find me working.

Launch: Who were some of your colleagues who helped make Penrose “the model rocket capital of the world?”

Gleda: That would encompass people in all divisions of the company, from the R&D department to production to shipping, mail processing, customer service, dealer sales, marketing, visual graphics, etc. There would probably be at least 100 names if I went back and listed those who were extremely important in the development and growth of the company. Certainly our department heads and supervisors earned a lot of credit for keeping things running smoothly and our customers happy.

Launch: Do you miss those days?

Gleda: Yes, I do miss the old days at Estes; the adrenaline when there were so many orders we couldn’t keep up, working wherever the pressure was greatest to get the orders out the door, and working with my department heads in later years through all those hectic times. Of course, there were periods when things were proceeding on an even keel and not so hectic. Some of



MARS SNOOPER

- FASCINATING DESIGN
- PARACHUTE RECOVERY
- IDEAL FOR DEMONSTRATION FLIGHTS

A truly different model rocket, the Mars Snooper combines interesting appearance with reliable performance — makes an excellent model for demonstration flying and display. Features payload section and 18" parachute, pre-cut fins for easier assembly. Recommended for the careful modeler, the Mars Snooper kit comes complete with all parts and detailed instructions (but no engines). Shipping wt. 12 oz. Cat. No. 651-K-20 \$3.00 each

Specifications	
Length	21.7 in.
Body Dia.	.95 in.
Weight	2.2 lbs.

Recommended Engines

- 1/4 A-2
- A-8
- B-6

An advertising illustration, top, in the December 1958 issue of *Scientific American* inspired the design of Estes’s classic futuristic kit, the Mars Snooper

my best friends today are people I worked with at Estes many years ago.

Launch: Vern, you had so many classic Estes kits that it’s got to be tough to single any out. But do you have a favorite? And why?

Vern: Simple—that’s the type of rocket I like. That is why the Big Bertha is my number one choice. Big Bertha, as you probably know, is an offshoot from the Astron Ranger, an early three-engine rocket. The birth of Big Bertha was not an official effort by our R&D staff. The Astron Rocket Society, a group of local rocketeers (including some employees) met in the garage at the back of our house.

One evening we were all building rockets when I decided to build a Ranger, but constructed it for only one engine. I painted its body red and decorated it with decals of some nice looking ladies, then dubbed it Big Bertha. I was not sure the single engine would be adequate for a safe liftoff. At our next launch my concerns were allayed. Big Bertha lifted off the pad, straight as an arrow into the blue sky above. Its liftoff was slow and steady like the big birds being launched at the Cape. I kept flying this reliable rocket over and over again and finally realized that this might be a kit we should market. We found that others liked the Big Bertha kit, which turned into a big success for our company. I still have the original. I flew it at the NARAM -31 Old Rocketeers Reunion in Manassas, Virginia, and again in 2000 at NARAM-42 held at Estesland, Colorado.

Launch: The first rocket I ever ordered from your firm was the Mars Snooper in 1967. What was the inspiration for that futuristic kit, which to this day is an iconic design?

Vern: Gene Street designed the Mars Snooper. Gene had a number of jobs at Estes including illustrations for our publications and work in the R&D department designing future kits. I believe his inspiration for this design came from an illustration in an ad in a national magazine. (**Editor’s note:** See the ad illustration from the December 1958 issue of *Scientific American*.)

Launch: It strikes me that some of the artwork on the Estes catalogs and kits would be considered high art now. Were there artists and writers that you especially liked to work with?



Gleda: I think all of our people who did the artwork and the writing were talented in their field. The artists were not writers and the writers were not artists but they made a great team and worked well together. Bill Simon was one of our first and most prolific writers. I enjoyed working with him and he and his wife are still among our close friends today. Also, Wayne Kellner probably created our most unique art.

Launch: I'm assuming that interest in model rockets closely paralleled interest in the space program itself. Did orders go up and down depending on NASA's activities?

Vern: Yes, NASA activities always sparked interest in orders.



Estes Industries was a team effort: Vern and Gleda, left, review an Estes publication in Vern's office. Below: Gleda holds her record-breaking Space Plane and Vern holds his original Big Bertha rocket, in this photo taken at Vern's personal rocket museum at their home in Canon City, Colorado.

However, it was our mailings of catalogs and *Model Rocket News* that caused the biggest surges in business. Sometimes, the orders were simply overwhelming. It is a good problem to have when your business is so good that, in spite of all your efforts, you can't even open the mail on a timely basis. All you can do is just let it stack up in boxes until the rush slows down or you hire enough help to get things under control. Fortunately (or unfortunately depending on how you look at it), this didn't happen often. However, our policy was to ship every order received in the morning mail that same day. It was disturbing to us when we couldn't meet this commitment to our customers.

Launch: In the late '60s, as NASA prepared to send astronauts to the moon, you greatly increased the

emphasis on major scale models with the release of the Mercury Redstone, the Saturn 1-B and Saturn V kits (even though Estes had offered scale models of other kits almost from the beginning). The Saturn kits, in particular, were more expensive and complex to build. In fact, the Uprated Saturn 1-B was a four-engine cluster and today sells for hundreds of dollars at auctions. How difficult was it to create these scale kits? And how well did they sell originally?

Vern: Gene Street, Wayne Kellner, Mike Dorffler, Bill See, and Bill Simon, with Bill Simon at the helm, did most of the research and construction on kits during this period. They were all good model designers and I let them do their work and call on me when it was show time. Show time was not always the best of times as the well-known phrase "Anything That Can Go Wrong Will Go Wrong" often kicked in. However, these guys did their jobs in a professional manner and kept up with (sometimes ahead of) the developments at the Cape. These scale model kits sold well, but not in large numbers like the Alpha, Big Bertha, and other inexpensive and less challenging models.

A short article in the April 1967 issue of *Launch Pad* noted that Gene Street had recently launched a 34½-inch-high Saturn C-1, Block 2



scale model and that the next rocket up in our space program would be the Saturn 1B. The article goes on to say, “*Estes Industries is determined to stay in the space race. Therefore, Gene Street is now busy designing and building a replica of the Saturn 1B.*”

Launch: As I recall, you were on hand for the launch of Apollo 11. Is that true? And how thrilling was that?

Vern: Apollo 11 was a very special event for Gleda and me and our family. Not only were we there but we had also sponsored a contest to bring one of our rocketeer customers to the launch. He—Sven England, then 15-years-old of New Canaan, Connecticut—and his family joined us and we watched the lift-off together. Just before launch I placed a carefully constructed Saturn V rocket (our kit) on top of our rental car. Then, just as that huge Saturn roared off the pad, I snapped a picture with our kit in the foreground. All in all, this was a thrilling once-in-a-lifetime experience that we will never forget. We have been back a couple of times for Shuttle launches, but the sound and sight of that huge Saturn V liftoff was simply awesome.

Launch: In the ‘60s, your chief competitor was Centuri Engineering in Phoenix. For model rocketeers, it was wonderful because we had two high-profile companies to choose from—and many of us ordered from both companies. How did you view the competition?

Vern: The Piesters were good friends of ours as well as our major competitor. From the very beginning Centuri bought their rocket motors from us. Even when the day came that Mabel, running 24/7, could no longer keep up with the demand we shared on an equitable basis until Mabel II came on line. We toured Europe with the Piesters and spent time together at meetings and conventions.

Even though Centuri captured a significant portion of the model rocket market, I credit them with helping us to succeed. Their innovative products, ideas, and presentations (catalogs, etc.) made us work hard to be sure we stayed ahead. Centuri helped make and mold the hobby into what it became. Leroy and Betty Piester deserve a lot of credit and a big thank you from all of us.

Launch: How difficult was it to convince authorities back then that model rocket motors were safe and were not fireworks?

Vern: In a few cases it was no problem at all (Colorado, for example). In other cases, like California, it was very difficult. Fortunately, the NAR was working on this along with us and other manufacturers. G. Harry Stine instigated efforts with the National Fire Protection Association resulting in NFPA 1122, which many entities have

adopted in whole or in part. In promoting the safety of the hobby I frequently used the phrase that model rocketry has a “positive safety value.” Even though there is some hazard to those participating in the hobby of model rocketry, the society as a whole is safer with model rockets freely available than without.

Launch: You sold the company to Damon in late 1969 (and Damon later acquired Centuri as well). Can you tell me if this was a lucrative deal for you two personally?

Vern: The Damon purchase was a very good deal at the time of our agreement. However, our sale was for unregistered stock, stock that has a long holding period before it can be sold. When we inked the deal the stock was selling for about \$35 per share.

The Model Rocket News provided how-to tips for Estes rocketeers and kept them updated on the latest new kit offerings—including the Omega/Cineroc aerial movie camera.



It kept going up in price and by the time we could sell stock (a small portion of our shares) the price had gone up to around \$70. Gleda and I donated some of our available stock to build the Boy Scout Service Center in Pueblo, Colorado, and made a second donation to Central College (where we met) to renovate Science Hall.

We also cashed in some shares and put the money in the bank. Then things began to change as Damon’s stock started a steady downward move. Much of our stock was still not available to sell as we watched the stock continue its fall. Finally, at around \$25 we were able to offer additional stock for sale. While still holding over half of our acquired stock the price took an overnight dive to about \$8. We eventually sold a large portion of our holdings in the \$5 to \$8 range. I guess you could say we came out OK, but not as good as the value of our original bargain.



Launch: It sounds like, if you had it to again, you would negotiate a deal that gave you much quicker access to the stock?

Vern: We all learn from our experiences and this is no exception. The type of transaction we got into was quite common at the time and likely still is. It is not an issue in my life anymore and I do not dwell on it, as it was not a life-changing situation. Gleda and I are fortunate to have adequate resources for a comfortable retirement, should we ever decide to go that route.

Launch: How much longer did you stay with the firm after the Damon merger?

Vern: As part of the sales package I entered into a management agreement with Damon. After working for them for a couple of years I became dissatisfied with certain business practices and negotiated out my remaining contract, freeing me to do other things. I then entered into a consulting arrangement with Damon that lasted until the early '80s. My consulting agreement provided for me to retain the title of president, let me keep my original executive office as well as an adjacent secretarial office. During this time I represented Estes at rocket meets, etc. Most of my time was devoted to other business and investment activities.

Launch: When you left Estes, what was your next venture?

Vern Estes: I have since been involved in a number of investment and entrepreneurial endeavors. Some have been successful and some failed. None have had the kind of success I enjoyed with Estes Industries. Shortly after selling the company I remarked to a fellow employee, "I do not ever expect to do anything else in my life that will be as successful or give me as much satisfaction as the rocket business." Sometimes I wish that statement had been wrong. Other times, I think back to those times and feel the pleasure of knowing those days were the highlight of my life. I guess you can't have it both ways.

Launch: I'm sure you are aware there are collectors out there today who are so obsessive about model rocketry that they can pinpoint exactly when a kit was produced by looking at the hangtag (or lack of one), whether it's a "pre-Damon or post-Damon"



These early Astron Drifter, Apogee II, and Sprite kits can sell for hundreds of dollars at auction. Below: Two marketed versions of the Estes Astron Nighthawk. The one on the right is the earlier version, before the company was sold to the Damon Corporation.

kit, or a "pre-skill level" or "post-skill level" kit. And some collectors have nearly every single version of every single kit your firm ever produced. In a funny way, it reminds me of the *Star Trek* phenomenon. Like William Shatner, do you ever want to look some of them in the eye and say: "Get a life?"

Vern: I think it is great when people have a chance to do the things they enjoy. We all have hobbies and pastimes and when we are experts in something it brings great satisfaction in our lives. As long as our activities are not harmful to others, or keep us from being a member in good standing of our society, I say, "go for it."

Launch: Speaking of collectors, many of us buy and sell kits on eBay. But now, because of terrorism concerns, eBay will not allow model rocket motors to be sold online. Does it bother you that model rocketry has gotten caught up in these terrorism concerns?

Vern: Yes, it bothers me to some extent. However, the terrorism concerns are real and the result is many changes in our society, many that we don't like, but find it necessary in order to secure and protect our future. Perhaps, as the future unfolds, a more critical review will better differentiate actual threats versus perceived threats (like model rocket motors).

Launch: Gleda, if you could choose one highlight or one event from your time at Estes, what would it be?

Gleda: I think probably the one event that stands out above all others was the Open House we held for both local people and all of our customers who wished to see our main building on Highway 50. I believe we entertained somewhere around 4,000 people that day in 1969, even though we had to deal with a lot of snow in the parking lot and snowy weather for visitors to drive through to get there. We served thousands of rocket-shaped cookies, many gallons of punch and who knows how many nuts and mints. The Chamber of Commerce Prospectors Club (of which I was a member) volunteered their time to help with serving, as guides in the building and directing traffic in the parking lot. (continued on page 60)



ARCHIVAL BLACK-AND-WHITE PHOTOGRAPHS OF VERN AND GLEDA ESTES FROM THE 1960S ARE COURTESY OF THE VERN ESTES MUSEUM OF MODEL ROCKETRY.



SPACE AGE LEGENDS

(continued from page 33)

Launch: You two were a young couple in the '60s—a decade when the Beatles were enormously popular, when JFK was in the White House, and when kids could still walk most streets alone in America without fear. Of course it was also the decade of Vietnam, civil rights marches, and turmoil across the country. What is your impression of the 1960s as a decade? And Gleda, have you and Vern considered that perhaps Estes rockets kept a lot of young people on the right path?

Gleda: To answer your last question first, I hope that we were effective in helping to channel hundreds of thousands of young people into more productive channels. Most of the time in the '60s I was too busy to take note of some of the news or spend much time worrying about anything beyond our boundaries. Keeping up with my work, housekeeping, raising three children, yard work, rocket club, etc., didn't leave much time for other things. I know that we did not normally lock our doors except when the girls were home in the evening and we were not. Our German shepherd, Dusk, was an excellent guard dog and no one would bother the girls as long as he was in the yard or the house. I basically remember the '60s as being an exceedingly busy time in our lives. We also remodeled our "farmhouse" and lived in it while doing so...no easy task.

Launch: From where I sit here in New York, Colorado seems like such a wonderful place to live. Did you and Vern ever think of leaving the state for another job or business venture?

Gleda: In 1979 Vern became involved in another business venture, which took him out of state (Nevada) for most of a year. I spent nearly six months working in his Nevada office and was very glad to get back to Colorado when that venture ended. I agree that Colorado is a wonderful place to live and raise a family.

Launch: And how is life these days in Colorado?

Gleda: Life is good, though still very busy as I work in Vern's office, bookkeeping, etc., for his investment activities. (Hey, I am retirement age, why am I still working?)

Launch: Vern, you and Gleda have been very loyal to the hobby through the NAR and other activities. What's your feeling about the present and future of the hobby?

Vern: Your question brings me to reflect on the past. How well I remember some of the activities of those early days. Harry Stine had taken the invention of Orville Carlisle's and began it all by founding Model Missiles and the National Association of Rocketry. The youth of America were inspired by the desire to participate in our newfound activity, the race into space.

For our youth, rocketry and participation in the hobby was a passion. These were young men and women growing up who had their eyes on the sky. The Pittsburgh Spring Convention, organized in 1966 by Jay Apt (later known as Astronaut Dr. Jerome Apt) brought hundreds of youths together from across the country to share that passion—to learn and participate in rocketry and our future in space. The NAR recognized this youthful enthusiasm by establishing the LAC (Leader Administrative Council) to channel their efforts into helping the organization fulfill its obligations to these future space pioneers. And on and on...

We are still at the beginning of our ventures into space, but much of the youthful "must do it now" enthusiasm is gone. This is partly caused by the lack of competition with other countries to "get there first." It is also caused by the many new activities

that have come along to capture the minds and imagination of our youth. Computers, video games, online chats, and a host of other activities now compete for their limited time and resources.

With these changes in our society, model rocketry has taken on a somewhat different role. While model rocketeers still can obtain plans, kits and parts, a lot of emphasis is now placed on marketing models that are ready, or nearly ready, to fly. Plastic parts and rockets made in China are just not the same as what we did in the old days. A lot of the hands-on experience is now gone, along with the mind-capturing creativity that went with it. Perhaps these changes to the hobby are the natural outgrowth of changes in our society. I have often wondered what my business model would be today had I kept the company. I know we were doing the right thing for the '60s time period, but without being there, I cannot say what I would be doing today. To be successful in business you must provide what your customers want. I'm glad we had the opportunity to participate back in the "golden days of the hobby."



Vern and Gleda hold an Estes Mercury Atlas scale model.



In this 2005 photo, Gleda re-enacts her legendary sewing of the binding of Estes catalog #261 back in 1961. The earliest version of that catalog can now fetch as much as \$1,000.

The NAR is still doing a great job in leading the way. I am particularly impressed by activities such as the annual TARC event sponsored by the Aerospace Industries Association and the NAR. This event gets thousands of middle and high school students involved in the design and construction of model rockets to achieve a specific goal. It involves team efforts and I think it is one of the best programs ever implemented in model rocketry. So the hobby, even though changed, still continues to offer a lot to the youth of today.

Launch: Do you envision a day when someone will come along and invent a new hobby the way all of you did back in the late '50s and '60s?

Vern: I'm not very good at predicting the present. I know the world keeps changing and this changes the interests and activities of our youth. Perhaps the video games and computers of today *are* the model rockets of yesterday.

The world continually changes and that fact will not change. We may long for the past, but we must live in the future. However, model rocketry is still a great activity for those who want to live the experience of designing, building, and flying their own creation. It remains a strong motivator to get young people involved in science and space related activities.

Launch: Lastly, what do you think of the direction of our space program today?

Vern: Activities in the space program seem to have become non-news unless it is spectacular or involves life-threatening situations. Important activities are still taking place, like probes to the planets, their moons, etc. The space program is important and must continue. Indeed, at some time in the future it may be necessary for our species to move to another planet or nudge an asteroid away from a collision course with earth in order to survive. But, so far as we know, that is a long, long time down the road.

Even though space-related events do not seem to be as newsworthy as in the past, Gleda and I still take great satisfaction in knowing that somehow we played a part. Somewhere, somehow, each flight carries with it the efforts of an Estes Model Rocketeer. Be it an astronaut, engineer, computer programmer, quality control inspector, program manager, or any of the many jobs and responsibilities involved, we know that somewhere in that chain is one or more of our "youthful" customers of the '60s doing his or her job to make it happen. ■

Class Act.

Our rocket kits are not exotic designs. They probably won't amaze your friends or turn a lot of heads. But if you've got a classroom full of kids, and you want them each to build a rocket in about an hour, with minimal help, then fly them on the school athletic field, and fly more than once, well...

...that's what we do.

Our kits have evolved over the last 12 years into classroom favorites, loaded with teacher-suggested features, including:

- * Body tubes three times stronger than similar kits.
- * A gloss white finish that is easily decorated with washable markers.
- * All parts are pre-cut. The only tools you need are scissors and glue.
- * Small parts are individually pre-bagged to save you time and cut down on lost parts.
- * Nomex Heatshield in each kit so you never need recovery wadding.
- * Kevlar shock cord doesn't burn through.
- * Color stickers (that's what the scissors are for)
- * Fins pre-cut from strong 1/8 inch hard balsa
- * Streamer recovery brings them down close to the launch pad and away from the trees.
- * Great flights with inexpensive A and B motors.



Value.

Our most popular kits, the Super Six and the semi-scale D-Region Tomahawk (pictured here) sell for only \$5.50 each in individual packs. In bulk packs (five or more kits, one set of instructions) they are only \$4.50 each. Or you can get a Baker's Dozen Pack of either the Super Six or the Tomahawk, and get 13 kits for the price of 12: \$54.00. With a free kit in the box, you can build one yourself; why should the kids have all the fun?

Pratt Hobbies specializes in manufacturing unusual and innovative products for model fliers. See our Web page for information about our unique launch systems, hybrid rocket motor supplies, strange and wonderful electronic devices, useful accessories, and other products from our unconventional imagination. We can design custom rocket launch systems to your specifications.



Pratt Hobbies
2513 Iron Forge Road
Herndon, VA 20171

www.prathobbies.com