

**NEW!**

# WIZARD

**"FREE WIZARD"**

High Performance Model  
With 30" Streamer Recovery

When You Purchase  
The MAXI-ALPHA

See Page 17 for Special  
Savings Coupon

"NEW"  
WIZARD  
Available  
Only with  
This Offer!

**"FREE"  
Wizard**

# maxi Alpha

Skill Level 2

- Nearly 3 Feet Tall
- Giant 24" Parachute
- Great for Demos
- Flights up to 500 Feet
- "D12-5" Engine-Powered

Ship Wt. 16 oz.  
Catalog No. 1291

**ONLY \$8.00**

Inside: Valuable  
Savings Coupons  
Worth up to \$33.35  
in Discounts And



ESTES INDUSTRIES

A SUBSIDIARY OF



A SUBSIDIARY OF DAMON

# Flying Model Rocketry

# Christmas 1977



"'Twas The Night  
Before Christmas..."

**CHRISTMAS  
SPECIALS!**

SEE PAGES 16 & 17 FOR  
SPECIAL SAVINGS  
COUPONS! PLUS... THE  
CURRENT ISSUE OF  
MODEL ROCKET NEWS!



A SUBSIDIARY OF DAMON

# COBRA-1500

Skill Level 2/Recommended for Intermediate Rocketeers

- Almost 5 Feet Long
- Flights Over 700 Feet With "C" Engine
- Features Giant Kit Decal
- Big 18" Parachute Recovery

### Specifications:

Height 59"  
(1500mm)  
Body Dia. 1.325"  
(33.6mm)  
Weight 3.17 oz.  
(90 g)  
18" Parachute  
Recovery

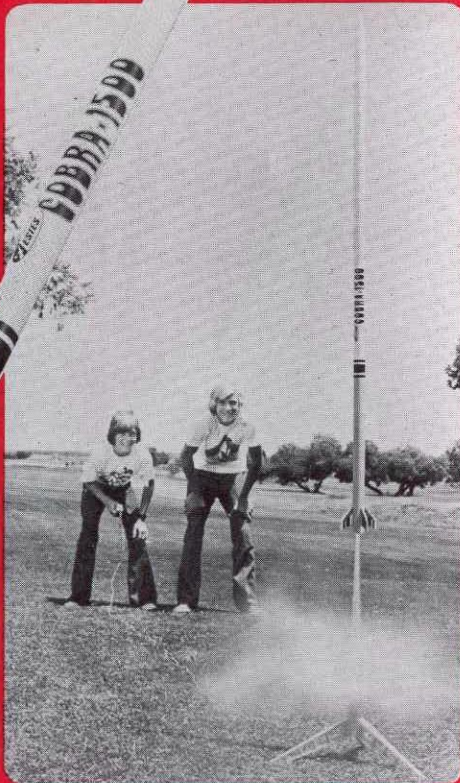
### Recommended

Engines:  
A8-3 B6-4  
B4-4 C6-5  
Ship. Wt.  
16 oz.

# NEW!

Cat. No. 1294

## ONLY \$5.00



(Unless otherwise stated, all the model rocketry kits in this catalog are hobby kits requiring assembly. Launch system, engines, glue, and finishing supplies are not included. Recommended for ages 10 to adult. Adult supervision suggested for those under 12 years of age when flying model rockets.)



Coming in 1978

## STAR WARS™ FLYING MODELS

Dear Estes Rocketeer:

Another year has passed, and what a year 1977 was for model rocketry and space flight!

The two big events were NASA's successful tests of the Space Shuttle Enterprise, and the release of what may be the biggest motion picture of all time -- STAR WARS.

And the big news from ESTES is that we're going to have real flying models of STAR WARS rockets by early spring 1978!

That's right. As I'm writing this, our engineers are staging test flights of the X-Wing Fighter and the Tie Fighter here on our Penrose Proving Grounds. Not only that, but we expect to have a MAXI-X-WING Fighter -- a huge scale model that will be the same size as the ones used by the STAR WARS special effects team in making the film! This means if you have a movie camera, you can make your own STAR WARS film!

If you're not already a member of the Estes Aerospace Club, hurry up and join; because our members will be getting the very first announcement of our "NEW" 1978 model rockets including our STAR WARS flying models! (See page 14)

We all hope 1978 will be a great year for model rocketry and for you. So, here's wishing you the merriest of Christmases, and may the Force be with you all through the coming year.

Vern



**SAVE \$1.00  
ON ORDERS OVER  
\$10.00 See Page  
16 For Special  
Savings Coupon!**

# HANGAR SALE!



## STAR BLAZER

Skill Level 3  
Authentic space vehicle appearance with its forward crew cockpit canopy, structural fairing strips, and streamlined design. Three-color U.S.A.F. decals and 10" parachute recovery.

### SPECIFICATIONS

Length 11.5" (29.2cm)  
Diameter 0.736" (18.7mm)  
Weight 0.73 oz. (20.7 g)  
Shipping wt. 5 oz.

### RECOMMENDED ENGINES

1/4A3-2T (First flight)  
1/2A3-2T A3-4T  
A10-3T  
Cat. No. 0831  
Reg. \$3.25

**SAVE \$1.25**  
**STAR BLAZER NOW**  
**\$2.00 See Page 16**  
**For Special Savings**  
**Coupon!**

**SAVE \$2.00**  
**RUSSIAN VOSTOK Now**  
**Only \$3.00 See Page**  
**16 For Special**  
**Savings Coupon!**

## RUSSIAN VOSTOK

Skill Level 3

Dramatic semi-scale, profile model of the famous Russian space booster which carried man into space for the first time on April 12, 1961. Responsible for establishing a foundation for the Russian space program, Vostoks set 21 world space records during the six missions between 1961 and 1963. Our profile version of this historic space vehicle looks great on display and realistic on the pad. Kit features include preprinted fins, quick-release engine mount, and realistic Russian decor. Big 18" parachute recovery makes for super-exciting flights.

### SPECIFICATIONS

Length 19.75" (50cm)  
Diameter 1.325" (34mm)  
Weight 2.4 oz. (69 g)  
Shipping wt. 11 oz.

### RECOMMENDED ENGINES

A8-3 B4-4 B6-4 (First flight) C6-5  
Cat. No. 1272 Reg. \$5.00

## ARCAS®

Skill Level 3

A precise reproduction of the well-known Atlantic Research Corp. sounding rocket. Designed to collect meteorological data at altitudes up to 40 miles. Original high performance design gives great performance to our smaller 1:3.4 scale version. Kit includes detailed fin mounts, authentic ARCAS decal, and 18" parachute.

### SPECIFICATIONS

Length 22.8" (58cm)  
Diameter 1.325" (33.7mm)  
Weight 1.4 oz. (40 g)  
Shipping wt. 11 oz.

### RECOMMENDED ENGINES

A8-3 (First flight)  
B6-4 C6-5  
Cat. No. 1226

Reg. ~~\$4.25~~

**SAVE \$1.50**  
**Camroc Carrier Now**  
**Only \$2.50 See Page**  
**17 For Special**  
**Savings Coupon!**

## Camroc Carrier

Skill Level 3

This high performance model is especially designed for lofting big payloads. Reaches altitudes over 1,000 feet with "C" engines. Special reducer section and elliptical fins create an excellent low drag design. Features giant cargo section for those interesting experiments. Kit includes die-cut fins, stick-on decals, molded plastic nose cone, and 12" parachute recovery.

Kit includes die-cut fins, stick-on decals, molded plastic nose cone, and 12" parachute recovery.

### SPECIFICATIONS

Length 17.75" (45.09cm)  
Diameter 1.634" (41.5mm)  
Weight w/payload 1.96 oz. (56 g)  
Weight w/o payload 0.81 oz. (23 g)  
Shipping wt. 6 oz.

### RECOMMENDED ENGINES

A8-3 (First flight) B6-4 B14-5  
C6-5  
Cat. No. 1266

Reg. ~~\$4.00~~

**SAVE \$1.50**  
**ARCAS NOW \$2.75**  
**See Page 16 For**  
**Special Savings**  
**Coupon!**

**HANGAR SALE!**  
Not Only Do You Get Big Discounts On These Models, These Count Toward The \$10 Total You Need For The \$1-Off Coupon On Page 16!

**SAVE \$2.50**  
**SCRAMBLER NOW**  
**ONLY \$5.50 See**  
**Page 16 For Special**  
**Savings Coupon!**

## "SCRAMBLER"

Skill Level 3

A super big "egg loft" for sport or contest flying. Huge see-through payload section holds an egg or any other large payload. Three-engine cluster gives you the power you need to boost your cargo. Capable of lofting a grade A hens egg over 1,000 ft. and then gently returning it to earth. Kit includes two 18" parachutes, decals, and Tech Report on clustering.

### SPECIFICATIONS

Length 23.5" (59.7cm)  
Diameter 1.637" (41.6mm)  
Payload Dia. 1.796" (45.6mm)  
Weight 2.8 oz. (79 g)  
Shipping wt. 13 oz.

### RECOMMENDED ENGINES

Requires 3 identical engines at launch.  
A8-3 B6-4 (First flight)  
B14-5 C6-5  
Cat. No. 1237  
Reg. ~~\$8.00~~

© Registered Trademark of The Atlantic Research Corporation, Alexandria, Virginia.

# SUPER SPECIALS

**"LOOK AT THESE SAVINGS"**

**SAVE \$6.00**  
**SATURN 1-B NOW**  
**ONLY \$9.95** See  
 Page 17 For Special  
 Savings Coupon!

**SAVE \$3.00**  
**MARS LANDER NOW**  
**\$6.95** See Page 17  
 For Special Savings  
 Coupon!

## MARS LANDER

Skill Level 5  
 Displays futuristic concept for a planetary exploration and landing vehicle. Spring-loaded landing gear simulates realistic upright touch-down. Big 18" bright orange and white canopy 'chute makes for a really great recovery sequence. Includes highly detailed body panels, colorful scale-like decals, and quick-release engine mount.

**SPECIFICATIONS**  
 Height 12" (30.5cm)  
 Diameter 3.8" (96.5mm)  
 Landing Gear Span 13.2" (33.5cm)  
 Weight 3.0 oz. (85 g)  
 Shipping wt. 16 oz.



**RECOMMENDED ENGINES**  
 B4-2 (First flight) B6-2 C6-3  
 Cat. No. 1243 Reg. \$9.95

## SATURN 1-B

(1/70th Scale)

Skill Level 5  
 Completely detailed model of the giant rocket that first lofted the lunar module into earth orbit. A real NASA workhorse, the Saturn 1-B has most recently been used to shuttle astronaut crews to Skylab. Features four-engine cluster power for really dramatic lift-offs. Highly scaled escape tower and stabilizer fin assembly. Includes authentic U.S.A./NASA decor, quick-release engine mounts, and die-cut balsa parts. Plus big, dual 24" orange and white parachutes for main booster and 12" 'chute for Apollo capsule. Tech report on engine clustering also included.

**SPECIFICATIONS**  
 Length 37" (94cm)  
 Diameter 3.938" (100mm)  
 Weight 9.9 oz. (280 g)  
 Shipping wt. 3 lbs., 5 oz.  
 Cat. No. 1229 ... Reg. \$15.95

**RECOMMENDED ENGINES**  
 A8-3 B6-2 (First flight)  
 B6-4 C6-5  
 (4 engines required. All must be the same type.)

**FLY THE MARS LANDER LONG BEFORE NASA DOES!**

**Incredibly Realistic!**



## Santa's Engine Special

**Engine Special**  
**Save \$1.50**

**A \$7.50 VALUE**

You get three A8-3, three B4-2, three B6-4, and three C6-5 MODEL ROCKET ENGINES, plus Recovery Wadding and Igniters.

Ship. wt. 16 oz.  
 Cat. No. 1738 **ONLY \$6.00**

**See Page 17 For Special Savings Coupon!**

## SOLAR LAUNCH CONTROLLER

**MODEL ROCKETRY'S MOST ADVANCED LAUNCH SYSTEM**



Futuristically designed launch control unit that requires only four alkaline pen light batteries for power. Unit is easily assembled in minutes and features safety key, continuity check lamp, ignition button, and 15 feet of light-weight launch cable. Use with Estes Solar Igniters. (Batteries not included.)

Cat. No. 2300 Reg. ~~\$6.00~~

**COMBINATION OFFER**  
**SAVE \$2.00 Buy Both**  
**The Solar Launcher**  
**& Porta Pad ONLY \$9.00**  
 See Page 17 For  
 Special Savings Coupon!



Rocket Not Included.

**\$11.00 VALUE**

**COMBINATION OFFER**

Shipping wt. 12 oz.  
 Cat. No. 1450

**ONLY \$9.00**

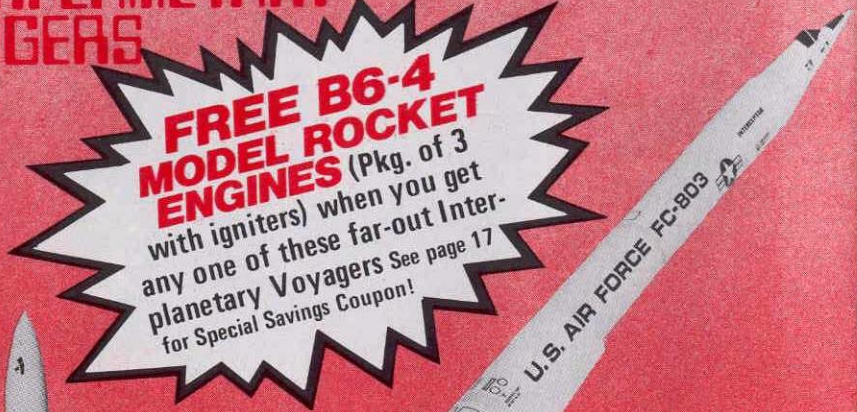
## Porta-Pad

**PLASTIC TRIPOD**  
 Rugged Porta-Pad Tripod Launcher with sturdy plastic girder construction, blast deflector plate, 1/8" dia. x 36" two-piece launch rod, and special tilt-adjustment to compensate for wind direction. Also handles larger 3/16" launch rod for Maxi-Brutes. Can be adapted for rail launchings with Estes "C" Rail.

Cat. No. 2217 Reg. ~~\$5.00~~

# INTERPLANETARY VOYAGERS

**FREE B6-4 MODEL ROCKET ENGINES** (Pkg. of 3 with igniters) when you get any one of these far-out Interplanetary Voyagers See page 17 for Special Savings Coupon!



## INTERCEPTOR

Skill Level 3

Futuristic version of real interplanetary interceptor. Deep space exotic design makes it the pride of any modeler. Delivers excellent performance for really sensational flights. Dramatic 18" parachute recovery, two

big sheets of four-color decals, and quick-release engine mount. Plus all die-cut balsa parts and detailed plastic nose cone, wing pods and tail cone.

<b>SPECIFICATIONS</b>	<b>RECOMMENDED ENGINES</b>
Length 26" (66cm)	B4-2 B6-4 (First flight)
Shipping wt. 12 oz.	C6-5
Cat. No. 1250	<b>ONLY \$8.00</b>

## Orbital Transport

Skill Level 4

Features dramatic space shuttle concept. Developed for both orbital and near-space missions. Long and sleek transport ship lifts-off vertically with shuttle riding piggy-back. At engine ejection transport returns via 18" parachute and shuttle becomes gliding re-entry vehicle. Separation of crafts at apogee makes for exceptionally spectacular flights. Includes quick-release engine mount and realistic three-color decals.

<b>RECOMMENDED ENGINES</b>
B6-2 B6-4 (First flight) C6-5
Cat. No. 1242

**ONLY \$6.00**



## Sky Dart

Skill Level 4

This totally new rocket-boosted glider design features an internal rear ejection power pod. Streamlined "Business SST" body styling results in a high performance glide along with good reliability. 12" parachute recovery brings power pod back safely. Pat. No. 3,157,960.

**RECOMMENDED ENGINES**  
A8-3 B4-2 B6-2 (First flight) C6-3  
Cat. No. 1257  
**ONLY \$6.00**

**CHRISTMAS SPECIAL!**  
SEE PAGES 16 & 17  
FOR SAVINGS COUPONS  
& FREE GIFTS!

## SCISSOR-WING TRANSPORT

Skill Level 3

This exciting bird introduces the revolutionary new Scissor-Wing concept. Features super SST styling and high flight reliability. Capable of glide times of more than 60 seconds. Internal ejection power pod features vertical stabilizer fins. Comes ready-to-assemble with die-cut parts and two-color decals.

**RECOMMENDED ENGINES**  
B4-2 (First flight) B6-2 C6-3  
Cat. No. 1265

**ONLY \$6.00**

Skill Level 3

Designed for journeys to distant planets this incredible "starship of the future" will be an outstanding addition to your model rocket collection. Performing interplanetary missions within the galaxy, our engineer's conception of the actual ship features simulated hybrid fission-ion propulsion engines, forward crew module and colorful mission decor. This beauty is over 43" long and represents a unique entry to our own Starship Fleet. Kit features include die-cut parts, highly detailed decals, and quick-release engine mount. Andromeda's flights are of course most spectacular, especially with giant 18" parachute recovery.

**RECOMMENDED ENGINES**  
B6-4 (First flight) C6-5  
Cat. No. 1273

**ONLY \$6.00**

## Andromeda



# GIANT MAXI- BRUTES!

## German V-2

**Skill Level 3**  
Giant scale model of the ground-to-ground ballistic missile developed at Peenemunde before and during World War II. This 1/19th scale Maxi-Brute features "D" engine power, detailed plastic nose cone, dual 24" parachute recovery and pre-shaped fins.  
**RECOMMENDED ENGINE**  
D12-3  
Cat. No. 1267

**ONLY \$17.95**

**NEARLY  
3-FEET  
TALL**

**CHRISTMAS  
SPECIAL! SEE  
PAGES 16 & 17  
FOR SAVINGS  
COUPONS &  
FREE GIFTS!**

*A 3/16" launch rod should be used for best lift-off results.*

## PERSHING-1A

**Skill Level 3**  
This Maxi-Brute is a true scale model of the U.S. Army's surface-to-surface ballistic missile. Our 1/10 scale model is "D" engine powered with three-color decals, pre-shaped fins, detailed molded plastic nose cone, and dual 24" parachute recovery.  
**RECOMMENDED ENGINE**  
D12-3  
Cat. No. 1268 . . . . .

**ONLY \$17.95**

**MORE THAN  
3-FEET  
TALL!**

**OVER  
3-FEET  
TALL**

## HONEST JOHN

**Skill Level 3**  
Our newest Maxi-Brute is a 1/9th scale model of the famous U.S. Army surface-to-surface, supersonic ballistic missile. Highly detailed model uses single "D" engine for power and comes with pre-shaped, accurately scaled fins and molded plastic nose cone. Spectacular recovery with giant, dual 24" orange and white canopy chutes.  
**RECOMMENDED ENGINE**  
D12-3  
Cat. No. 1269

**ONLY \$17.95**

**3 FREE SUPER-POWERED D12-3 ENGINES (Value \$3.25) when you purchase a Maxi-Brute! SEE PAGE 17 FOR SPECIAL SAVINGS COUPON!**

## LTV Scout <sup>1/24th</sup> Scale

**Skill Level 3**  
Since its first mission in 1960, Scout has been the launch vehicle for more than 90 missions, holding the record for consecutive successes among all NASA launch vehicles. This model is extremely detailed with many plastic parts and realistically decorated with two-color decals. Other features include molded plastic fins and adapter sections, quick-release engine mount and big 18" parachute recovery.

**RECOMMENDED ENGINE**  
C6-5  
Cat. No. 1287

**ONLY \$6.00**

**OVER  
3-FEET  
TALL!**

**OVER 31"  
LONG**

# SCALE MODELS

## SANDHAWK

*(1/10th Scale)*  
**Skill Level 2**  
A mighty "D" engine powered, ultra-detailed, 30" tall scale model. Actual rocket is a single-stage, solid-propellant vehicle developed for upper-atmosphere research experiments. Our scale version features all plastic, highly-detailed nose cone, payload section, fins and tail assembly. Quick-release engine mount plus 12" chute for payload and big 18" parachute for rocket.

**RECOMMENDED ENGINES**  
B4-2 C6-3 D12-5 (First flight)  
Cat. No. 1251 . . . **ONLY \$6.00**

**"FREE"**

**FIREFLY** With  
Any of These Authentic Scale  
Models. See Page 17 for Special  
Savings Coupon!

## NIKE AJAX

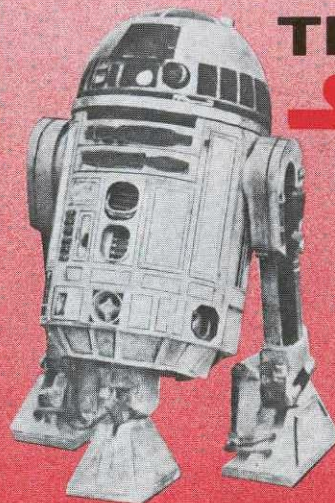
**Skill Level 3**  
The first supersonic anti-aircraft missile, the Nike Ajax, was developed to defend large cities and industrial complexes against enemy bomber attack. Our 12.4 to 1 semi-scale model comes complete with authentic U.S. Army decor and realistic detailing. Kit includes 18" parachute recovery, die-cut balsa parts, and quick-release engine mount.

**RECOMMENDED ENGINES**  
A8-3 B4-4 B6-4 (First flight)  
C6-5

Cat. No. 1279 . . . . . **ONLY \$6.00**

Now, From the Smash Hit,  
**STAR WARS™**, Threepio and  
 Artoo Invite You to  
**"INTRODUCE A FRIEND  
 TO MODEL ROCKETRY"**

The Brand New  
**STAR WARS™**  
 Flying Model  
 Rocketry  
 Starter Kit  
 Available  
 Now!



Build and Fly the  
**STAR WARS™**  
 Proton Torpedo—the  
 Missile that Destroyed  
 the Imperial Death Star!

Introduce A  
 Friend And You'll  
 Receive A "FREE" 10"x27"  
**FULL COLOR STAR WARS  
 POSTER!** (Not Available  
 In Stores!)



**THIS ROCKET  
 CAN ATTAIN  
 ALTITUDES OVER  
 1,000 FEET!**

Everything you  
 need for lift-off  
 in less than 30  
 minutes! Very  
 Easy-To-Assemble!

Star Wars Flying  
 Model Rocketry  
 Starter Kit  
 Cat. No. 1420  
 Only \$13.00

Share the fun and ex-  
 citement of model rocketry  
 with your friends! Let your  
 pals know about your "farout"  
 hobby! Have a friend get involved  
 by purchasing this "new" STAR WARS  
 Starter Kit. We'll send you a fantastic  
 10"X27" Full-Color STAR WARS Poster,  
 "Free", for helping us get him started.

**Give This Coupon To Your Friend**

Requires  
 6 volt lantern battery  
 and glue (not included).

No other model is more perfect for the beginning rocketeer. Your STAR WARS Starter Kit will give you dozens of enjoyable missions just like the first one. The high performance Proton Torpedo rocket is very easy-to-assemble with jet black plastic nose cone and fin unit. Features quick-finish fluorescent decals and pre-colored body tube. No painting required! The Proton Torpedo can be launched over and over again and returns via 12" recovery parachute. You need only replace the rocket engine, igniter, and recovery wadding for each new flight. STAR WARS Launch Control System features futuristically designed hand-held launch controller with arming lamp, safety key, launch button, and 15 feet of launch cable with micro igniter clips. Plus sleekly designed launch pad with blast deflector plate and 1/8"X36" two-piece launch rod. Entire system sets up quickly for launch and disassembles easily for compact storage. Flight Pak includes three N.A.R. safety certified model rocket engines, parachute recovery wadding, and high reliability Solar Igniters for three exciting flights.

(NOTE: Your Proton Torpedo can also accommodate more powerful rocket engines - the B6-4 which will take it to over 750', and even the C6-5, which will send it shooting up over 1,000'.)

**COMING IN EARLY SPRING! X-WING FIGHTER PRECISELY DETAILED  
 FLYING MODEL THAT LAUNCHED THIS PROTON TORPEDO . . .**  
 Plus . . . TIE Fighter! Your STAR WARS Collection Won't Be Complete Without Several  
 Of These Fighters Commanded By Darth Vader. Beautifully Detailed, Ready-To-Assemble,  
 With Authentic Decals And Parachute Recovery. (Important Note: These Kits Will Not  
 Be Available To Order Until Spring 1978.)

**ESTES.**

**I Want To Get Involved In Model Rocketry**

YES! I would like to purchase a STAR WARS Starter Kit and launch my own rocket. Please rush my STAR WARS Starter Kit to me. I have enclosed \$13.00.  
 Order From: Estes Industries, Penrose, Colorado 81240

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please send my friend a "Free" STAR WARS Poster for helping me get started.

Friend's Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**ESTES.**

Join More Than 85,000 Estes Rocketeers  
Getting The Most Out Of Model Rocketry

# BECOME A MEMBER OF THE ESTES aerospace CLUB TODAY!

**SAVE 50¢ SPECIAL  
EAC MEMBERSHIP  
ONLY \$2.50 See Page  
17 For Special  
Savings Coupon!**

You'll discover membership in the Estes Aerospace Club opens up a whole new world of model rocket activities. Membership is permanent, and your membership kit includes:

- \*VIPER ROCKET – Club's Exclusive High Performance Design.
- \*MEMBERSHIP CERTIFICATE – Suitable for Framing.
- \*CLUB EMBLEM – Official iron-on patch. As you progress to higher skill levels, you receive additional iron-on "thrust" bars.
- \*DECAL SHEET – Identify your rockets as part of the EAC fleet!
- \*RANGE BOX STICKERS – Multipurpose stick-ons for your range equipment.
- \*EAC STATIONERY – Distinctive stationery for notes and letters.
- \*MODEL ROCKETRY TECHNICAL MANUAL – Includes information on construction techniques, finishing, stability, tracking, recovery systems, multi-staging, and boost gliders, plus much, much, more.
- \*COPY OF MODEL ROCKET NEWS – Features free plan designs, technical articles, contest, rocketeer contributions and more.
- \*EAC PRODUCTS BULLETIN – Outstanding offers for EAC kits and products available ONLY to members.



## JOIN NOW! BECOME AN ESTES AEROSPACE CLUB ROCKETEER TODAY!!

Simply Check the EAC box on your order form and include your payment.

Regular EAC Membership (#1447) . . . . . ~~\$3.00~~

**Special EAC Membership Offer . . . . . ONLY \$2.50**

Be sure to include Special Savings Coupons with your order form.

### IMPORTANT NOTICE!

ESTES AEROSPACE CLUB MEMBERS WILL RECEIVE THE VERY FIRST ANNOUNCEMENTS AND OPPORTUNITY TO ORDER ALL THE "NEW" 1978 ESTES MODEL ROCKETRY KITS AND STAR WARS FLYING MODELS.

**THIS IS AN EXCLUSIVE BENEFIT, ONLY AVAILABLE TO CLUB MEMBERS, IF YOU ARE NOT ALREADY A MEMBER, YOU ARE URGED TO JOIN NOW!**

## CLOSEOUT SPECIAL



**SHRIKE  
STYROFOAM GLIDER  
ONLY 50¢** See Page 17 for Special Savings Coupon!

Cat. No. 33040  
Ship. wt. 12 oz.

**SAVE 75¢**

**HURRY, ORDER NOW!  
SUPPLIES ARE LIMITED!!**

# available now Model Rocketry's First Scale space shuttle

**So Realistic, That  
From A Distance,  
You'd Swear It Was  
The Real Thing!!**

**Skill Level 4**  
Dramatic 1/162nd scale reproduction of America's newest space vehicle. Designed as a reusable near space transportation system, tests of the real thing have been taking place for several months. This semi-scale orbiter employs glide recovery just like the real thing while boosters and external tank return via 18" parachute recovery. Our model features special stabilizer fins for atmospheric flight which remove easily for display. Kit components include injection molded and vacuformed plastic and die-cut parts plus quick-release engine mount.



**FREE C6-3 MODEL  
ROCKET ENGINES** (package of 3 with igniters) with the purchase of a Space Shuttle. See page 17 for Special Savings Coupon.

### SPECIFICATIONS

Shuttle Length	13.6" (34.5cm)
Diameter	2.04" (51.8mm)
Orbiter Length	9.0" (22.9cm)
Orbiter Wingspan	7.1" (18.9cm)
Weight	4.37 oz. (124 g)

Shipping wt. 16.oz.  
**RECOMMENDED ENGINE  
C6-3**

(Engines, Launch System, and Glue are not included with this kit.)  
Cat. No. 1284 . . . . . **Only \$8.00**



# Christmas/New Year's Savings Coupons

from  **ESTES**

A SUBSIDIARY OF DAMON


SAVE UP TO **\$33.35** ON ROCKETS ... LAUNCH EQUIPMENT ... ENGINES ... SPECIAL PRODUCTS. A CHRISTMAS GIFT TO YOU ... FROM ESTES!

## HOW TO USE THESE SAVINGS COUPONS

When you decide on a purchase from this catalog, look to see if you can use one of the Savings Coupons. For example if you purchase the Mars Lander on page 6 you can use the Savings Coupon which allows you \$3.00 toward the purchase of this regularly \$9.95 kit. You would tear out the Coupon ... send it in with your order and your check or money order for \$6.95 plus handling charge of \$1.00 ... and you will receive the Mars Lander for \$3.00 off the regular price. Be sure to enclose all Savings Coupons used with your Order Form in your return envelope.

All offers good only with the Order Form enclosed with this catalog. You cannot use these Savings Coupons at your retail dealer. All offers Expire 4-1-'78. Substitutions will be made when necessary.

Special Bonus Coupon

 **ESTES**


A SUBSIDIARY OF DAMON

**WORTH \$1.00**

Toward the purchase of \$10.00 or more from this catalog. Redeemable only direct from Estes Industries.

Expires 4-1-'78


Special Bonus Coupon

 **ESTES** Savings Coupon

**WORTH \$1.50**

Toward the purchase of an ARCAS (#1226).


(See Pages 4 & 5) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$2.50**

Toward the purchase of a SCRAMBLER (#1237).

(See Pages 4 & 5) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$2.00**

Toward the purchase of a RUSSIAN VOSTOK (#1272).


(See Pages 4 & 5) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$1.25**

Toward the purchase of a STARBLAZER (#0831).


(See Pages 4 & 5) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$1.50**

Toward the purchase of a CAMROC CARRIER (#1266).


(See Pages 4 & 5) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$6.00**

Toward the purchase of a SATURN 1-B (#1229).


(See Page 6) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$3.00**

Toward the purchase of a MARS LANDER (#1243).

(See Page 6) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$1.50**

Toward the purchase of SANTA'S ENGINE SPECIAL \$7.50 Value (#1738).

(See Page 7) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH \$2.00**


Toward the purchase of SOLAR LAUNCHER/PORTA-PAD COMBINATION Offer (#1450).

(See Page 7) Expires 4-1-'78

 **ESTES** Savings Coupon


**FREE** Package of B6-4 MODEL ROCKET ENGINES WORTH \$1.70 when you purchase an INTERPLANETARY VOYAGER on pages 8 & 9.

Expires 4-1-'78

 **ESTES** Savings Coupon


**FREE** Package of D12-3 MODEL ROCKET ENGINES WORTH \$3.25 when you purchase any MAXI-BRUTE on page 10.

Expires 4-1-'78

 **ESTES** Savings Coupon

**FREE** FIREFLY GLIDER WORTH \$1.50 when you purchase a SCALE MODEL On page 11.


Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH 50¢**

Toward membership in the ESTES AEROSPACE CLUB (#1447).


(See Page 14) Expires 4-1-'78

 **ESTES** Savings Coupon

**WORTH 75¢**

Toward the purchase of a SHRIKE GLIDER Reg. \$1.25

(See Page 14) Expires 4-1-'78

 **ESTES** Savings Coupon

**FREE** Package of C6-3 MODEL ROCKET ENGINES WORTH \$1.90 when you purchase a SPACE SHUTTLE.

(See Page 15) Expires 4-1-'78

 **ESTES** Savings Coupon

**FREE** "NEW" WIZARD WORTH \$1.50 when you purchase a MAXI-ALPHA (#1291).

(See Back Cover) Expires 4-1-'78

Vernon Estes . . . . . Publisher  
Dane Boles . . . . . Editor  
Mary Roberts . . . . . Asst. Editor  
Bob Cannon . Dir. of Publications  
Charlie Webb . . . . . Photographer  
Ron McClaren . . . . . Staff Artist  
Steve Garcia . . . . . Staff Artist  
© Estes Industries 1977

## JAWAS, LASER BURNS AND DARTH VADER

by Mike Dorffler  
Photos by Charlie Webb

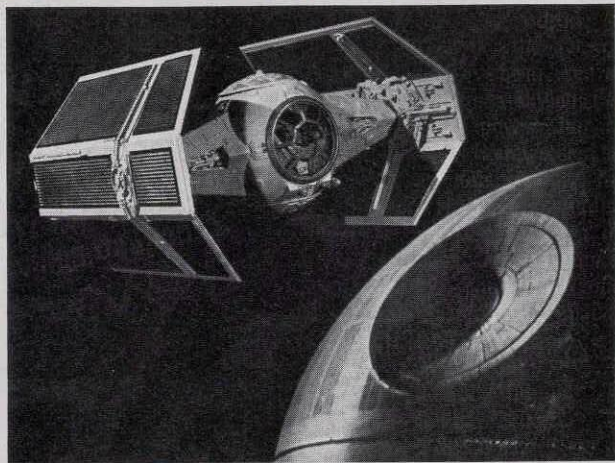
It was strangely quiet as we slowly approached the designated vine covered structure. The "silence" was broken only by the nearby San Diego Freeway traffic and the rapid overflight of private aircraft from an airport located closeby.

As I read the sign on the massive wooden door I suddenly felt a tremor in the FORCE and thought we may have made a serious mistake in coming. It read: "ENTER AT YOUR OWN RISK, (signed) Darth Vader." We said nothing but stared at each other not knowing what to expect. We knocked the pre-instructed number of times then moved away from the door. After a few moments, it opened just far enough for one of the occupants to gaze at us with one eye. Then a low voice said, "State your name and business".

"We're from Estes Industries and have come to examine the spacecraft," one of us stuttered.

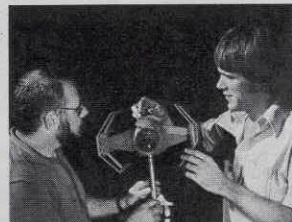
"Ah-h-h, good. You're expected." The door opened further and we entered making every effort to keep our balance as the four heavy equipment cases we carried made movement difficult.

Once inside one could feel the awesome presence of the FORCE. The silence was again deafening. Only the FM stereo receiver blaring hard rock and the sound of hyperactive typewriters kept us from speaking in hushed words. We had safely passed



Darth Vader's TIE Fighter screams past the "ominous" Death Star, to challenge the X-Wing Fighters of the Rebel Forces.

from the outside world into the incredible Industrial Light and Magic Studio where the STAR WARS



Joe Johnston (Right), creator of STAR WARS spacecraft explains detail of Darth Vader's TIE Fighter to Estes photographer, Charlie Webb.

special effects were filmed. It was to be an experience that Charlie Webb, Wayne Kellner and I will never forget.

We tried to hide our drooling, pop-eyed, tongue hanging expressions to no avail as we introduced our-

selves to the team of brilliant artists (and Model Rocketeers) who made STAR WARS such a success.

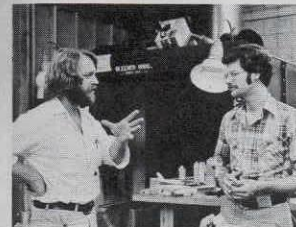
We met Joe Johnston, the creator of all the spacecraft used in the movie. He is an outstanding artist and it was his renderings that guided the construction of



Charlie Webb closely examines Darth Vader's super-highly detailed TIE Fighter.

the models used in filming. He was also responsible for doing the "story board" illustrations used to guide the team in filming the action

shots. We met a few of the guys who actually built those unbelievable models, like Steve Gawley, Lorne Peterson and Grant McCune. We talked to Mas Norihiro, Richard Edlands, Doug Smith and the man who created the computerized camera system to film those fantastic space battles, John Dykstra.



Wayne Kellner (Right), Estes R&D Staff, raps with Grant McCune, STAR WARS model builder.

After we visited for about an hour exchanging model rocket experiences, asking thousands of questions about the models and sound effects, and the problems they encountered making the film, we were led into the film studio where the STAR WARS models were stored.

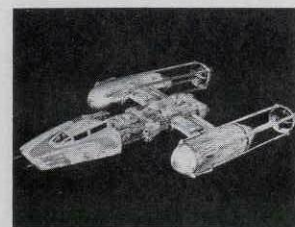
There in one corner were several large, white wooden crates with STAR WARS stenciled all over them. Charlie, Wayne and I waited breathlessly as the first crate was opened. The foam packing sheets were lifted out followed by a huge three-foot square plexiglass dust case. I had to re-adjust my pacemaker as I saw the T.I.E. Fighter for the first time. It was huge! It was nearly two feet from engine panel



Wayne takes scale measurements of Y-Wing Fighter.

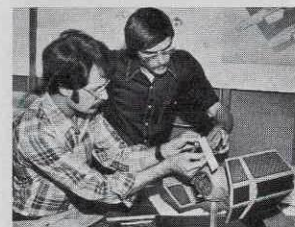
to engine panel, and almost as high. The detailing was breathtaking. You could even see the wrinkles on the pilot's

uniform. And so it went. As the X-Wing Fighter and



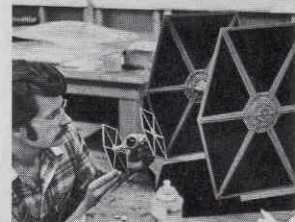
Incredibly detailed STAR WARS Y-Wing Fighter.

the Y-Wing Fighter were uncrated Charlie unpacked his cameras and began to set up the T.I.E. Fighter for picture taking. He took nearly 500 pictures of the models in two days, and some of these



Wayne and Mike Dorffler, Estes R&D Staff, discuss Darth Vader's TIE Fighter.

are shown here just for you. Although all of the models were expertly built and finished, the favorite of the three of us was Darth Vader's. There was only one of this model built where all of the



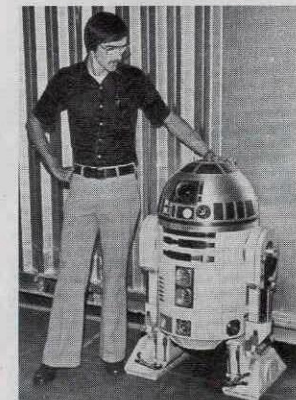
Wayne compares Estes TIE Fighter to real movie version.

others required several copies. The reason for this was that some needed to be blown-up during the filming.

It took over two years of painstaking work to create and film all of the models we saw. For instance; once a particular flight sequence was decided upon, a model or models had to be placed on

special support stands, the camera lined up and a test shot taken. This strip of film was processed immediately and viewed. If the sequence was not quite right, the models were adjusted and re-filmed.

It's also difficult to imagine that the system John Dykstra used to film the models had not been attempted before. The models NEVER MOVED. All the movement that you see in the STAR WARS movie is in your mind. These fantastic glimpses of spacecraft moving and rolling at high rates of speed were created by movements of only the movie camera. The computer system used to control the movement of the camera system could also remember what was filmed previously and how it was filmed.



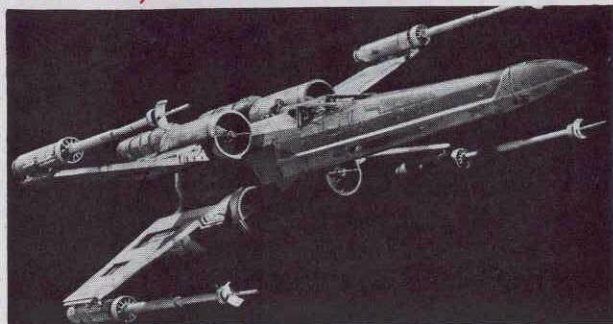
Mike Dorffler meets STAR WARS robot hero, R2-D2.

Remember when the escape pod with C3PO and R2-D2 jetisoned from the Blockade Runner in the beginning of the movie? What you saw was a small model dropped from an opening in a tabletop sized scene with the camera looking down from above. Do you also remember when the Blockade Runner was hit by a Laser blast from the Corellian Stardestroyer in the beginning? And how the explosion flared up and away into free space? That scene was filmed upside-down so that gravity would pull all the blast debris down and away from the model.

(Continued Next Page)

(Continued From Page 19)

# JAWAS, LASER BURNS AND DARTH VADER



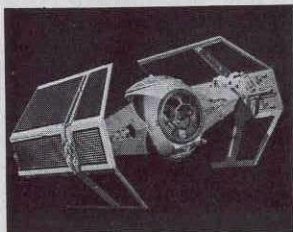
Close-up of fantastic movie model of X-Wing Fighter.

These guys are real tricky and true magicians.

Remember those sound effects? They were all added later, using a very complex electronic sound mixing system. We were really surprised to learn that the T.I.E.

Fighter engine roar was actually an elephant roar electronically "enhanced". Chewbacca's "voice" is actually a mixture of walrus and bear. Artoo's buzzing, bleeping, and chirps were all expertly created on a

Moog Synthesizer. All of the work done on STAR WARS is the result of over 900 dedicated people and we only met a few of these. It was an experience to be long remembered.



Close-in shot of Darth Vader's TIE Fighter. Notice super-detailed cockpit.

We hope you enjoy these photos.

**MAY THE FORCE BE WITH YOU.**

## SPECIAL NOTICE "New" Star Wars Kits

Although we're as excited as you are about our new STAR WARS Kits, the only kit available at this time is the STAR WARS PROTON TORPEDO STARTER OUTFIT (#1420) featured on pages 12 & 13. Please do not order our other STAR WARS models until you receive our 1978 Model Rocketry Catalog scheduled to be mailed in February 1978. Thank you for your patience as we're sure you won't be disappointed. By the way, EAC members will be the first to receive our 1978 Catalog, so if you're not yet a member, JOIN NOW! (See page 14 for special membership discount.)

**FREE!**

**IRON-ON  
DECALS** For

Your T-Shirts, Wind  
breakers, and Range Jackets.

Remember all orders received on odd numbered months will be given a "FREE" iron-on decal for your T-shirts, windbreakers, or range jacket. These new Estes iron-ons will feature a variety of super-neat designs. You iron it on right at home to any surface containing 50% or more polyester. Remember these great new iron-ons will be available only with your return mail orders on the odd numbered months (January, March, May, etc.)

## DON'T MISS AN ISSUE OF MODEL ROCKET NEWS

Model Rocket News is published six times yearly and inserted with return mail orders. To receive your bi-monthly copy simply place an order or request the latest issue from: Estes Industries, Attn: MRN Editor, Penrose, Colo. 81240.

MRN PUBLICATION SCHEDULE			
Vol.	No.	Month	Year
17	6	December	1977
18	1	February	1978
18	2	April	1978
18	3	June	1978

Note: We regret that the MRN is not available as a subscription as we do not have the internal staff and machinery to handle such a program at this time.

**YOUR BEST BET IS TO OBTAIN MODEL ROCKET NEWS WITH YOUR NEXT ORDER!**

## Help Us Publish Model Rocket News

Got any good ideas for MODEL ROCKET NEWS articles, technical information, cartoons, anecdotes, club news of unusual interest, etc.? Then why not submit them to us for possible publication? Our constant aim is to make MRN a better, more interesting magazine, and you might be just the type of contributor we need.

If you send us photos, please make sure that you pack them between cardboard sheets so that they won't get creased in the mail. All contributions become the property of Estes Industries and cannot be returned. Address all material to: MRN Editor, Estes Industries, Penrose, Colorado 81240.

Should your article or photos be used in MRN, we'll reward your efforts and talent with an Estes merchandise certificate, the amount of which will be determined by the MRN editorial staff.

Hope to hear from you soon!

SEMI-SCALE

# sidewinder

**SKILL  
LEVEL 2**

HONORABLE MENTION FEBRUARY 1976  
DESIGN OF THE MONTH CONTEST

By SCOTT ORMSBY Bay Village, OH

Build the SIDEWINDER with Estes High Performance Parts and Accessories.

## PARTS LIST

A)	1 Body Tube (BT-50)	3073
B)	1 Engine Mount (EH-2050)	3150
C)	1 Fin Stock (BFS-30)	32108
D)	1 18" Parachute (PK-18)	2267
E)	1 Shock Cord	2276
F)	2 Launch Lug (LL-2A)	2321
G)	1 Screw Eye	2280
H)	1 Nose Cone (BNC-50J)	8008

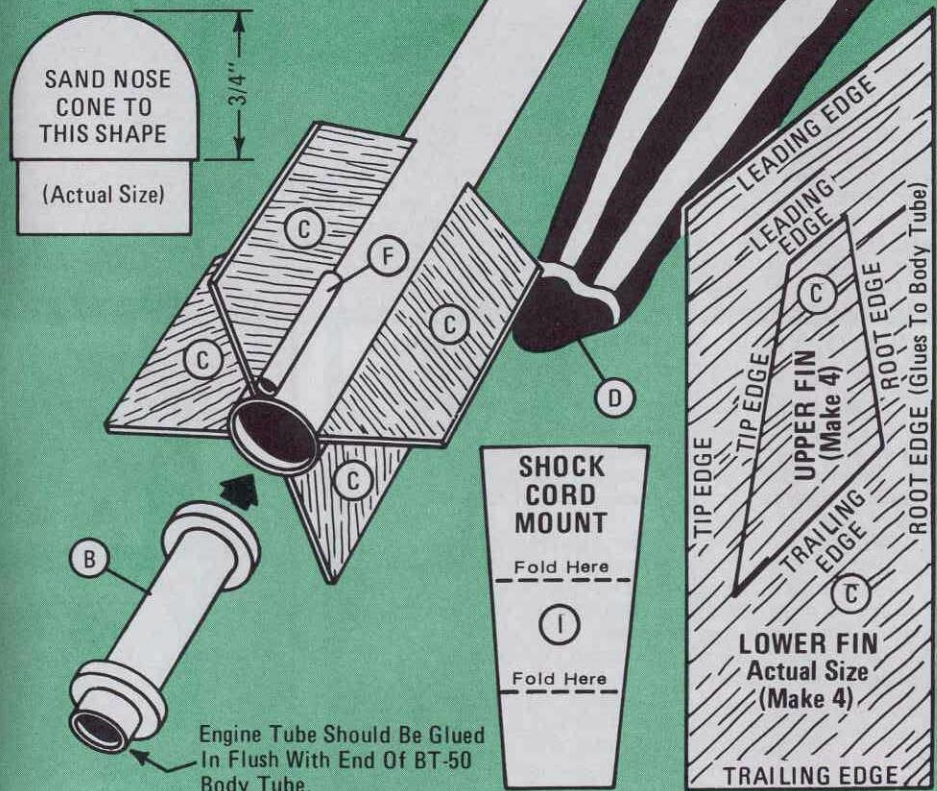
Glue  
Launch Lug 2" From  
Top And Aligned  
With Bottom Lug.

## Additional Materials Required:

Hobby Knife, White Glue, Ruler, Sandpaper, Sanding Sealer, Enamel Paint (Spray), and a Sharp Pencil.

## Recommended Engines

A8-3 B6-4 C6-5



# DESIGN OF THE MONTH WINNERS

Congratulations to another fine group of Estes Rocketeers for their outstanding DOM entries. First place winners will receive \$75.00 merchandise certificates and honorable mentions will be awarded \$10.00 certificates. Keep those entries coming, maybe you'll be our next winner!

**JULY 1977** — First Place Seven-Way-Tie: Ernesto Uribe II, APO New York (Under Water Launch System). Roger Gilbertson, Woodside, CA (Inca 1). Tom Baker, Phoenix, AZ (Lathe). Andrew Dubner, Potomac, MD (Hideaway). Duane L. McVay, Findlay, OH (The 7-UP Rocket). Gordon Bugg, Gadsden, AL (Sky-sighter: Rocket Tracker). Joseph Schell, Helena, MT (The Black Cat). Honorable Mention: Gordon Bugg, Gadsden, AL (Talon). Jay Rickerts, Oklahoma City, OK (Artemis Clipper). Dan Williamson, Irvine, CA (F-19 Super 'Ceptor). Jonathan Pierce, Charlotte, NC (Excaliber). Eddie Cox, Washington, NC (XV-9 Star Fighter). Alexander Pucciariello, Roscoe, NY (U.S. Intermolecular Space Voyager). Andrew Tuls, Lancaster, CA (Guillotine). Michael Bibeault, Dracut, MA (The Marauder). Michael Webb, Emmetsburg, IA (Anterogator). Erik Downey, Newark, DE (Star Fire). Robert Wenzel, Carmel, IN (Severus). Willie Miller, Tijeras, NM (Side Winder S-X). David Suda, Latrobe PA (Confederate). Tommy Best, Corpus Christi, TX (Defender).

**AUGUST 1977** — First Place Five-Way-Tie: Chris Donahue, Northport, AL (Neutron Express). Randy Heald, Lamesa, TX (Messenger 1). Rick Salgado, Los Alamos, NM (Blue Angel). Tony Stockard, Rhome, TX (Sweep-Wing Rocket). Bob Luzenski, Sterling Hts., MI (Electronic Launch Control System). Honorable Mention: Brian Casey, Shorewood, IL (The Venus Explorer). Terry King, West Lafayette, IN (The Pocket Rocket Concept). Karel Chaloupka, Missouri City, TX (Skyliner). Donald Stewart, Anoka,

MN (Dragonfly I). Jack Benz, Loveland, CO (Titan II). Daniel Rick, Dallas, TX (Orion). Jason K. Durfee, Orem, UT (Luna VII). Steve Fox, Christ Church, Barbados, W. Indies (Sprite).

**SEPTEMBER 1977** — First Place Tie: Karl Reissig, Montgomery, NY (Black Giant). Mike Hilton and Sean Fitzpatrick, Alexandria, LA (Neutron Star). Honorable Mention: Mitchell Stepuch, Hanford, CA (Galaxy). Pete Monfre, Casper, WY (Shuttle). Dave Amory, Mercer Island, WA (Daedalus). Melvin Quan, Los Angeles, CA (Ivan Hoe). Debbie Summa, Bardonia, NY (Vulcan). Dan Gregory, Brook Park, OH (Triroc D). Gary Friedman, Lexington, MA (Freighter X-7). Chris Del Rossi, Jaffrey, NH (Red Nose Patriot). Steve L. Gillies, Dillon, CO (Cobra). Craig Power, McKeesport, PA (Altair 3). James O'Turner III, N. Charleston, SC (Fatso). Matthew Queen, Fruitdale, SD (Swift). Mike Bays, San Diego, CA (Commodore I).

**OCTOBER 1977** — First Place Four-Way-Tie: Rick Gaulke, Overland Park, KS (Arachnid Destroyer). Robert Vavrik, Longwood, FL (Midnight Streak). Steve Semkins, Irmo, SC (Cosmic-Probe). Michael Annechini, Willingboro, NJ (Planet Probe). Honorable Mention: Peter Byrnes, Victoria, BC Canada (Phaser). Francis Pang, Stockton, CA (Voyager II). Jim Bulkley, Aspen, CO (The Lance). John Dodd, New City, NY (Electron). Lee Dayton, Palmyra, NY (Sky Base International). Greg Yeomans, Vancouver, BC Canada (Centaurus). Dennis Reip, Port Ewen, NY (Voyager IV). Fedel Marquez, Chicago, IL (Hercules I). Bill Cravis, Lexington, MA (Space Witch).

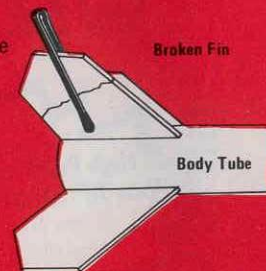
## THE IDEA BOX



### FIN REPAIR TIP

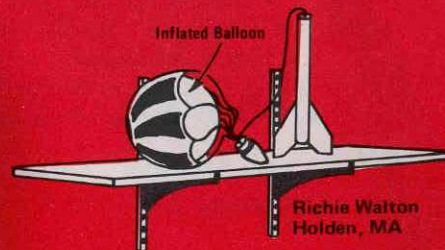
Hold broken fins in place while there're being repaired.

James R. Durland  
Arlington, TX



### PARACHUTE STORAGE IDEA

Open parachute out and put an inflated balloon in the chute. Leave this way until used.

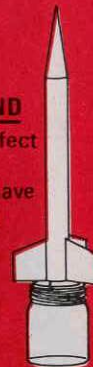


Bend Inward  
To Here

### QUICK PAINT STAND

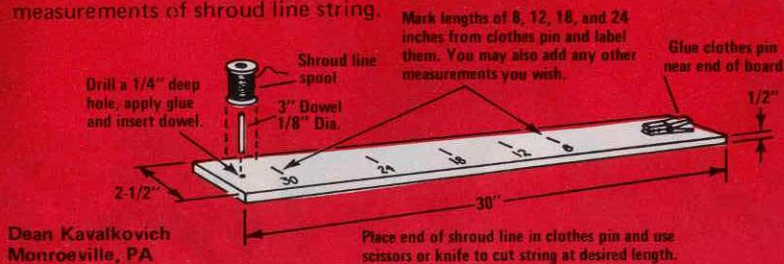
An old glass jar makes a perfect stand for painting rockets, especially for those which have an engine hook sticking out further than the end of the rocket.

Jim Donahue  
Great Falls, MT



### SHROUD LINE MEASURE

Speeds assembly of parachutes, gives accurate measurements of shroud line string.



## WANT YOUR TEACHER TO SPONSOR A MODEL ROCKET CLUB?

Model rocketry is a fun way to learn about the big rockets, space ships, and science. If you want us to send your teacher some free information about model rocketry as a school sponsored activity, send us your teacher's name, school name, school address, city, state, and zip code.

We will send your teacher a guide explaining why model rocketry is a great school activity. A current catalog with all of our great new rockets will be sent. A list of our many publications on specialized areas of rocketry will be included.

Send your teacher's full name and address (as explained above) to:

Education Department  
Estes Industries  
Department 51N  
Penrose, Colorado 81240

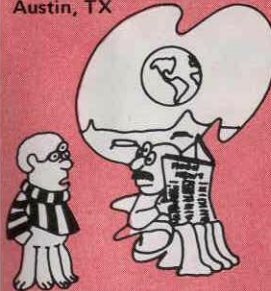
## "IMPORTANT NOTICE"



MRN CREATURE  
CONTEST WINNERS  
WILL BE FEATURED  
IN THE DECEMBER  
1977 ISSUE OF  
MODEL ROCKET  
NEWS

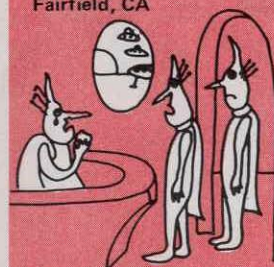
"DON'T MISS IT"

Thomas Fenstemaker  
Austin, TX



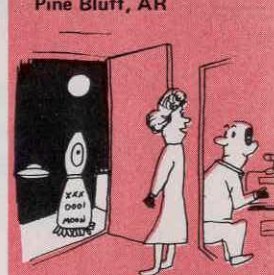
"May I have the flying saucer tonight, Dad?"

Danny Patterson  
Fairfield, CA



"Our mission was a failure. The Earthlings don't have a cure for the common cold either"

Mark Moore  
Pine Bluff, AR



"Remember that station that you talked to last month on your ham radio?"