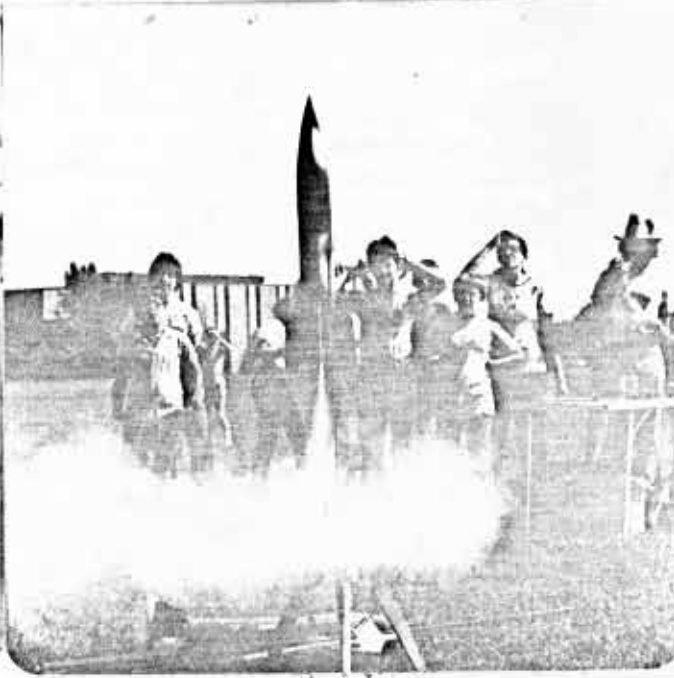


THE LEADING EDGE

—NIRAI—



September 20, 1981

Greetings, fellow rocketeer!

On behalf of all the members of the Northern Illinois Rocketry Association, or NIRA, let me thank you for coming out to our demonstration launch. We're sorry about the weather, but we hope you enjoyed the flying anyway.

NIRA is a model rocket club of about 45 members living all over the Chicagoland area. NIRA is jointly sponsored by the Glen Ellyn Toy and Card Shop and the Glen Ellyn Park District. We are one of the oldest model rocket clubs in the country.

Our meetings are held on the first Friday of every month, at 7:30 PM, in the Glen Ellyn Civic Center, 535 Duane, in downtown Glen Ellyn. We discuss club business, of course, but we also show movies, slides, rockets and have talks about new models and techniques. We have access to a flying field in Glen Ellyn, and fly at least once a month during the spring and summer. Many of our members are active competitors, and attend contests all over the Midwest. Currently, we boast two National Champions among our membership!

If you'd like more information about our club or its upcoming activities, give me a call or drop me a line. If you can, come out to our next meeting, Friday, October 2. If you can't make it, why not just fill in the membership form located on the next page, and we'll put you on our mailing list for our newsletter, the Leading Edge.

NIRA hope you'll enjoy this little offering, and that we'll soon be seeing you at our meetings and launches. Remember! If you have any questions, don't hesitate to call.

Sincerely,

Mark B. Bundick, President
1925 North Hudson Avenue
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642-9028

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1628 Waterford
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BASH THAT KIT!!!

BY BUNNY

After you've built about 6 or 8 model rocket kits, it gets to be old hat. Most people then tackle one of the more complex and expensive kits, like a Saturn V, or go on and start designing their own rockets. But there's another way to get around ho-hum, boring rocket kits. Kitbash it, guys! That doesn't mean take a baseball bat to it. It means modifying the kit in some way to make it fly better or to change its appearance. You don't have to do too much to most kits to get a neat looking bird that will be the hit of the next sport launch or that can win NIRA's "Model of the Month" contest.

One of the easiest things to do is to paint it differently. Most catalogues show a suggested paint scheme. That's ok, but after you've seen a couple of kits painted the same way, it gets boring. I modified my Centuri F-104 Starfighter by using American decals instead of the German ones in the kit. Not a lot of work for a model that's different. If the catalog shows a white rocket with red trim, try a red rocket with white trim.

The second thing you can try is to use different decals. Lots of hobby shops sell decals for model airplanes. They're easy to put on and can make a big difference.

Another way to modify kits is with junk. That's right, junk. You know the sort of junk I'm talking about. It's all those old plastic airplane and car parts that are gathering dust in your attic. You can use them for detailing futuristic model kits or as piping, antennas, etc. in semi scale models. Dowels and stick balsa can also be used effectively for details.

The biggest set of kitbashed kits use more drastic measures, usually this means changing the fin pattern, the length of the body tubes or some combination of both. When you start changing fins and moving body tubes around, you start messing up stability. The kit manufacturers have taken extreme care to build in extra stability. Thus, you can usually cut some fin area off without any adverse effect. You can add some nose weight to offset any reduced fin area, too.

To be super careful, you can compute the CG-OG relation on paper before you build the rocket. If you don't like that, you can swing test the model after it's built. Of course it's hard to change the fins then, but it's your choice.

When you change the fins, use your imagination. You can make square fins have rounded shapes and vice versa. Swept back fins become swept forward fins. Simple sport models can be turned into Star Wars like creations. In general, try almost anything.

One of the easiest kitbashes is to copy some fancy scale model you've seen in the MODEL ROCKETEER or at a contest.

PARTBASHING

OR

How To Fly More For Less

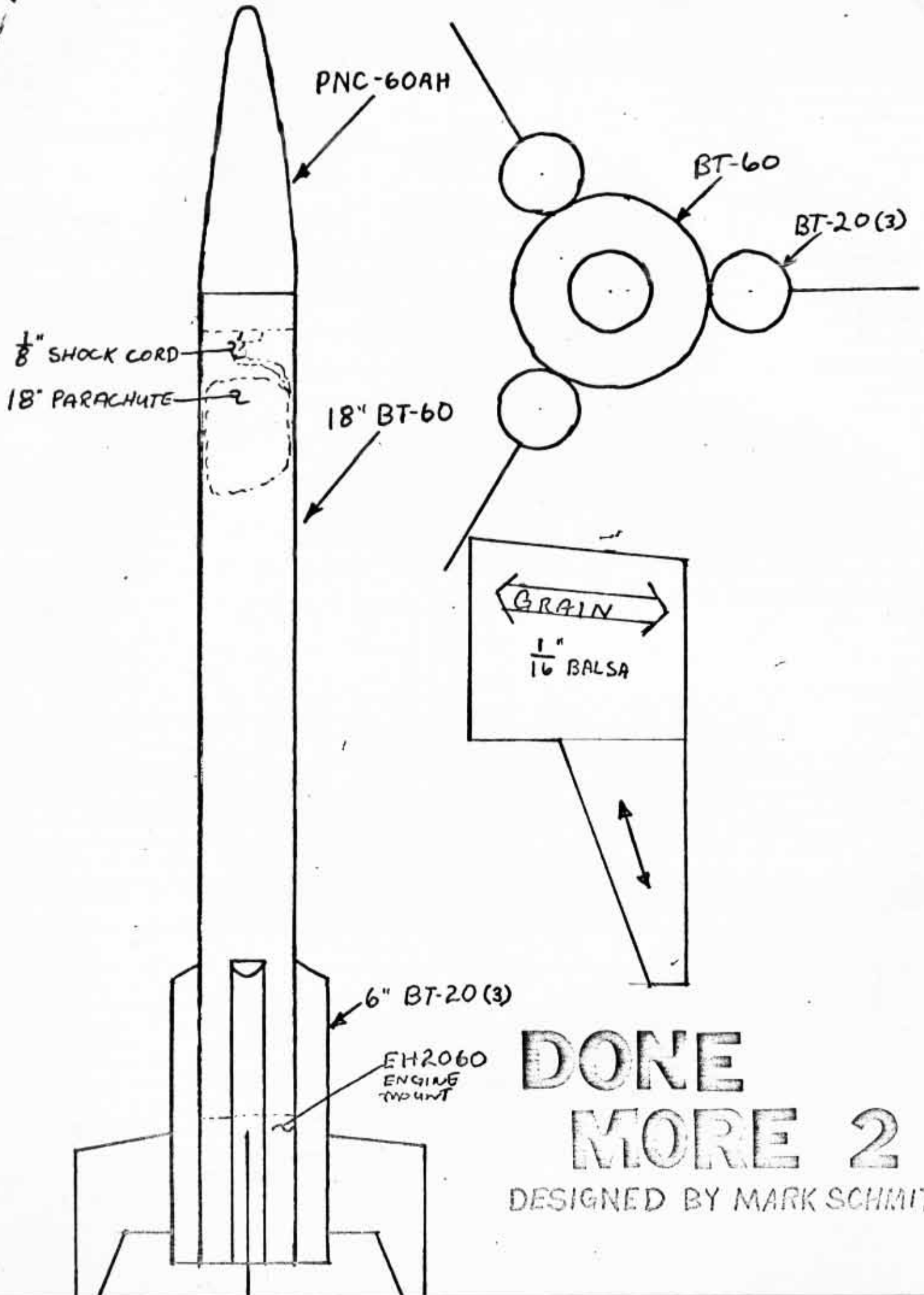
With the cheapest nose cones going for 60¢ and even the lowly engine block fetching 15¢, inflation hits every part of our hobby. If you put the high priced parts in a fancy package with a few decals and some instructions, you see the \$1.35 Skyhook of 1969 hit \$2.65 in 1979. If you're tired of high prices and want to fight back, try a little partbashing.

Partbashing is a combination of inventiveness and scrounging. These two combine to make your own parts instead of buying them. Need that 15¢ engine block? Cut off $\frac{1}{4}$ " of an old engine casing. Free engine block! Centuri mini engines used to come with small spacer rings. They made good engine blocks if cut in half and stage couplers if left whole.

The larger centering rings you buy from Estes or Centuri are just rolled paper. You can easily make your own. Just cut some strips of notebook paper $\frac{1}{4}$ " wide. Glue one end onto your engine tube, then put a bead of glue on top of the strip. Now wrap the strip around the tube, pushing the bead of glue ahead as you roll. Add glue if you run out. Keep rolling strips around the tube until your "ring" is the correct size. Some really cheap rocketeers simply use masking tape, instead of paper strips and glue. Yet another way to make engine mounts is to use four balsa spacers and two cardboard rings (for ejection gas seals).

Nosecones are very expensive. It's amazing to see how many people think they can't make them. All you need is a $\frac{1}{4}$ " drill, some block balsa and a headless screw. Chuck the headless screw into the drill. Carve the block balsa to the right length (including shoulder) and screw it onto the drill. Make sure it's properly centered, turn on the drill and shape with rough sandpaper or a file. Simple, eh?

CONTINUED ON LAST PAGE.



DONE MORE 2

DESIGNED BY MARK SCHMITT

NIRA'S HANDY MAP

NORTH AVENUE (RT. 64)

MAIN STREET



ACKERMAN PARK
(LAUNCH SITE)

SWIFT ROAD

ST. CHARLES ROAD

DOWNTOWN
GLEN ELLYN

Meetings are the first Friday of every month at 7:30.

Launches are usually on Sunday afternoons at 2 PM. Contact any NIRA member for exact date and time.

DUANE

CIVIC CENTER
(MEETINGS)



NORTHERN ILLINOIS ROCKET ASSOCIATION MEMBERSHIP/ SUBSCRIPTION FORM

Please fill in completely, print or type

NAME _____ DATE ____ / ____ / 19 ____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

NAR NUMBER _____ EXPIRES _____ AMA NUMBER _____

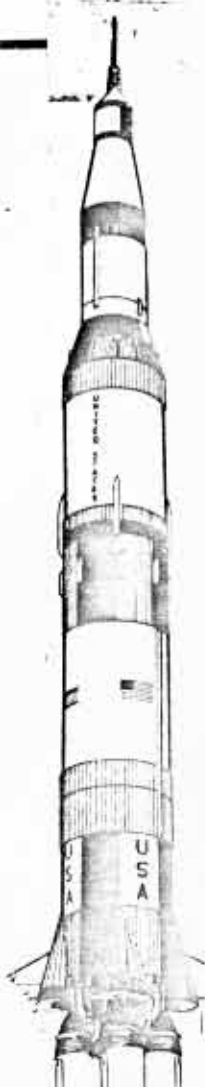
- (1) How long have you been involved in Model Rocketry? _____
- (2) List your favorite type(s) of rockets. _____
- (3) How did you first learn about NIRA? _____
- (4) List any other interests besides Model Rocketry. _____

Membership in NIRA- \$3.00 per year (includes subscription to Leading Edge)

OR

Subscription to Leading Edge along (6 issues)- \$2.00

Please make checks payable to the Northern Illinois Rocket Association



Finally, buy those little parts in bulk locally. Screw eyes come cheap in hardware stores. Paper drinking straws make good launch lugs. Shock cord is sold by hobby shops as "contest rubber" for about 1¢ per foot. Carpet thread makes great shroud line.

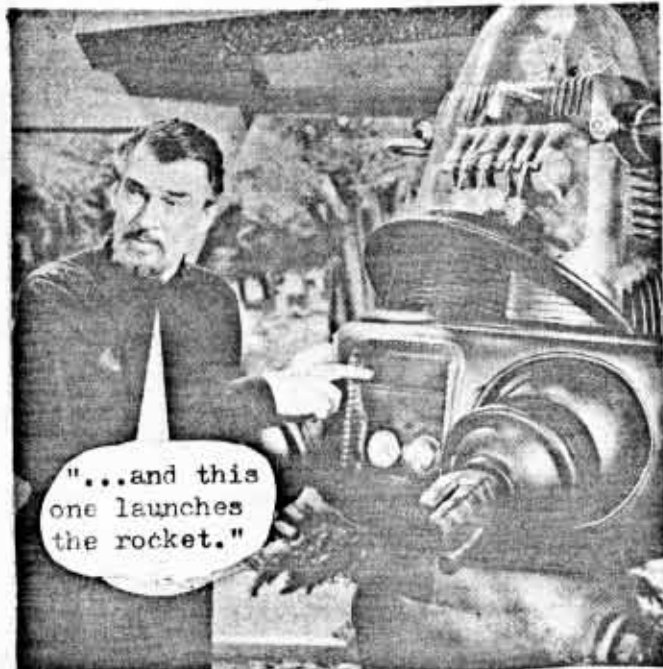
About the only thing which isn't easily partbashed is body tubing. We've not discussed all the possible partbashes, so use your imagination. Start scrounging and start saving today!

The Leading Edge is published bimonthly by and for the members of the Northern Illinois Rocket Association (NIRA), section 117 of the National Association of Rocketry and is dedicated to the idea that Model Rocketry is Fun.

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A Boeing AGM-86B ALCM is launched from a B-52G bomber.



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