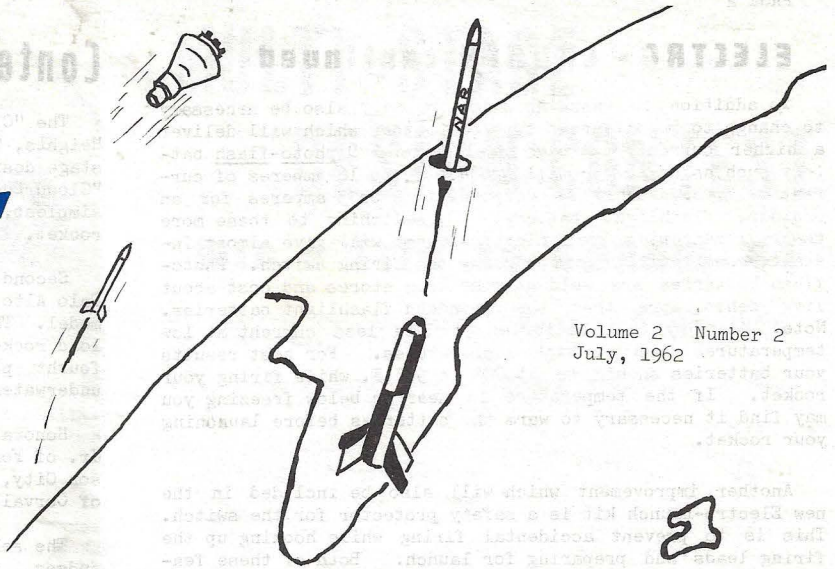


# MODEL ROCKET NEWS



Volume 2 Number 2  
July, 1962

## NATIONALS TO BE HELD IN COLORADO

### ELECTRO-LAUNCH IMPROVED

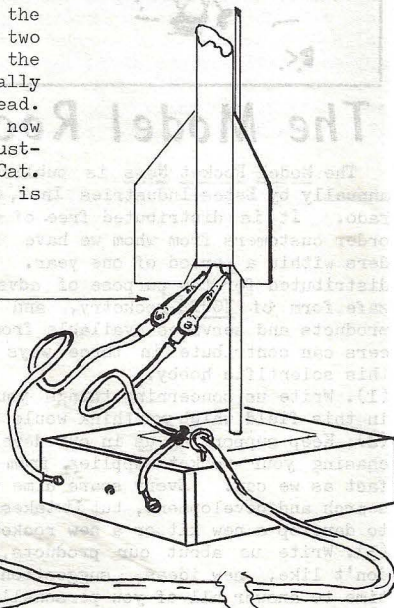
The Electro-Launch system produced by Estes Industries has recently been re-designed to increase safety and reliability. One of the changes made provides for direct ignition, eliminating the need for jetex wick. The new direct system also produces a quicker response to the press of the firing button.

For direct ignition, a 2" piece of no. 30 nichrome wire is wound twice at the middle around a small rod or mandril, such as the point of a ball point pen. Then the coil end of this igniter is inserted into the nozzle and held in place by tamping a 1/4" x 1/4" piece of kleenex tissue into the nozzle opening (see illustration, page 2).

When converting the old Electro-Launch system to the new direct system it is necessary to remove completely the firing head. Next attach two micro-clips to the ends of the wires which were originally connected to the firing head. Clips for this purpose are now available from Estes Industries and are ordered by Cat. no. 261-MC-1. The price is 15¢ each or 2 for 25¢.

Igniter hook up clips.  
Attach as close to nozzle  
as possible.

Short piece of body  
tube #BT-3. Remove  
immediately before  
firing.



(Continued on page 2)

NARAM-4, the fourth national NAR meet will be held at the Air Force Academy this summer on August 23 to 26. Co-hosts for the meet are the Peak City Section and the Rampart Range Section of the NAR.

Some of the extra attractions for this year's nationals will be tours and demonstrations. The tours will cover the blockhouse at Norad and the Air Force Academy, including the aerodynamic lab. Demonstrations will include the supersonic one inch wind tunnel and the smoke tunnel at the academy. The annual picnic, with its usual activities, demonstrations, and fun will be held on Saturday.

The schedule of contest events has already been set. On Thursday there will be the Spot Landing, Parachute duration, B Altitude, F Scale Altitude, and BA Altitude events. Friday's events will include Open Altitude, Open Payload, Open Scale Altitude, B Payload, and Double Pee Wee. The Scale, Plastic Scale, Aero-Space Systems, Research and Development, and Pee Wee Altitude contests will be held on Saturday. On Sunday events will include A Scale Altitude, Boost-Glide Duration, demonstrations by manufacturers, special demonstrations, and a show by the Air Force Model Airplane Team.

William Roe, NAR Vice-President, in a special Model Rocket News interview, had these suggestions: "If you want to have a good chance to win your event, test your model well before you come. Make sure it is safe, as judging will be strict on safety, and a wind tunnel will be available to back up the judges' decision."

The competition will be conducted according to the Model Rocket Sporting Code, 1962 edition (NAR "Pink Book"). The "Pink Book" contains all rules and tells all about the different events. Rocketeers who are not yet NAR members should get their membership applications in immediately so they will be able to compete and will have their copies of the "Pink Book" in sufficient time to prepare for the meet.

Rocketeers may obtain entry blanks for the nationals by writing to NARAM-4, Box 1052, Colorado Springs, Colorado. All entrants must be NAR members in good standing.

As of this writing, final information on housing is not yet ready. Camping facilities will be available. Further information can be had by writing to NARAM-4, Box 1052, Colorado Springs, Colorado.

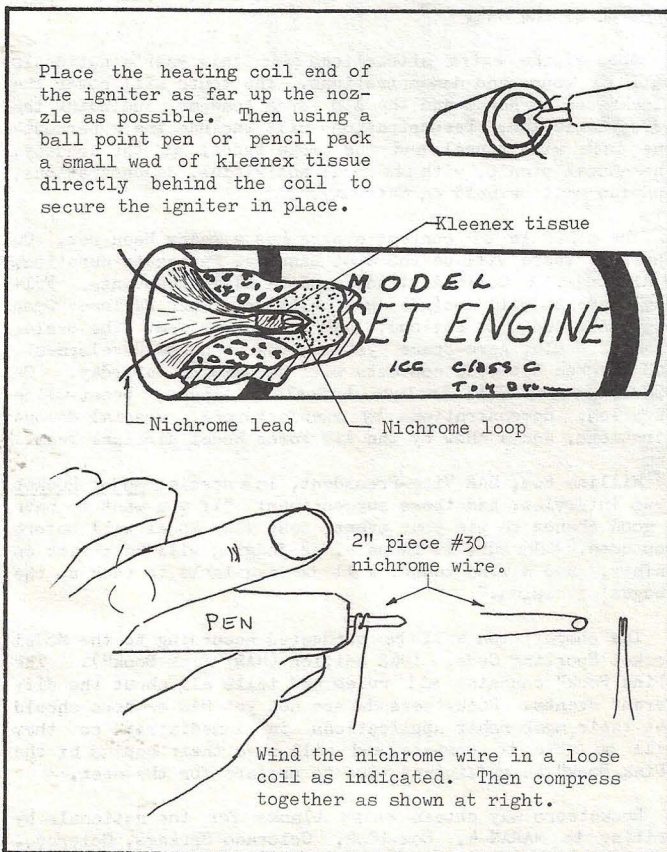
The organizers of the meet suggest that NARAM-4 will make a good opportunity for the whole family to visit scenic Colorado. Further information on sights to see and places to visit will be made available to those interested.

## ELECTRO-LAUNCH continued

In addition to changing clips it will also be necessary to change to a different type of battery which will deliver a higher current. A high quality size D photo-flash battery such as Ray-O-Vac will produce up to 16 amperes of current on a dead short as compared to 2 or 3 amperes for an ordinary flashlight battery. By switching to these more powerful batteries your Electro-Launch will give almost instantaneous ignition upon pressing the firing switch. Photo-flash batteries are sold at most drug stores and cost about five cents more than the standard flashlight batteries. Note: All dry cell batteries produce less current at low temperatures than at high temperatures. For best results your batteries should be at 70° to 90° F. while firing your rocket. If the temperature is near or below freezing you may find it necessary to warm the batteries before launching your rocket.

Another improvement which will also be included in the new Electro-Launch kit is a safety protector for the switch. This is to prevent accidental firing while hooking up the firing leads and preparing for launch. Both of these features will be standard on the Electro-Launch within about 30 days.

The #30 nichrome wire used for direct ignition is the same as the wire now used on the firing head (Cat. no. 261-NW-1). Soon all engines will be shipped with nichrome ignition material in place of the jetex wick now supplied.



### BALSA REINFORCING MATERIAL AVAILABLE

A treated paper material with a high-quality adhesive on one side is now available for reinforcing balsa surfaces. Use of it easily doubles the strength of balsa parts, and eliminates the need for sanding the surface, as well as providing a good surface for painting. A sheet 3x9 inches will be listed as 261-BRM-1 and will cost 10 cents per sheet or 20 cents for three sheets.

## Contest Won by Jankowski

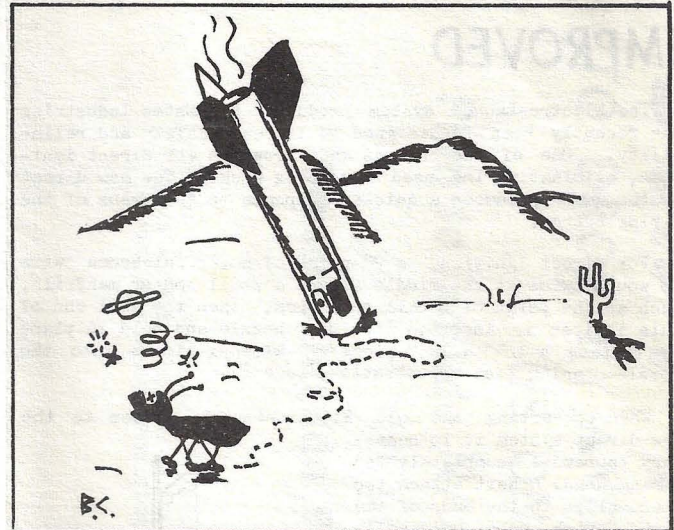
The "Cloud Buster," designed by John Jankowski of Maple Heights, Ohio, was the first place entry in the recent single stage design contest sponsored by Estes Industries. The "Cloud Buster" was selected from the other entries as the simplest, easiest to build, most reliable, and most practical rocket.

Second place in the contest went to Douglas Malewiski of Palo Alto, California for his intricate Mercury Capsule model. The third place design was a three engined live payload rocket submitted by Tom Rhue of Colorado Springs, and fourth place went to M. J. Arendt of Long Island for his underwater rocket with parachute recovery.

Honorable mention was given to designs by Robert C. Forbes Jr. of Fort Dix, New Jersey, Alexander A. Andrade of Dickson City, Pa., David Klein of Philadelphia, Pa., Doug McRae of Corvallis, Ore., and Tom Stump of Goshen, Indiana.

The selection of winners was especially difficult for the judges, and in some cases involved building and testing the designs, only to find that the rocket was inherently unstable.

Vernon Estes, NAR 380, President of Estes Industries, stated: "I would like to express my congratulations to John Jankowski and the other winners, and encourage every rocketeer to enter his favorite design in the new multi-stage contest."



## The Model Rocket News

The Model Rocket News is published approximately 6 times annually by Estes Industries Inc., Box 227, Penrose, Colorado. It is distributed free of charge to all of our mail order customers from whom we have received substantial orders within a period of one year. The Model Rocket News is distributed for the purpose of advertising and promoting a safe form of YOUTH rocketry, and for informing you of new products and services available from our firm. You rocketeers can contribute in three ways to help us in advancing this scientific hobby.

- (1) Write us concerning things you and your club are doing in this field which you think would be of interest to others.
- (2) Keep supporting us in our development program by purchasing your rocket supplies from us. We are working as fast as we can. Every spare dime we get goes back into research and development, but it takes a heck of a lot of dimes to develop a new kit or a new rocket engine.
- (3) Write us about our products, what you like, what you don't like, new ideas, suggestions, etc. We may not have time to answer all of you personally, but we will read every word.

# NOTES FROM THE BOSS



Things are still booming around here. In fact, for a while we were just plain swamped. Our schedule is still a bit tight, but it looks like we'll be able to get a little bit more done soon. We're working hard to give you the best service we can, and we'll keep on trying.

We'd like to give SPACE WORLD a great big thank-you for their offer in the last issue of MRN. SPACE WORLD is a real good magazine, and will make good reading for the model rocketeer. Those of you who didn't get your copies of MRN in time to send in for the SPACE WORLD offer--well, the post office isn't known for its track stars.

We had a few problems, but the Multi-Stage Report will be ready by the time you get this issue and mail back the form on the Clip 'n' Mail page. Those of you who sent back the questionnaires will be getting your copies automatically, but the rest of you will just have to send for it.

The Model Rocket News will be coming out a bit more often now. We have another staff member to handle it, and he can give special attention to the ideas, suggestions, and information you send in for the MRN. We appreciated the suggestions all you rocketeers sent in on your questionnaires, and you'll be seeing some of them put to work in this issue, and some more in the issues to come.

With the multi-stage contest starting, we'd like to tell you about some of the things which counted against entries in the first contest, so you can avoid the same mistakes in your multi-stage designs. One of the biggest goofs was fins up forward. I know it looks like all that forward fin area should give real terrific stability, but it does just the opposite. Another thing that took a lot of otherwise good designs out of competition was failure to include a parts list as the rules stated. Some of those designs we sure hated to reject, but we have to follow the rules too. Another thing which counted against some designs was messiness--we couldn't read the writing or decipher the design--so take a few extra minutes and do a neat job. It can't hurt you, and it sure will improve your chances. One last thing--make sure your drawing is to scale. It can be full size, half size, or twice as big as life, but it has to be to scale. So draw up your design for the new contest, test it, and send it in. We'll be looking forward to seeing it.

Progress on the camera rocket is coming along slowly. We could use a few more ideas on it, so if you have any suggestions on building camera rockets, write and tell us, and we'll really appreciate it.

Catalog 621 is still not ready. Some of the manufacturers and distributors haven't been any too cooperative. We will have it out as soon as we can, but we aren't making any promises any more.

The tracking device and a complete article on altitude computation will be ready in the next issue of MRN. In fact, it should be ready before then. So if catalog 621 comes out before the MRN, it should be in there.

We're looking forward to meeting quite a few of you at NARAM-4 this August. This year's contest will be bigger and better than ever, with more added attractions and events, for a real enjoyable time for all who come. We'll be there, and we hope you will, too.

# MULTI-STAGE DESIGN CONTEST

## Win a Trip to NARAM-4!

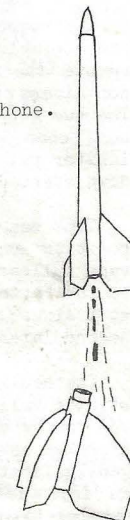
Send us your own multi-stage model rocket design and win one of these great prizes!

- 1st Prize - We pay up to \$100 for transportation costs to and from the NAR Nationals in Colorado on August 23 to 26 or give you \$50 in merchandise credit.
- 2nd Prize - "Dream Special"
- 3rd Prize - "Experimenters' Special"
- 4th Prize - Astron Space Plane

First place winner will be notified by telephone.

### CONTEST RULES

- 1) All plans must be drawn to scale. Pencil or ink drawings are acceptable.
- 2) A parts list must accompany entry.
- 3) All entries must be flight tested to assure that they have suitable flight characteristics.
- 4) Only multi-stage designs will be qualified.
- 5) The decision of the judges is final.
- 6) All plans submitted become the property of Estes Industries, Inc.
- 7) Entries must be postmarked no later than midnight, August 8, 1962.
- 8) No plans or designs will be returned.



Contest results and the winning design will be published in the September issue of the Model Rocket News.

## VACATION IN COLORADO

With NARAM-4 coming to Colorado, rocketeers have a perfect excuse to visit Colorado on their vacations this year. The Pikes Peak-Colorado Springs area is especially scenic and has attractions for the whole family which will fill an entire vacation in the most enjoyable way.

Just a few of the places which are "musts" on every visitor's list are the Air Force Academy, the famous frontier town of "Buckskin Joe," The Cave of the Winds (a natural wind tunnel?), Cheyenne Mountain Lodge, Cheyenne Mountain Zoo, Cliff Dwellings, Cripple Creek, The Garden of the Gods, several ghost towns, Helen Hunt Falls, Royal Gorge (With the world's highest suspension bridge. We do not recommend playing catch by firing rockets from the floor of the canyon to people on the bridge 1053 feet above or testing stability by dropping rockets from the bridge.), Seven Falls, Pikes Peak, Will Rogers Shrine of the Sun, Rampart Range Road, Mt. Manitou Park, Ute Pass, and the Petrified Forests. There are activities for everyone: Fishing, hiking, swimming, ice skating, boating, and many more.

NARAM-4 will be held in the middle of this scenic region. So if the family hasn't planned its vacation yet, why not suggest Colorado--for the last two weeks in August? Then on the 23 to the 26 the rocketeer can fill out his vacation at the nationals.

A brochure on the points of interest in the region is available. Just check the square on the Clip 'n' Mail page and send the form to us.

# Guppies Into Inner Space or There's Something Fishy There

by Terry Schmidt

It looked like a good day. The clouds had cleared and the sky was inviting. Two guppies about 3/4" long had been obtained two days before, and they appeared strong and ready for the trip. It was Saturday, February 2, and the early morning hours were spent in last minute preparations and calculations. All rocketeers arrived at launch site, and after a few delays, we were ready to launch.

The rocket was taken out to the triple launching device and assembled on pad three. The treated water, boiled to remove the impurities and poured back and forth between two containers to absorb oxygen, was poured into the capsule. The two guppies were taken from their transport van and the nose cone was fitted on. The capsule was sealed and the ignitor put in place. A picture was snapped and the count-down started.

Time was running T minus 60 seconds. The observer was in position and the recovery crew was waiting with portable vans full of water. At T minus 15 seconds the toggle switch to the battery was thrown and the circuit was ready. Then at T minus one second the firing button was pressed, and a second later the rocket was up there at a high altitude.

The sections of the rocket separated at peak altitude and started falling. The capsule was equipped with a parachute and the booster section with a streamer, but neither one appeared at this time. The parachute finally was spotted, gently floating to the earth, while the capsule tumbled down in free-fall at an increasing speed. Would the plastic chamber break at impact, spilling the fish out on the ground? Would the impact shock kill the small passengers? Or did the acceleration already kill them?

The capsule hit the earth. We ran over and picked it up. The capsule was not broken but it was almost completely filled with bubbles. The larger of the two fish was lying in an inverted position, apparently dead. The capsule contents were emptied into a van full of water. One of the fish, the smaller one, appeared to be all right, because he started swimming around, but the other turned over on her back and sank to the bottom.

We took her out of the water and fanned her, then dipped her back into the water. Her side flippers moved. We took her out and repeated the fanning and dipping, and after five minutes she was swimming again, but in an inverted position. This process continued every fifteen minutes and after a few hours she swam and acted normally again.

Any day now she will give birth to a whole school of little guppies. This should set a new kind of record: These will be the youngest guppies in the world with astronautic experience.

# LETTER SECTION



The following are letters or excerpts from letters received from you fellow rocketeers. Keep sending them, and we will try to print the ones which seem to have the most general appeal.

Gentlemen:

I looked up P.M. 125 .1-.2-.6 (your label information) at the local post office. Did you know paragraph -.6 of section 125 deals with mailing switch blades? I know your engines are sharp, but that's ridiculous!

Charles P. Travis  
NAR 2113

Dear Mr. Travis:

We just printed what the post office told us to print. It's still ridiculous!

Sincerely,  
Vernon Estes

Dear Mr. Estes:

I am very happy with all your products and I am expecting many great, new rocket kits and engines. You seem to go out of your way to insure quick, safe delivery of products.

By the way, my first three stage rocket was a homemade one. If you will examine my left arm you will find a burn that will never heal over completely. No wonder I am buying your products.

Keep up the good work.

Sincerely,  
J.J.L.  
Haworth, N.J.

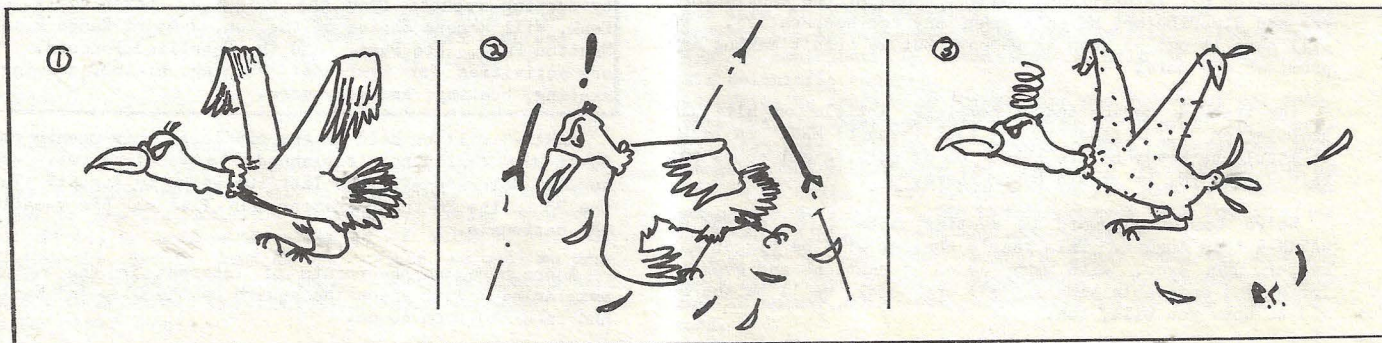
(P.S.) 10 to 1 you don't print this letter in MRN.

Dear J.J.L.:

We appreciate your letter. Sorry you were injured, but we're glad you weren't killed.

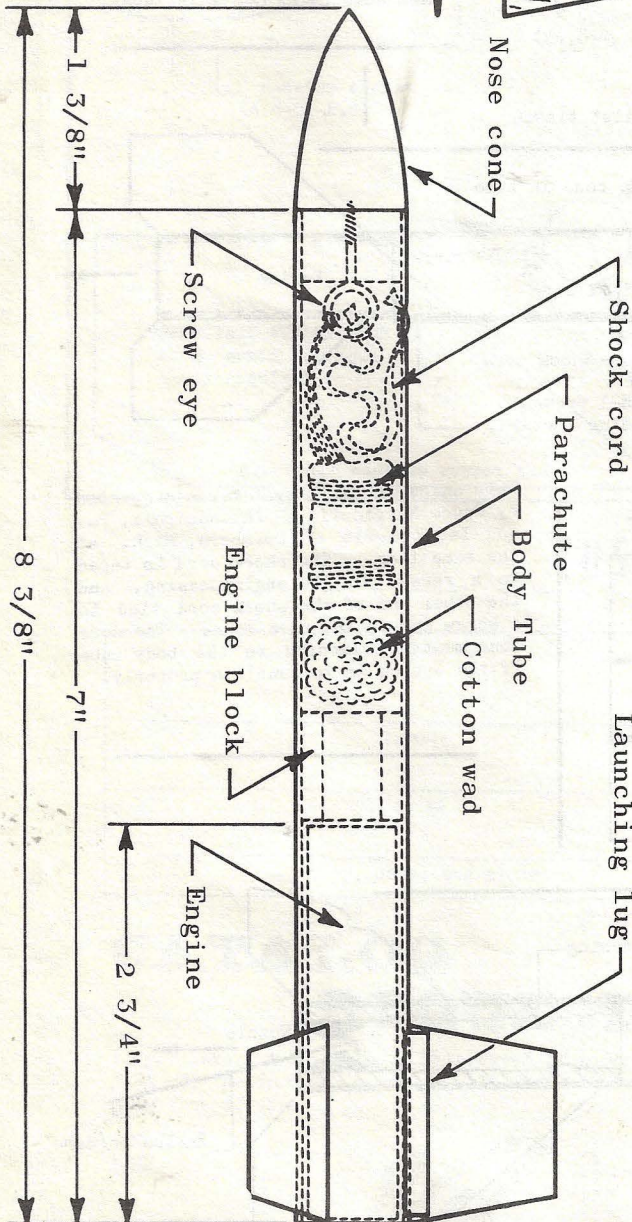
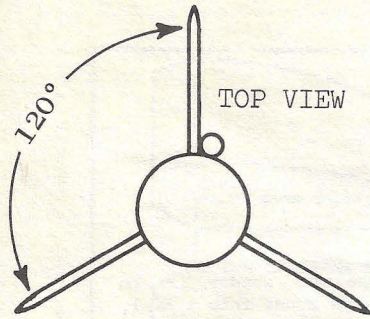
Sincerely,  
Vernon Estes

(P.S.) The bet is on.



# the Cloud Buster

FIRST PLACE DESIGN, SINGLE STAGE CONTEST  
by JOHN JANKOWSKI



## PARTS LIST

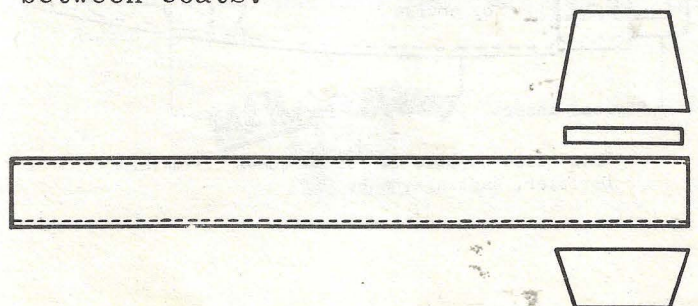
1 Body Tube	Part #BT-30
1 Nose Cone	Part #BNC-30D
1 Screw Eye	Part #SE-1
1 Shock Cord	Part #SC-1
1 Parachute	Part #PM-1
1 Engine Block	Part #EB-30
1 Fin Stock	Part #BFS-20
1 Launching Lug	Part #LL-1B

Use B.8-6 engines  
for flights over 1000'.  
(Be sure engine is secure  
in body tube.)

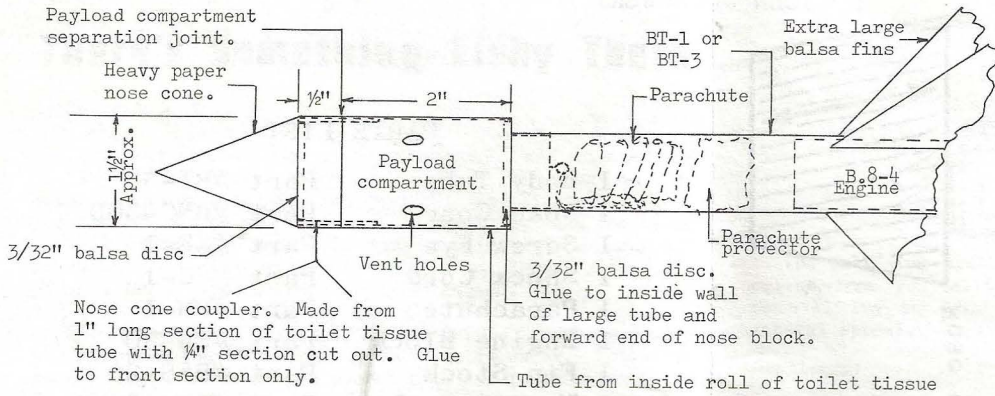
## ASSEMBLY INSTRUCTIONS

First cut a body tube 7" long. Then glue the engine block in place 2 3/4" from the rear of the body tube. To do this, place a large dab of glue on the end of your little finger, reach into the end of the body tube as far as possible, and spread the glue around the inside of the tube. Insert the engine block into the end of the tube, and using an engine casing push it forward until it is the right distance from the rear. Do not stop until it is in its proper position.

Glue the fins solidly in place. Attach the launching lug. Attach the screw eye to the nose cone. Hook one end of the shock cord to the body tube near the top, glue in position, and fasten the other end to the screw eye. Put the nose cone in place, sand the balsa parts of the rocket, and apply several coats of paint or dope, sanding between coats.



# The Idea Box

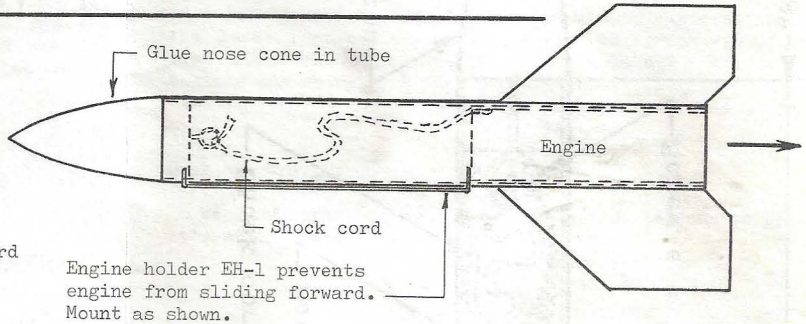
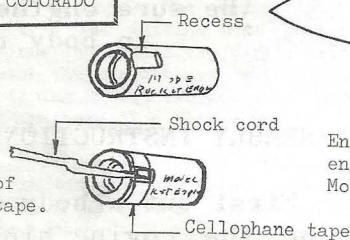


For those who wonder how to get a large mouse into a BT-1, there's this live payload compartment suggested by Doug Ritz, Lititz, Penna. One toilet paper roll, one nose block, and some balsa is all it takes.

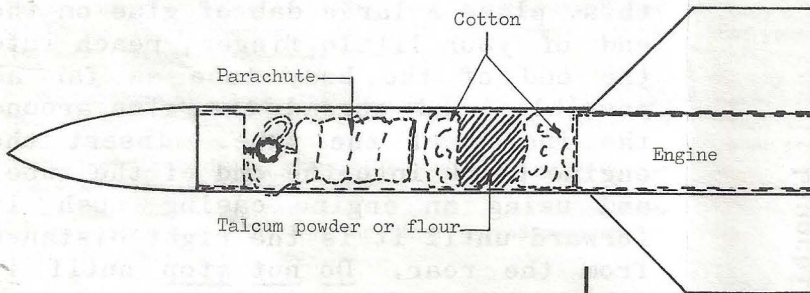
Nose cone coupler. Made from 1" long section of toilet tissue tube with 1/4" section cut out. Glue to front section only.

GOT SOME MORE IDEAS?  
 SEND THEM IN TO THE MODEL ROCKET NEWS  
 BOX 227  
 PENROSE, COLORADO

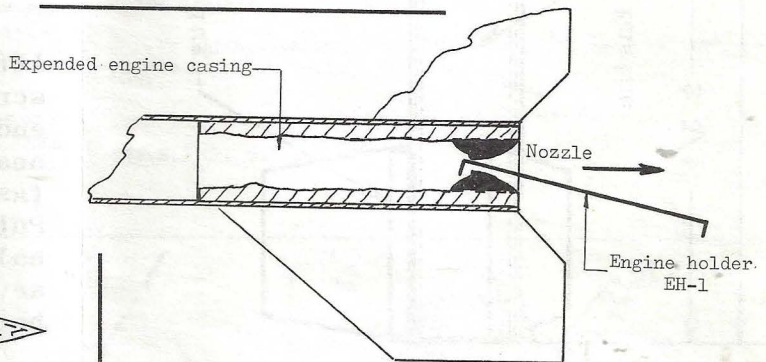
Cut small recess on outside of engine casing as shown. Attach shock cord in recess using cellophane tape. For extra strength double shock cord back over first layer of tape and then apply second tape.



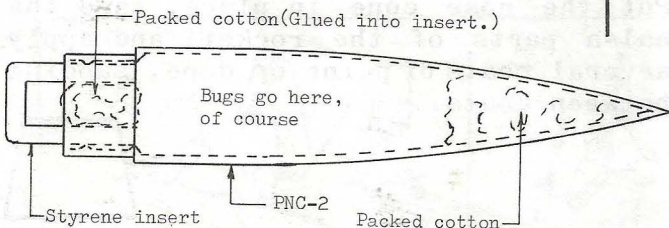
This quick recovery system was suggested by Bruce Maryanoff of Philadelphia, Pa. and Leon Laszlo of Dearborn, Mich. at the same time. The shock cord is taped to a recess in the engine casing, and the other end of the shock cord tied to a screw eye in the nose cone. The nose cone must be cemented to the body tube if the system is to function properly.



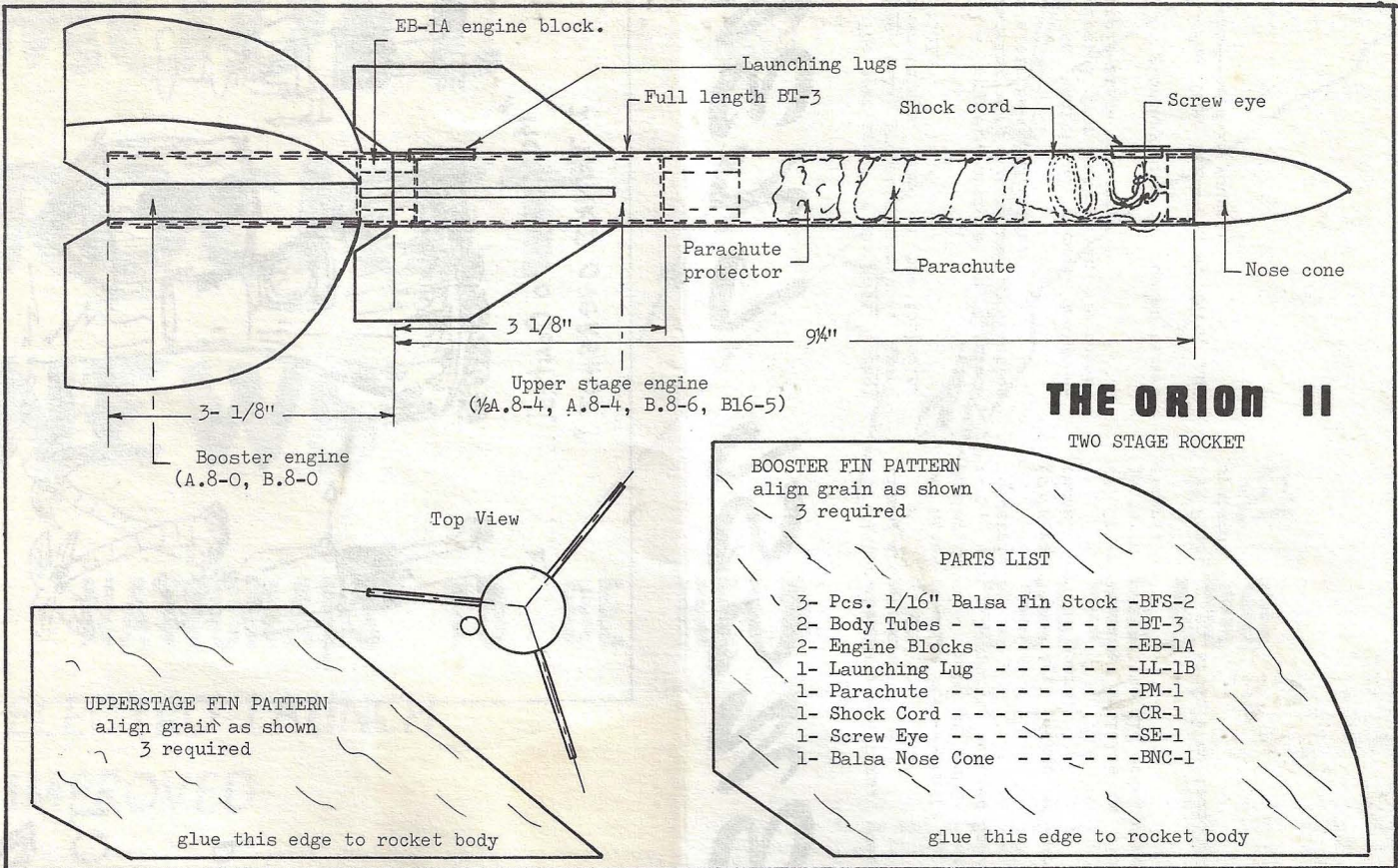
To make his rockets easier to spot, Richard Reynolds of Minneapolis, Minn. puts two tsp. flour behind the parachute. No yeast.



This quick method of removing spent engine casings was suggested by none other than the Boss himself. He just hooks the wire in, and pulls the engine out.



This quick capsule for bugs comes from Mike Dorffler, Hastings, Neb.



**THE ORION II**  
TWO STAGE ROCKET

BOOSTER FIN PATTERN  
align grain as shown  
3 required

PARTS LIST

- 3- Pcs. 1/16" Balsa Fin Stock -BFS-2
- 2- Body Tubes - - - - -BT-3
- 2- Engine Blocks - - - - -EB-1A
- 1- Launching Lug - - - - -LL-1B
- 1- Parachute - - - - -PM-1
- 1- Shock Cord - - - - -CR-1
- 1- Screw Eye - - - - -SE-1
- 1- Balsa Nose Cone - - - - -BNC-1

UPPERSTAGE FIN PATTERN  
align grain as shown  
3 required

glue this edge to rocket body

glue this edge to rocket body

**CUSTOMER SERVICE**

cut along dotted line

YOUR NAME \_\_\_\_\_

name \_\_\_\_\_

address \_\_\_\_\_

city, zone, and state \_\_\_\_\_

For plans, information, and data, fill out this form and mail to:

Estes Industries, Inc.  
Box 227  
Penrose, Colorado

CHECK DESIRED ITEMS

- TR-1, Report on Rocket Stability (enclose 10¢)
- Final Multi-Stage Report (enclose 10¢)
- Order blanks (Free)
- Plans for Dirty Bird III (Free)
- Plans for Bug-A-Bye--Payload Rocket (Free)
- Plans for Pee Wee--Two Stage Rocket (Free)
- NAR Application Blank (Free)
- NAR Section Guide (Free)
- NAR Safety Code (Free)
- Colorado Travel Brochure (Free)

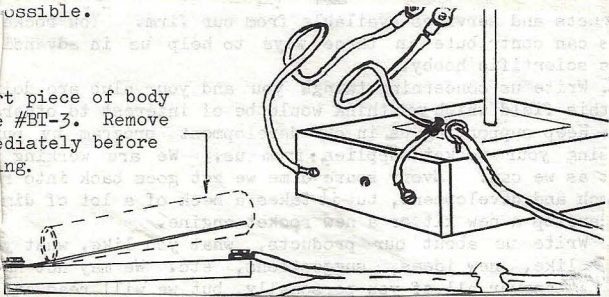
Please enclose a stamped, self addressed envelope with this request. Enclose an extra four cent stamp with requests for more than three items. This offer expires August 30, 1962.

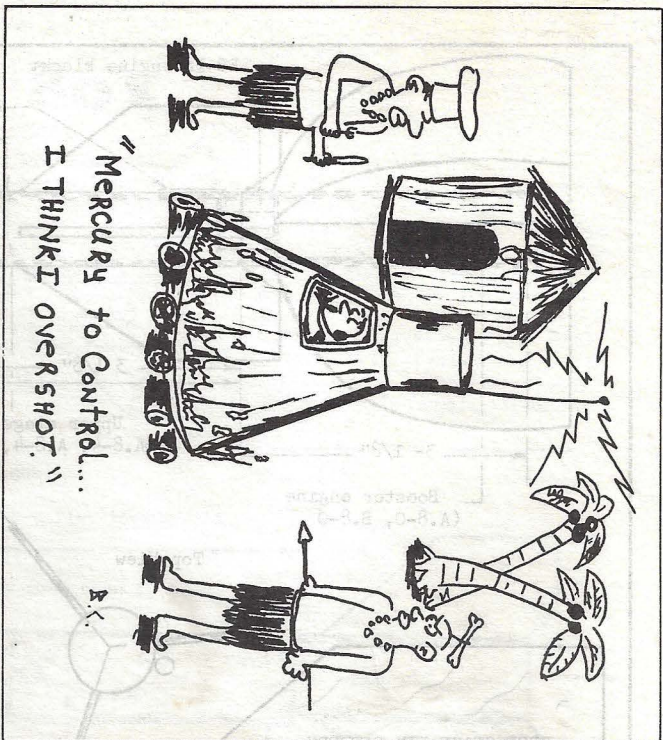
**CATALOG REQUEST**

If you have a friend who is interested in rocketry, fill out the form below and we will send him a catalog free of charge.

ossible.

et piece of body  
e #BT-3. Remove  
mediately before  
ng.





# DON'T FORGET TO DROP BY AND SEE US ON YOUR V Plan to include NARAM-4 in your vacati make Colorado your vacati

COME TO COLORADO AND SEE PIKES PEAK, ROYAL GORGE,  
FORCE ACADEMY, THE CAVE OF THE WINDS, THE SEVEN FALLS  
THE MANY MORE SCENIC ATTRACTIONS WITHIN THE STATE.

This quick method of removing spent engine casings was suggested by none other than the Boss himself. He just hooks the wire in, and pulls the engine out.

# NARAM-4

The next issue of the Model Rocket News will probably include, among other things, some of the following articles.

- (1) A complete article on altitude tracking with extensive information on altitude computation.
- (2) An additional rocket design---selected from entries in the recent single-stage contest.
- (3) A Glossary of model rocket terms.
- (4) The Idea Box---hints, tips, and ideas---send in yours!
- (5) Letter Section---Letters, questions, and answers.
- (6) Notes from the Boss---What's happening in the world of model rocketry, what's happening here at Estes Industries.
- (7) More "Space Age" jokes or cartoons. Send in yours.
- (8) Other feature articles on subjects of interest to all model rocketeers.
- (9) Possibly an article on launching systems.

Estes Industries, Inc.  
BOX 227  
PENROSE, COLORADO

RETURN REQUESTED  
if not delivered

