

FLASH!!!!!!  
SPECIAL PREVIEW

**STAR WARS**  
**THE EMPIRE STRIKES BACK**  
**WARS™**

Article By: Diana Attias

Photos Courtesy of: Lucasfilm, Ltd.

Due to be released May 21, 1980 the second incredible STAR WARS science fiction fantasy extravaganza will introduce an amazing variety of new characters, alien places, and fantastic spacecraft. Here's a glimpse of what you can look forward to:

**All Terrain Armored Transport** (AT-AT; snow walker): Fifty-feet tall armored exoskeletons used to attack the Rebels on the ice planet Hoth. These four-legged death machines are manned by two Imperial pilots and equipped with turnstile guns and laser cannons. Although ungainly, the snow walkers seem invincible.

**Avenger:** The Avenger Star Destroyer is part of the Imperial space fleet. Its commander, Captain Needa, infuriates Darth Vader by letting the Millennium Falcon escape the Dark Lord's pursuit.

**Bespin:** The gaseous planet of Bespin, located in the Bespin system, is the home of Cloud City. Bespin is a highly technological planet whose prosperity stems from the rich resources of its Tibanna gas mine. Bespin's Cloud City serves as a temporary refuge for Han Solo and Princess Leia in their escape from Vader's armada of Star Destroyers.

**Bespin Guards:** The protectors of Cloud City, the lovely pedestal metropolis located on the Bespin planet. The Bespin guards aid their administrator, Lando Calrissian, in helping the Falcon crew escape the clutches of Darth Vader.

**Boba Fett:** The most notorious bounty hunter in the galaxy, Boba Fett is hired by Darth Vader to hunt the Millennium Falcon and its crew. Dressed in a battered suit of armor, Fett is equipped with wrist lasers, rocket darts, and flying backpack.

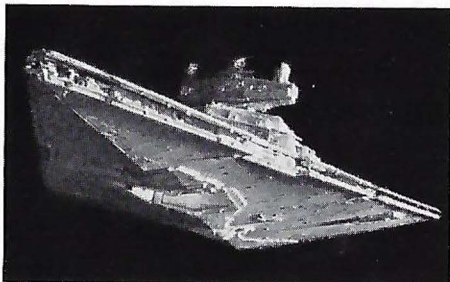
**Bossk:** One of the alien bounty hunters hired by Darth Vader to track down the elusive Han Solo. A tentacled, Page 24

amphibious monster, Bossk has a soft baggy face housing two huge bloodshot eyes that allow him 300° vision.

**Dack:** Rebel fighter who serves as Luke Skywalker's gunner in the battle between Rebel snowspeeders and Imperial snow walkers.

**Dengar:** A mangy, human-type bounty hunter, Dengar is among those summoned by Darth Vader in his pursuit of the Millennium Falcon and its crew.

**Major Derlin:** A Rebel officer, based at the temporary headquarters on Hoth.



Star Destroyer™\*

**Executor:** The largest and most fearsome of the Imperial Star Destroyers, the Executor is Darth Vader's ship. Its topside resembles a metropolitan skyline in size and shape, and its long, narrow form lends a properly ominous look to this, the Dark Lord's personal space vehicle.

**FX-7 (Effxseven):** FX-7 is a medical droid that assists Too-Onebee, the surgeon droid called upon to tend Luke Skywalker's injuries. The droid FX-7 appears to be nothing more than a metal-capped set of cylinders, wires, and appendages.

**Hoth:** The ice planet Hoth serves as a temporary Rebel base after the one at Yavin is abandoned. Bitterly cold and devoid of most lifeforms, Hoth is a land of vast snowscapes and ice caverns. The Rebels use one of these ice caverns as their headquarters until Imperial forces drive them from this frigid planet in search of another, safer haven for the Rebellion.

**IG-88:** Also known as the Phlutdroid, IG-88 is a battered and tarnished war droid. Summoned by Darth Vader to search for Han Solo, this chrome-

colored droid is among the most fearsome of the galaxy's bounty hunters.

**Lando Calrissian:** The suave and dashing administrator of Cloud City, Lando Calrissian is a former associate of Han Solo. Han calls Lando a gambler, con-artist, and all-around scoundrel, but nonetheless seeks his assistance in evading Darth Vader. The opportunistic Calrissian surprises them all by doing all he can to help the Falcon crew escape.

**Lobot:** Serving as personal aide to Lando Calrissian, Lobot is a tall, bald man who wears a brain enhancer wrapped around the back of his head.

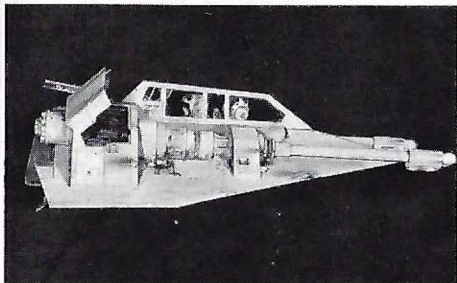
**Mynock:** Mynocks are five-foot-long tan, leathery creatures that can be found in asteroid caves. These batlike, shapeless creatures fly in packs and are fond of attaching themselves to the hulls of available spacecraft.

**Captain Needa:** As commanding officer of the Star Destroyer Avenger, Captain Needa arouses the fury of Darth Vader when he allows the Millennium Falcon to elude the pursuing Imperial fleet.

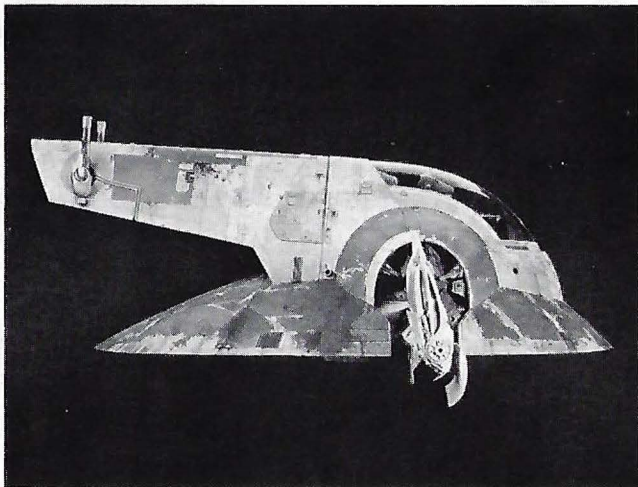
**Admiral Ozzel:** The squat, evil-looking Admiral Ozzel is the commander of Darth Vader's Imperial forces until his clumsy, ill-planned strategies arouse the Dark Lord to a murderous rage.

**Captain Piett:** An officer in the Imperial forces, Captain Piett is promoted to admiral after the demise of Ozzel.

**Probot (Imperial Probe Droid):** Sent by the thousands to seek out Rebel activity all over the galaxy, the Imperial Probe Droids are highly complex surveillance machines. These large, insectlike droids are equipped with sensor appendages that allow them to detect the smallest sign of life.



Rebel Armored Snowspeeder TM\*



Slave 1 TM\*

**Rebel Armored Snowspeeder:** These highly maneuverable, two-man vehicles are flown by the Rebels on the ice planet Hoth. Small, snub-nosed craft, the snowspeeders are especially useful in battling the slower, more awkward Imperial snow walkers.

**Slave I:** Boba Fett's ship, the Slave I, is elliptical in shape and looks somewhat like a helmet in form. This unusual craft is used by Fett in his career as bounty hunter, and is the ship that carries a priceless, carbonite-encased cargo away from Cloud City.

**Star Destroyer:** These massive, wedge-shaped spacecraft are the flagships of the Imperial forces. Darth Vader's Star Destroyer, the Executor, is the largest of these ships, but all Destroyers inspire awe and fear in the galaxy the Empire would dominate.

**Tauntaun:** Used as a beast of burden at the Rebel base on Hoth, the Tauntaun is a large gray snow creature covered with matted fur. Its keen senses make the Tauntaun invaluable to the Rebel troops who must depend on these beasts for transportation while guarding their Hoth headquarters.

**Too-Onebee (2-1B):** The surgeon droid Too-Onebee is programmed to do complex computerized surgery for the Rebel forces. This droid assists Luke in recovering from injuries he sustains after encountering dangerous foes.

**Twin-pod Cloud Cars:** Cloud cars are the main form of transportation on Bespin's Cloud City. These graceful flying vehicles are composed of two cubiclelike pods connected by an engine structure that powers the craft.

**Ugnaughts:** These piglike creatures dwell in Cloud City and act as scavengers and all-purpose henchmen.

Also known as hogmen, the Ugnaughts assist in the carbon-freezing process Darth Vader employs against his enemies.

**Wampa Ice Creature:** The enormous white monster dwelling in the frigid wasteland of Hoth. Luke encounters this horrifying creature and must summon the Force to help him escape the Wampa's icy cavernous home.

**Wedge:** Rebel pilot of the Rogue Three Snowspeeder in the Hoth battle against the Imperial snow walkers.

**Yoda:** The Jedi Master, Yoda, dwells on the bog planet Dagobah. This tiny, wizened creature could be any age, but must be at least eight-hundred-years old as he has taught Jedi Knights for that long. The former teacher of Obi-Wan

Kenobi, Yoda undertakes to train Luke in his efforts to become a Jedi Knight and learn to use the Force.

**Zuckuss:** An unsavory, battle-scarred human bounty hunter summoned by Darth Vader in his relentless pursuit of the Millennium Falcon and its crew.

And of course . . . all of your STAR WARS favorites . . . Princess Leia, Luke Skywalker, Han Solo, Chewbacca, Darth Vader, Artoo-Detoo, and See-Threepio.

Don't miss the exciting STAR WARS blockbuster, THE EMPIRE STRIKES BACK, being shown at a theatre near you on May 21st, 1980 . . . . . MAY THE FORCE BE WITH YOU!!!

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## ASTROCAM 110 PHOTO CONTEST FINALISTS... STILL IN THE RUNNING

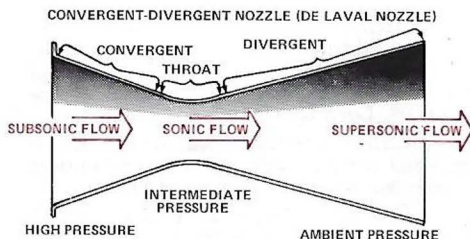
One of the following AstroCam 110 Photo contestants will be chosen as our First Place Winner and will receive the Grand Prize, a fabulous all expense paid trip for four to Disneyland or Disney World! Final results will be announced next issue.

Herbert Desind, Silver Spring, MD. Arthur E. Nestor, Zelienople, PA. Stuart Swan, San Jose, CA. Scott Pearce, West Chester, PA. Jon Waxham, Laurel, MD. Brent Miller, Manhattan Beach, CA. Scott Phillips, Toledo, OH. Larry Sloan, West Chester, PA. John M. Skelton, Independence, MO. Gerard Hosek, Rockford, IL. David Moosa, Eunice, LA. Gary Moore, Garden Grove, CA. Anthony Guarnieri, Warren, MI. Paul Anderson, Abbotsford, CANADA. Ralph Robinson, Pueblo, CO. Wayne Nelson, Brookings, SD. Steven Katz, Laurel, MD. Jeff Cooper, New Oxford, PA. Richard Bookbinder, Beechurst, NY. Kurt Bentz, Calgary, CANADA. Ralph Wagner, Escanaba, MI. Francis Ruzicka, Willard, MO. Don Kelly, Oromocto, CANADA. John Menk, Brenham, TX. Scott Hardy, Harrisonburg, VA. Dale Brown, Greybull, WY. George Misadoques, Naugatuck, CT. Max Bauer, El Cajon, CA. Garren Alldredge, Oak City, UT. John Dietrich, Painesville, OH. Mike Clary, Orange, CA. Owen Wallen, Ft. Collins, CO. Ray Buteux, Suffern, NY. Eddie Richardson, Laurel, MD. Richard Metzger, Houston, TX. William A. Roskey, Columbia, MD. Bret Bahe, Dexter, KS. Paul Wilkin, Holley, NY. Andy Cohen Chatsworth, CA. Michael Borders, Pueblo, CO.

## Stump Your Teacher Quiz

**Question:**

What is a de Laval nozzle?



**Answer:**

The de Laval nozzle is a special type of nozzle developed in 1889 by Swedish engineer Carl de Laval. Its original function was in gas turbines. Since it converts the heat energy released by the combustion of propellants into directed kinetic (motion) energy of the exhaust gases, it has proven very useful in improving the performance of rocket engines.

This diagram shows the basics of the convergent-divergent or de Laval nozzle. To converge means to come closer together, as the molecules of the exhaust gases when they enter the throat of the nozzle. To diverge means to spread apart. Ambient pressure means the atmospheric pressure in the surrounding area.



## THE 1980 UNITED STATES MODEL ROCKETRY TEAM

### The Contest

The Fourth World Space Modeling Championships will be held September 7 through 12, 1980, at the U.S. Naval Air Engineering Center in Lakehurst, New Jersey. The contest is sponsored by the National Association of Rocketry (NAR) and is sanctioned by the Federation Aeronautique Internationale (FAI). The contest is expected to draw delegations from twelve to fifteen countries, including Bulgaria, Canada, Czechoslovakia, Great Britain, Hungary, Poland, Rumania, the Soviet Union, Spain, Switzerland, the United States, West Germany, and Yugoslavia.

### The United States Team

International rules allow each nation to send three people per event, with a maximum of twelve contestants total from each nation. The American team was selected by the National Association of Rocketry (NAR, the non-profit organization for US model rocketry and an affiliate of the National Aeronautic Association (NAA)) through competitive flyoffs. The team manager is John S. Langford, a member of the American teams in 1974 and 1978 and currently

### The Events

Class	Event Name	Allowable Engine Power (Newton-seconds)	Max. Wt. (Grams)	Max. Time (Seconds)
S4D	Eagle Boost-Glide	40.00 (Class D & E engines)	240	300
S2A	Single Payload	10.00 (Class C engines)	90	N/A
S3A	Parachute Duration	2.50 (Class A engines)	100	240
S6A	Streamer Duration	2.50 (Class A engines)	100	120
S5C	Scale Altitude	10.00 (Class C engines)	120	N/A
S7	Scale	80.00 (up to F engines)	500	N/A

with the Lockheed Corporation in Burbank, California.

The team members for this year's competition include:

Philip D. Barnes, student, Washington, D.C.

Robert N. Biedron, student, Ohio State University, South Plainfield, NJ.

David Cook, student, Iowa State, Des Moines, IA.

Christopher C. Flanigan, engineer, General Dynamics Corp., San Diego, CA.

George Gassaway, student, Homewood, AL.

Thomas Hoelle, Systems Analyst, Allen City Data Processing, Ft. Wayne, IN.

Robert W. Justis, IBM Space Shuttle Support Div., Houston, TX.

Chris Morgan, student, University of Maryland, Silver Spring, MD.

Robert W. Parks, engineer, Lockheed Corp., North Hollywood, CA.

F. Randall Ringner, Public Accountant, Pearl River, NY.

Matt M. Steele, student, Kent State University, Medina, OH.

Charles M. Sykos, Systems Analyst, Bell Labs, Somerville, NJ.

Representing the US in Sparrow Glide (Unofficial Event):

Geoffrey A. Landis, Spire Corp./student, MIT, Cambridge, MA.

Gregory Stewart, Mutual Security Life Insurance, Ft. Wayne, IN.

Jeff Vincent, student, Renssalaer Polytechnic Institute, New Scotland, NY.

Defending his World Championship from the 1978 World Championships:

Harold "Guppy" Youngren, student, MIT, Annapolis, MD.

Alternates to the US Team include:

Bernard Biales, Boston, MA

Steven Honecker, Wheaton, MD

Celestine Leahy, Silver Spring, MD

### Competition Events

How does one "compete"? The simplicity is deceiving. The National Association of Rocketry lists over thirty events in its Sporting Code, each of which is divided into subcategories according to allowable engine power and model weight. The NAR sanctions numerous local and regional contests each year, and hosts the National Championships (NARAM) each August. It was on the basis of competitive performance at these meets that members of the International Team were selected.

As listed above, seven events have been announced for the upcoming World Championships. They include: Parachute Duration, where the models deploy large parachutes and the maximum flight duration determines the winner; Streamer Duration, where the goal of flight duration is the same but the model returns by streamer, a rectangular strip of paper or plastic instead of a parachute; Boost Glide, where the model ascends vertically under rocket power, drops its engines and glides down; Rocket Glide, essentially the same as boost-glide except the engine cannot be dropped; Payload, where an ounce of lead is carried to the highest possible altitude; Scale, in which an exact replica of a real rocket is submitted along with plans for the real rocket, to be judged on difficulty, accuracy, workmanship, detailing and flight performance; and Scale Altitude, where the model's static judging score is added to the altitude it reaches in meters. To eliminate winning with one lucky flight, all the duration events are conducted with three flights per entry, with a maximum allowable time ("max") on each flight. The times are summed to determine the winner, with a fly-off in the event of ties. Other popular events, though not scheduled at this year's World Championships, include altitude egg lofting and spot landing.

### **Previous World Championships**

Since the most active nations in Space Modeling are the United States and the Eastern European bloc nations, World Championships tend to be held in Eastern Europe. The first international rocket competition was held in 1966 in Czechoslovakia, with a similar contest in 1968. By 1970 the hobby had grown to the point of certification by the Federation Aeronautique Internationale, the Paris-based organization that oversees Championships and World Records of all flying-related sports. The first World Championships were held in Yugoslavia in September of 1972. The Second World Championships were held in 1974 in Dubnica, Czechoslovakia, and the Third in September 1978, in Yambol, Bulgaria.

### **Financing and Information**

Although many European nations support national space model teams, as they do in other international competitions, the costs of travel and competition for American team members are fully met by the individual. Total costs for the 1980 U. S. Team are estimated at \$14,000.00. These funds are raised through private donations and fund-raising activities. For more information on either the American Team or its fund-raising efforts, contact:

1980 U.S. Space Modeling Team  
John Langford, Manager  
631 East Palm Ave.  
Burbank, CA 91501

## **Help Us Publish The Model Rocket News**

Got any good ideas, cartoons, technical articles, or contributions? Then why not submit them to us for possible publication? Our constant aim is to make MRN a better, more interesting magazine and yours may be just the contribution we need.

Illustrations of ideas for the Idea Box and cartoons should be drawn in ink and no smaller than 4 inches by 4 inches. Technical articles and contributions should be well written and photos accompanying the articles should be packed between cardboard sheets to avoid damage.

All contributions become the property of Estes Industries and cannot be returned. Address all material to: MRN Editor, Estes Industries, Penrose, CO 81240.

Should your article, idea, or cartoon be used in MRN, we'll reward your efforts and talents with an Estes Merchandise Certificate, the amount of which will be determined by the MRN editorial staff.

Hope to hear from you soon!

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## **Attention Rocketeers: "Have You Joined The NAR?"**

Now that you are an active rocketeer we would like to recommend membership in the National Association of Rocketry.

As an NAR member you will be able to compete in officially sanctioned local, state, national, and even international model rocketry meets. Your rockets and designs will become eligible to set national and international records and most important, you will be kept informed of happenings in model rocketry around the world. Flight insurance is available now too!

Also as a NAR member you will receive a monthly copy of Model Rocketeer, a magazine published as a service by the NAR for its members. It contains news of upcoming model rocketry and space events, manufacturer news, modroc tips, designs and plans, news of the NAR, its members, and other people in the aerospace field. Also, it contains editorials, humor and rocket history.

For more information and a membership application write: NAR Headquarters, Dept. E-9, P.O. Box 725, New Providence, NJ 07974.

## **JOIN TODAY!**

# mini FINLESS

SKILL LEVEL 2

WINNER JULY 1979

DESIGN OF THE MONTH CONTEST

BY ALAN J. WAIDE, Pasadena, CA

PARTS LIST

A	1	Body Tube (BT-5) 2"	3070
B	1	Body Tube (BT-5) 3"	3070
C	3	Body Tube (BT-5) 1"	3070
D	1	Stage Coupler (JT-5C)	3050
E	1	Shock Cord	2276
F	1	Streamer	2341
G	1	Tape Discs (TD-1)	2294
H	1	Nose Cone (BNC-5E)	8000
I	1	Launch Lug (LL-2A)	2321

ADDITIONAL MATERIALS:

White glue, sanding sealer, spray paint, sandpaper, hobby knife, ruler, sharp pencil, and mini engine casing.

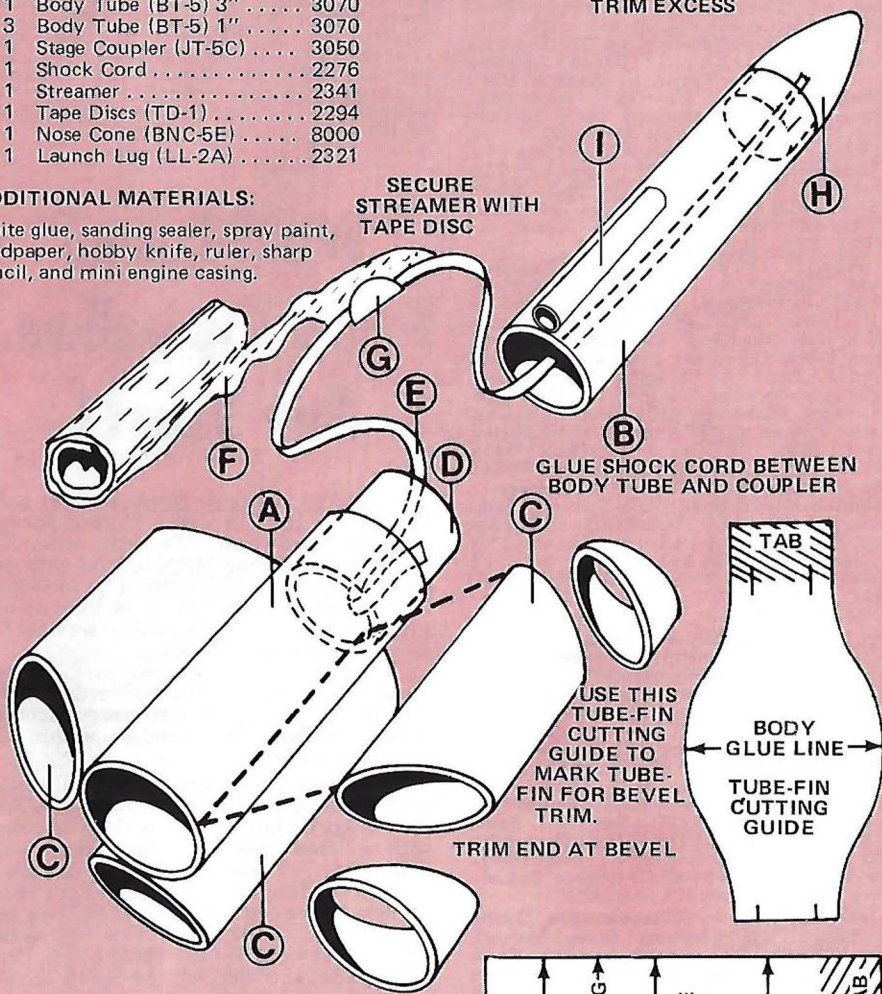
GLUE SHOCK CORD BETWEEN BODY TUBE AND NOSE CONE TRIM EXCESS

SECURE STREAMER WITH TAPE DISC

GLUE SHOCK CORD BETWEEN BODY TUBE AND COUPLER

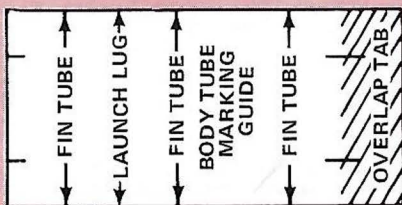
USE THIS TUBE-FIN CUTTING GUIDE TO MARK TUBE-FIN FOR BEVEL TRIM.

TRIM END AT BEVEL



RECOMMENDED ENGINES:

1/4A3-2T 1/2A3-2T A3-4T



# 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!

**MARCH 1979** — Winners: Dan Farrell, East Troy, WI (Glider). Jim Westphal, Humboldt, IA (Solar Launch System). Jack Baumann, Upland, CA (Launch Pad & Controller). Mitch Alwillar, Lodi, CA (Telstar 2). Honorable Mentions: Roger Isbill, Oklahoma City, OK (Damien). Michael Jones, Santa Cruz, CA (Wraith). Jonathan E.D. Schenken, Fort Wayne, IN (KSW-1). David M. Bassett, II, St. Paul, MN (DB-5). Steve Sidor, Redlands, CA (The Unknown). Steve Specker, Fridley, MN (Orbatron). Scott Spera, Bay Village, OH (Vangar I). Ken McClure, Upland, CA (Tri-Bi). Todd Wilson, Billings, MT (Venus 12). Tom Hannah, La Crescenta, CA (The M.X. Missile Air Force L.C.B.M.). Tracy Watkins, Robstown, TX (Angel). Mitchell Stapiech, Fresno, CA (S.A.M.).

**APRIL 1979** — Winners: Woodward Howard, Cartersville, GA (Fornax). Anthony DeFranco, Paterson, NJ (Count Down Ignition Panel). Torsten Duffy, Renton, WA (Equinox S.O.B.). Kurt Thearling, Southgate, MI (Zero-Volume Piston Launcher). Honorable Mentions: Richard K. Pautz, Anchorage, AK (The Sting). Roy Gillagly, Topanga, CA (Basilisk 6390). Richard K. Pautz, Anchorage, AK (Capricorn II). Paul De Lello, Yonkers, NY (Neptune). Darrell Higley, Coeur D' Alene, ID (NAT -- US Missile). Miles Conklin, Highland, MI (Apache Arrow). William H. Orr & Sons Systems, Bedford, TX (Salvage-1). Joe Czarnik, Glenview, IL (High Thruster). Scott Parsons, Lakewood, CO (Deimos). Dean Snyder, Sturgis, MI (Astroscan). Chris Peters, Canton, NY (Gull Recovery). Bryan McLane, Hollywood, FL (Boattail). Scott Parsons, Lakewood, CO (Sabeut).

**MAY 1979** — Winners: Mark Grebe, York, NE (Thunderbird-3). Caimo F. Bailey, Lorain, OH (Interplanetary Voyager). Ricky Kramer, Voltaire, ND (War Admiral). Honorable Mention: Dave Mattice, Hagman, NY (Stargaze). Ned Hutchinson, Ludington, MI (Arrow). Michael Marchionna, San Jose, CA (Swallow-Tail). Klay E. Gilbert, Wayne, OK (Ring Gli). Mark Williams, Amherst, NH (Astro-Gnat). Jim Tibbs, Sandpoint, ID (Capricorn). Mark Lyons, Yakima, WA (Genie). Steve Rapp, Cornell, IL (Brutus 1-B). Tom Speth, Green Bay, WI (Nereid 6). Frank Bell & Spencer Bell, Atlanta, GA (Demon-X). Shawn Hainsworth, Barrington, RI (Boomerang). Roger Moss, New Britain, CT (Space Bound). Stephen Dobro, Sharon, MA (Alpha 1).

**JUNE 1979** — Winners: Eric Duffin, Villa Park, IL (Glider-Roc). Clyde Verhoff, Ottawa, OH (Sky Diver). Kevin Lovelace, North Little Rock, AR (Two Digit Countdown Timer LED 1). Greg Fenton, Grand Ledge, MI (Launch Control System). Steve Hahn, Hastings, NE (Generic Launch Control System). Bob Heiderstadt, Denver, CO (Coupling Jig). Honorable Mentions: Eric Falconburg, McClave, CO (Falcon 5). Peter Karageorgos, Toronto, CANADA (Aids in Rocket Building). Rick Silenzi, Sherman Oaks, CA (Arrow). Terrv Skidmore, Delaware, OH (E.C.H.O.). Nguyen Thanh An, Lincoln, NE (Solar IV). Peter Cranshaw, Sherborn, MA (Phoenix-1). Mark Falimirski, Bensenville, IL (Destroyer). Jeff Danison, Delaware, OH (Maxi-

Interceptor). David Miller, Easthampton, MA (Neutron Duster). Bryan Hughes, Camp Lejeune, NC (S.C.C. -1080 USS Ricon). Ronald Stewart, Albany, LA (Anduril).

**JULY 1979** — Winners: Dale Wang, New York, NY (Nautilus). Alan James Waide, Pasadena, CA (Finless). Paul Heward, Green River, WY (Revenge II). Honorable Mentions: Al Lopez, Lakeland, FL (Warpslot). James Turner III, Summerville, SC (Optiroc). J. Warnock, Independence, KS (Ragnarok). Mark Smith, Saginaw, MI (Multi-Launcher). Brian Kean, Longmont, CO (Alpha Gamma). Keith Anderson, Duluth, MN (Alfa-Centuri). G. Douglass, Leicester, NY (Umbrella Recovery). Ray Mullan, Greendale, WI (Enforcer). Len Philpot, Bonita, LA (Phobos).

## MRN and Free Goodies.. For You!!

Model Rocket News is now published four times a year - Winter, Spring, Summer, and Fall. We will, whenever possible, mail your MRN to you with our seasonal mailings in addition to including it with return mail-orders as long as our supplies last as an exclusive service for our mail-order customers.

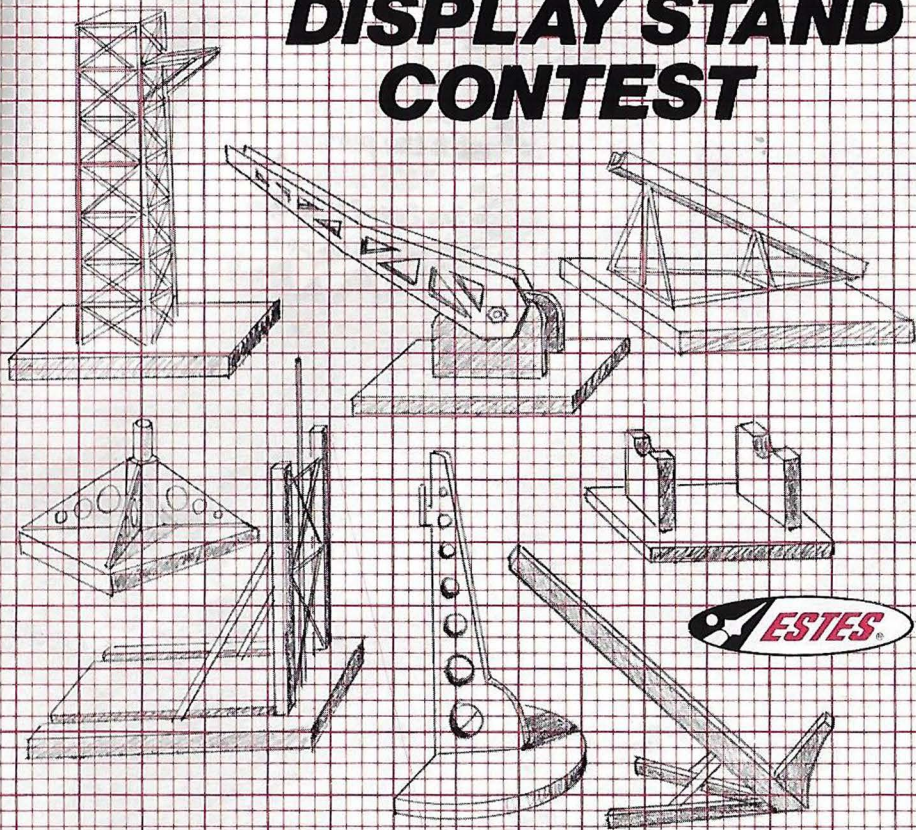
To receive our seasonal mailings you must be an active Estes mail-order customer which requires you to have placed an order for Estes merchandise within the past four months.

Additional Bonuses . . . All orders received on even numbered months, (February, April, June, etc.), will be returned with a "free" plan to help increase your Estes fleet. These new plans feature a variety of designs from single-stage sport models to far-out exotic rockets you will be proud to display. All "free" plans can be constructed from the Estes hi-performance parts and accessories listed in our catalog.

All orders received on odd numbered months will be returned with a free iron-on decal for your t-shirt, windbreaker or orange jacket. These iron-ons feature a variety of super-neat designs. You iron it on right at home to any surface containing 50% or more polyester.

Remember . . . these items are available only with return mail-orders!!!!

# DISPLAY STAND CONTEST



## WIN \$25.00 IN FREE ESTES MERCHANDISE!

Have an idea for an original Display Stand, Gantry or Cradle for your model rockets?

Enter your design in this contest and win \$25.00 in Estes merchandise, if your entry is one of the top twenty. \$500.00 in free Estes merchandise will be awarded!

### CONTEST RULES

1. Any display stand design may be entered.
2. All entries should include a parts list, drawing, and/or diagram. Also, include any instructions which may be helpful. Photos of entries are appreciated, but not required.
3. Display stands must be designed from easily available hobby materials such as balsa scraps, leftover model rocket parts, etc.
4. Please do not send the actual display stand as it cannot be returned.
5. All entries become the property of Estes Industries and cannot be returned.
6. Employees of Estes Industries and members of their immediate families are not eligible.
7. You may send as many entries as you like.
8. Entries will be judged for originality of design, use of materials, neatness, and completeness.
9. A \$25.00 Merchandise Certificate will be awarded to the 20 best entries. Decision of the judges is final.
10. Winners will be announced in a future issue of Model Rocket News.
11. Be sure to include your name, age, address, city, state, and zip code with each entry. Please include your Skill Level if you are an EAC member.
12. Mail entries to:  
ESTES INDUSTRIES  
Display Stand Contest  
Penrose, CO 81240
13. Deadline for receipt of entries is midnight, July 15, 1980.

**GOOD LUCK!**