

MODEL ROCKET NEWS

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Meet the

MINI-BOMARC

Less than a year ago, Estes Industries introduced the Bomarc, a striking scale model rocket version of the USAF surface-to-air interceptor missile. Hailed at the time as the first scale boost glider ever placed on the market, the Bomarc is now about to be offered by Estes in an even smaller version — and in a Canadian uniform.

Will retail for \$2.59

Christened the Mini-Bomarc, the new Estes entry will join the Mosquito, Screamer, and Mini-Bertha as part of the MINI-BRUTE family created by Estes last summer and designed to be flown with the powerful Estes mini-engines. It will be on the market within the next few weeks and will retail for \$2.59.

A 1/48 scale model of the CIM-10A (current designation of the full-scale Bomarc), the Estes Mini-Bomarc weighs in at a mere 1 oz., is 11-3/4-inches long, and has a wing span of 4-1/2-inches. At ejection a parachute pops out and the model gently returns to earth.

No plastic parts

Unlike the larger Estes Bomarc, the Mini-Bomarc has no plastic parts and the nacelle cones are made of balsa wood, the same material used for the nose cone. For easier identification, part numbers are printed on the die-cut fin stock.

Medium gray is the basic color suggested for the Estes Mini-Bomarc, and the kit (TK-5) is supplied with four-color decals which enable the rocketeer to decorate his model with authentic Canadian markings, including the familiar maple leaf roundel which appears on the Canadian flag.



The final check of the Estes MINI-BOMARC prototype is made by Larry Renger, project engineer in Estes Industries' Research and Development Department, who designed the sleek new model, a miniature version of the popular Estes Bomarc boost glider shown at left in picture and also designed by Larry. The new kit is engineered to be launched with the powerful Estes mini-engines.

The red, white and blue markings faithfully duplicate the official markings obtained from the Canadian Armed Forces by Estes Industries.

With the Mini-Bomarc, Estes is now offering some 70 model rocket kits, including a full line of cold-propellant models.

CINEROC tips

From time to time Estes Industries receives letters from CINEROC owners pointing out some difficulties they had with their model rocket movie camera. More often than not, these difficulties could have been prevented if the instructions had been carefully read – and followed. Here are a few tips that will help CINEROC owners avoid some of the problems:

Film jams in the Flight-Pak. Make sure that the drive band has been slipped over the pulley the right way (the pulley must turn counter-clockwise).

The drive band slips and causes the camera to fail. Did you use your fingers or a pencil point to position the drive band onto the advance pulley? The natural oil of your fingers or the graphite content of the pencil will lubricate the band and make it slip on the shaft. Use a ball pen cap or a small paint brush handle.

The film is too dark to show the flight's details. Usually, it is because the flight was too early or too late in the day. A good rule is to launch no sooner than two hours after sunrise and no later than two hours before sunset.

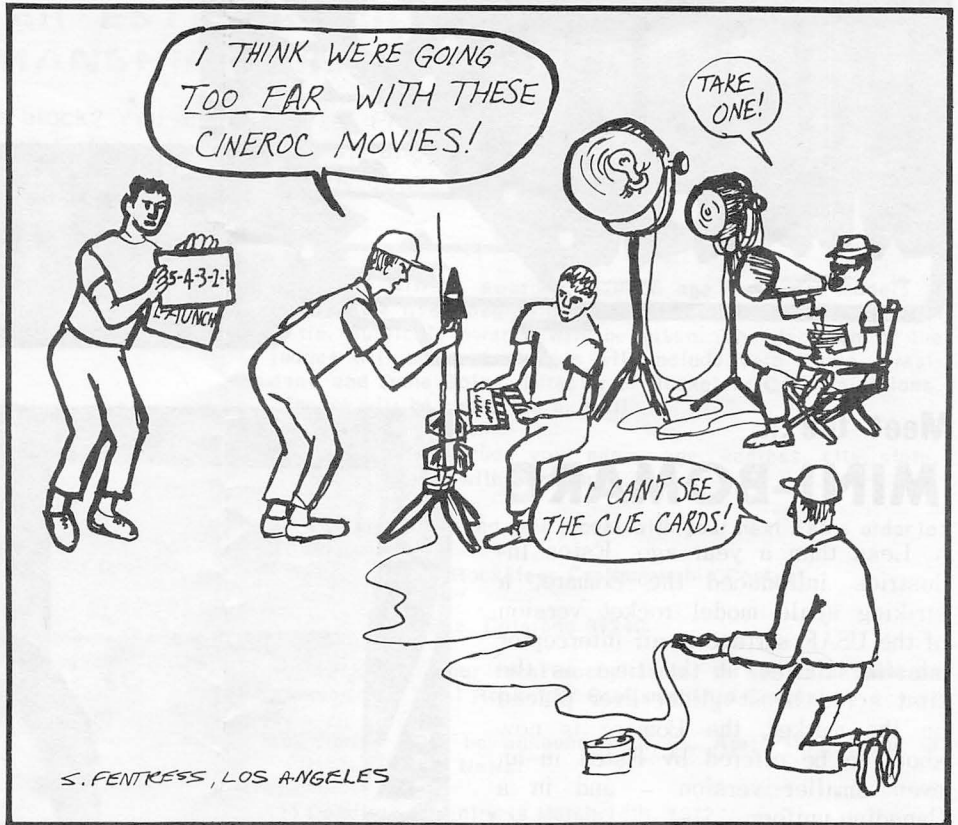
Other useful tips:

Do not fly your CINEROC when the temperature outside is below 35° F. Cold weather will cause the film to jam and weakens the battery.

Keep the Flight-Pak protected from light at all times. Do not remove the film from the Flight-Pak unless you are qualified to do your own processing. Always place the Flight-Pak in the black plastic bag before you put it in the cardboard mailing box.

Make sure that your rocket is ready for launch (double-check the circuit for continuity) before you turn on the camera. This will prevent having half of your film showing the launch pad only.

A question that has frequently come up is: How can I alter the CINEROC in order to slow it down and capture the entire flight? One way to do this without any alterations is to use a Big Bertha with a C6-3 engine. It won't go very high, but it will accomplish its mission.



Solve this problem and win a rocket!

by Robert Cannon, Education Director, Estes Industries

The Demon is a sharp-looking payload launcher for D engine power. Using your TR-10 (November 1970 revision), calculate how high the Demon will go without a payload in it. Then calculate how high it will go with a one-ounce payload. Assume a C_D of 0.75 for your calculations.

Write to us and state whether the model will go higher with the one-

FROM THE EDITOR'S DESK

This issue of MRN comes to you in a streamlined format that will enable us to publish MRN on a quarterly schedule (January, April, July, and October) to give you more up-to-date, exciting model rocketry information for your reading pleasure.

Each issue of MRN will feature a new rocketeer contest or promotion, plus technical information, articles of general interest, cartoons, the Idea Box, and a free plan from time to time.

MRN will be sent to Estes rocketeers with their filled orders. Subscriptions are also available with membership in the ESTES AEROSPACE CLUB.

We hope that you will enjoy our new, streamlined MRN. Remember to look for your next issue in April!

ounce payload or without it. State the number of feet difference between the two launches. The first ten correct entries will receive an A-20 Demon kit (Kit K-58, retail \$4.50).

Send your entries to Editor, *Model Rocket News*, Estes Industries, Box 227, Penrose, Colorado 81240. No entries will be returned. Employees of Estes Industries or members of their families are not eligible. All judges' decisions are final.

The winners' names, and the correct answers, will be published in a forthcoming MRN issue.

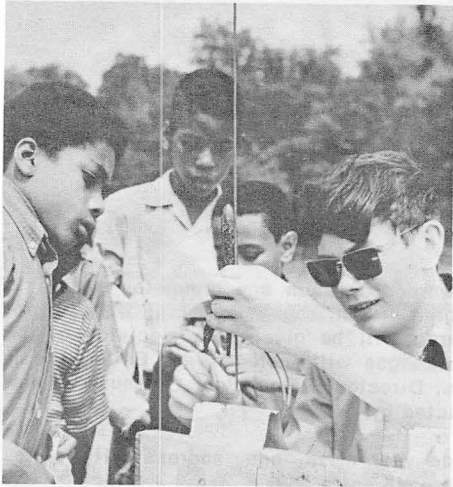
MODEL ROCKET NEWS

• ESTES INDUSTRIES 1972

The MODEL ROCKET NEWS is published by Estes Industries, Inc., Penrose, Colorado. This publication is written for America's model rocketeers to promote safe youth rocketry, distribute current technical information, and make model rocketry more enjoyable and educational. Current issues of the MRN are distributed free of charge to all active Estes customers.

Vernon EstesPublisher
Frangois GentyEditor





A worthy activity for clubs is to work with underprivileged youngsters. Here, Michael Keys (right), of the Rock Creek NAR section, gets ready to launch for physically handicapped children from Sharpe Health School, Washington, D.C. Site is NASA Goddard Space Flight Center, Greenbelt, Md.

Estes discontinues six historical kits

Six familiar Estes model rockets will be absent from the 1972 catalog and we thought we'd let you know, just in case you want to add any of these birds to your collection before the supply runs out.

The six models we are discontinuing to make room on our production line for new models are the *Astron Space Plane*, *Astron Ranger*, *Astron Spaceman*, *Astron Farside X*, *Thor Agena-B*, and *Little Joe II*. All six models are shown on the back page of this MRN issue.

Truly a historical model, the *Space Plane* was introduced by Estes in 1961 and was in the very first Estes catalog, the one that Gleda Estes, Vern's wife, stitched on her own sewing machine. (Sorry, but we are all out of 1961 catalogs!). It set two world records for boost glide, one at NARAM-4 and the other at COLREG-1.

Also in the historical category are the *Thor Agena-B*, an actual scale

model of the famed NASA booster that lofted such satellites as Alouette (Canada's first satellite), and Nimbus (the U.S. weather satellite); and the *Little Joe II*, a scale model of the solid-propellant rocket used for testing unmanned Apollo spacecraft under actual flying conditions.

With the *Astron Ranger*, a cluster bird introduced by Estes in 1963, you can lift and recover those special instruments and specimens launched to extremely high altitudes. And with the *Farside X*, a sophisticated ultra-high altitude probe or workshop vehicle designed by Estes in 1964, you can take large payloads to well over 2,500 feet.

The *Astron Spaceman* demonstrates that a rocket doesn't always have to look like a rocket to fly well. It's "a real odd ball of a rocket," as the 1964 Estes catalog called it - and it's a fun one, too!

CLUB COUNTDOWN

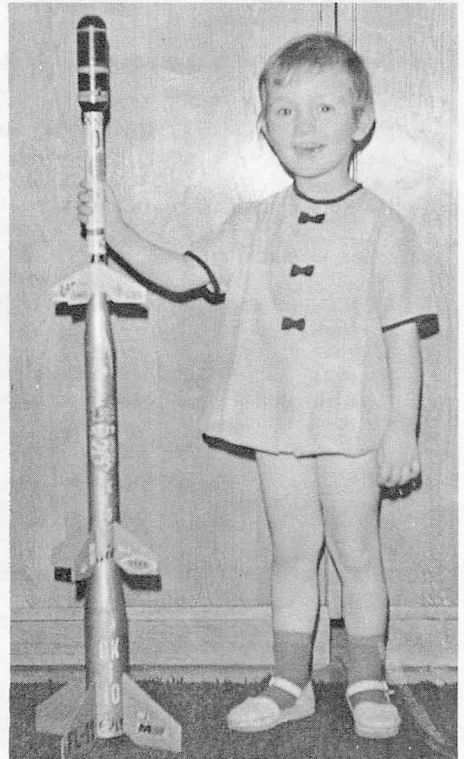
by Dane Boles, Director
Rocketeer Communications

All model rocket clubs need a club treasury to finance activities, projects, and the building and upkeep of workshop and range equipment. Here are a few fund raising ideas to build that club treasury.

1. Run a soda pop concession at the launch area.
2. Sponsor a neighborhood car wash.
3. Charge entry fees for major model rocket meets.
4. Stage a launch site "auction" or "rummage sale."
5. Carry out an aluminum can or glass bottle drive. Several can companies will pay up to 1/2¢ per can, and glass reclamation centers so much per bottle for clearing the land of waste glass and aluminum.
6. Have the mothers and sisters of rocketeer's bake up some cakes and cookies and host a neighborhood or launch site bake sale.

If you would like information on how to start a model rocket club or have a club tip, send your suggestion or request to Estes Rocketeer Communications Department, Box 227, Penrose, Colorado, 81240.

BIG Czech Camroc



Two-year old Renata Divis, daughter of Czech model rocketeer Jaroslav Divis, shows the three-stage carrier her dad built for his Estes Camroc. First stage has seven engines, each 10 nt-sec.; second stage, one engine, 5 nt-sec.; third stage, one engine, 5 nt-sec. (Photo and data courtesy MODEL ROCKETRY Magazine).

THE IDEA BOX

SIDE VIEW OF THE DISPLAYED MODEL

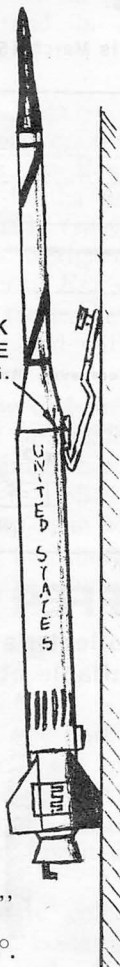
Drawing by
Ted Nomura
Las Vegas,
Nevada

Bend clip to "S" shape and turn large loop to 90°.

PAPER CLIP ROCKET DISPLAY HOLDER



HOOK IN THE LUG.



ENTER ESTES ROCKETEER CRAFTSMANSHIP CONTEST TODAY

Who is the best modeler on your block? You are of course! Prove it by entering the Estes Rocketeer Craftsmanship Contest. More than 60 Estes gift certificates, ranging from \$5.00 to \$50.00, will be awarded as prizes. Just place your best effort in your entry by constructing and finishing any one of our Estes kits and follow the rules below.

RULES

- 1) To qualify for entry all models must be received intact. Broken models will be disqualified. This means that packing your model is very important. Be sure to follow the suggested "Packaging Tips".
- 2) All entries must be Estes kits.
- 3) All models submitted become the property of Estes Industries and cannot be returned.
- 4) You may enter as many times as you like.
- 5) Employees of Estes Industries or members of their families are not eligible.
- 6) Models will be judged for care in construction, adherence to directions, quality of finish, and effectiveness of paint pattern.
- 7) Judging will take place in the following age groups:
 - A) 14 years and under
 - B) 15 to 18 years
 - C) 19 years and above

Prizes will be awarded in each age group for models in each of the five "degree of challenge" levels. In the event of a tie, duplicate awards will be given. The decision of the judges will be final. Judges will include Vern Estes, President, and Dane Boles, Director of Rocketeer Communications. Winners will be contacted by mail.

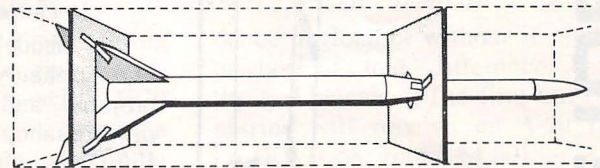
- 8) Be sure to include your name, age, address, city, state, and zip code with each entry.
- 9) To enter just send your model with your next Estes order to:

Estes Rocketeer Craftsmanship Contest
Box 227
Penrose, Colorado 81240

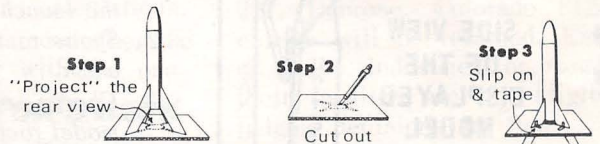
or check with your local hobby dealer to see if he will be sponsoring a local Rocketeer Craftsmanship Contest.
- 10) Winners will be announced in the April, 1972 issue of Model Rocket News.
- 11) Deadline for entry is March 15th, 1972.

PACKAGING TIPS

- 1) Be sure to use a good box or container to send your entry in.
- 2) Be sure to use adequate packing material to protect your model.
- 3) Be sure the package is sealed well with tape or string.
- 4) Ideas for packing:
 - a) Use pieces of cut out cardboard to position the model.
 - b) Use balloons - blow up balloons and pack them around your model.
 - c) Wrap your model in a plastic bag and pack around it with crumpled newspapers, pieces of styrofoam, or foam rubber.



This Way Offers even More Support...



SPECIAL HISTORICAL KIT OFFER!

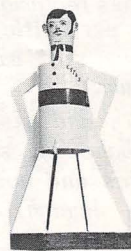
These famous Estes kits are being retired and will soon become collector's items of model rocket history. Take advantage of our tremendous offer. All historical kits are available at greatly reduced prices.



SPACE PLANE
Reg. \$2.25
Now \$1.19
Cat. No. 651-K-3



RANGER
Reg. \$3.25
Now \$1.69
Cat. No. 701-K-6



SPACEMAN
Reg. .85¢
Now .49¢
Cat. No. 651-K-9



FARSHIDE X
Reg. \$3.95
Now \$1.99
Cat. No. 701-K-12X



THOR AGENA-B
Reg. \$3.75
Now \$1.89
Cat. No. 701-K-28



LITTLE JOE II
Reg. \$3.95
Now \$1.99
Cat. No. 701-K-30

OR all six for ONLY \$7.95 (Cat. No. SO-72-A). Save \$10.05 off the original combined retail price.