1978 CATALOG NO. 782

Centuri

OUR 17TH ANNIVERSARY. . . ROCKETRY'S NEVER BEEN BETTER

25¢

Model Rocket Catalog

Good news for Canadian Rocketeers: See Page 3...

PRINTED IN U.S.A.

CENTURI ENGINEERING CO. INC., PHOENIX, AZ 85001

Why, what & how.

Centuri

Flying Model Rockets.

Why?

Why should you know about model rocketry? Because it is the newest, most exciting hobby in the world!

Model rocketry is a hobby that has gained a lot of recognition over the past twenty years. Since the hobby started, just about the same time as NASA, there have been more than 100 million model rocket launchings. Centuri is proud to have been one of the pioneers of the hobby. We've been around almost as long as the hobby, and we put our experience and care into every product in this catalog. You can be sure you're getting the finest model rocketry products in the world when you buy Centuri rockets.

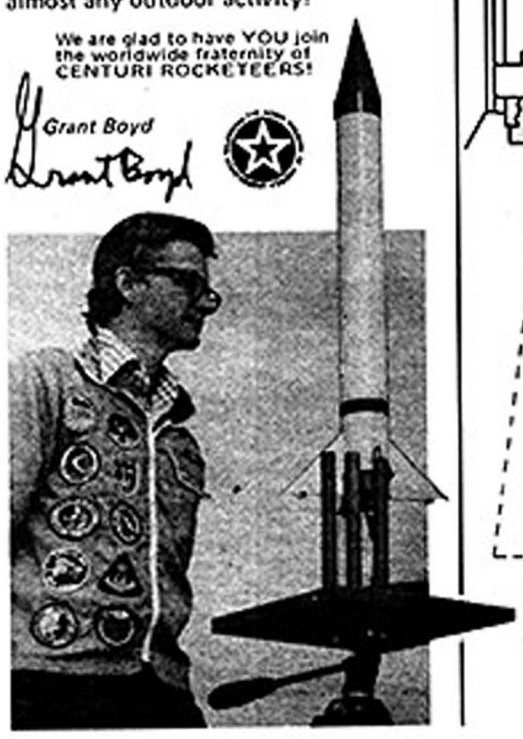
Just for a moment, picture yourself in the middle of your launch field, surrounded by your friends, as you ready the rocket you've built for launch. You see it poised on the launch pad, then it thunders skyward in a blaze of smoke and flame. It streaks to several hundred feet, and you wait breathlessly for the parachute to open. Then suddenly a bright red and white chute opens over your model, and you know all is well. You watch the model as it returns gently to earth, ready for another flight. That's why model rocketry is fun!

Many youth groups use model rockets in their programs too. It's just the kind of exciting activity many youth leaders are looking for, because it's something young people are interested in, and it's educational too.

But the most important thing about model rocketry is safety. Rocketry's safety is endorsed by countless organizations including the Boy Scouts of America, 4-H, NASA, the Air Force and government agencies. Centuri adheres to the guidelines and standards set by the Federal Aviation Administration, national Fire Protection Association, Hobby Industry Association of America, and the National Association of Rocketry. In short, model rocketry has a better safety record than almost any outdoor activity!

We are glad to have YOU join the worldwide fraternity of CENTURI ROCKETEERS!

Grant Boyd



What?

SOME FLYING MODEL ROCKETS HAVE DIFFERENT SHAPES & FLIGHT CHARACTERISTICS, BUT MOST ARE LIKE THIS ONE...

NOSE CONE: This caps the rocket. It can be either plastic or balsa. It guides the air flow around the rocket's body.

BODY TUBE: Made of a special paper tubing, this is the basic "Air Frame" of the rocket. Normally all other parts are attached to or contained within the "Air-Frame".

RECOVERY SYSTEM: Can be either a parachute or drag streamer. Lowers the rocket safely to the ground from apogee — the highest point of flight.

WADDING: Flame-proof cotton or crepe paper packed in here protects the recovery system from hot engine gases at ejection.

LAUNCH LUG: Paper or plastic tubing attached to side of "Air-frame". Holds the rocket on the launch rod & guides rocket upward during launch.

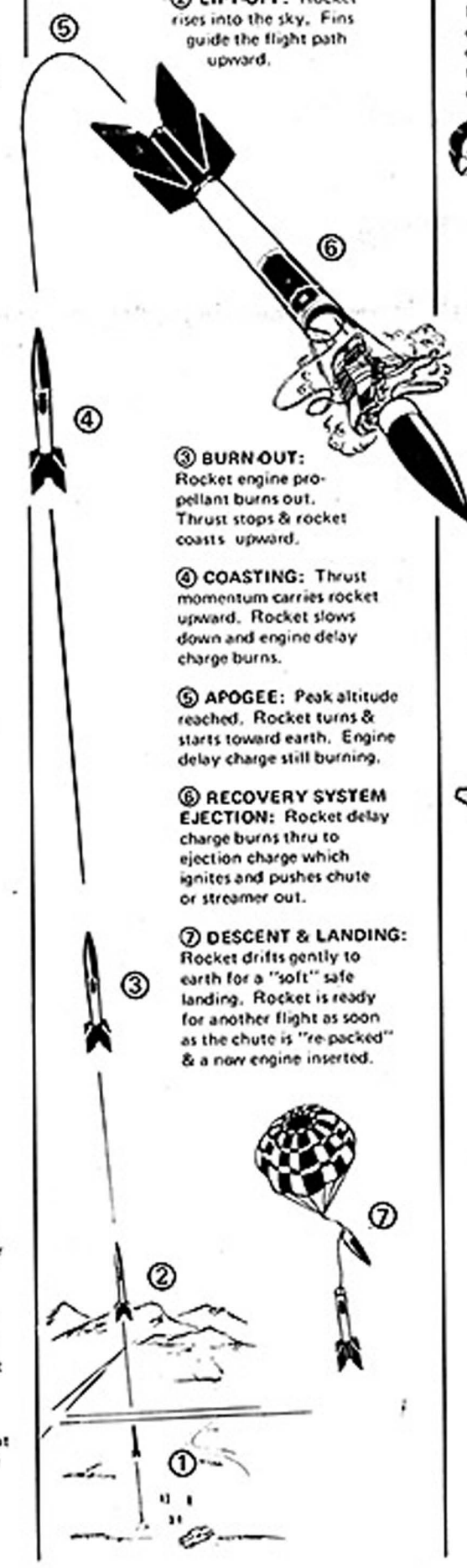
STABILIZER FINS: Made of balsa, fibre or plastic, the fins keep the rocket going straight after leaving the launcher.

ENGINE MOUNT: Glued to "Air-Frame". Engine "pushes" or "Thrusts" against airframe and imparts movement to the rocket.

ROCKET ENGINE: Safe, non-reusable propellant device; not supplied with rocket kit. A new engine is needed for each flight.

How?

CENTURI MODEL ROCKETS PERFORM MUCH LIKE BIG ROCKETS AND MISSILES. HERE'S THE FLIGHT PATH OF A TYPICAL MODEL ROCKET.



① **IGNITION:** Rocket engine is ignited electrically — usually with a 6 volt battery using igniter wires & a push button remote launch system.

② **LIFT-OFF:** Rocket rises into the sky. Fins guide the flight path upward.

③ **BURN-OUT:** Rocket engine propellant burns out. Thrust stops & rocket coasts upward.

④ **COASTING:** Thrust momentum carries rocket upward. Rocket slows down and engine delay charge burns.

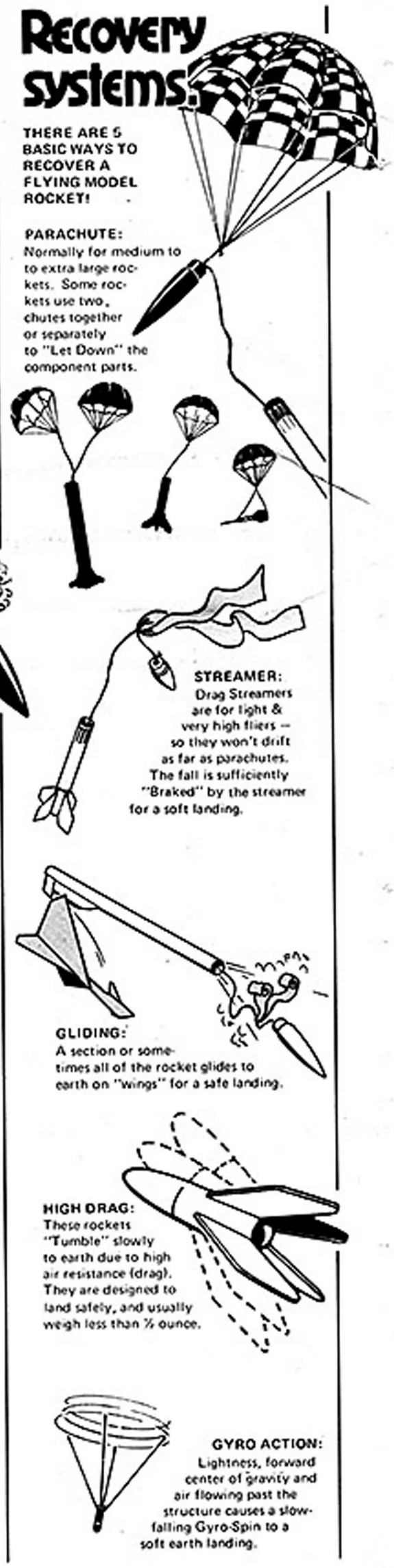
⑤ **APOGEE:** Peak altitude reached. Rocket turns & starts toward earth. Engine delay charge still burning.

⑥ **RECOVERY SYSTEM EJECTION:** Rocket delay charge burns thru to ejection charge which ignites and pushes chute or streamer out.

⑦ **DESCENT & LANDING:** Rocket drifts gently to earth for a "soft" safe landing. Rocket is ready for another flight as soon as the chute is "re-packed" & a new engine inserted.

Recovery systems.

THERE ARE 5 BASIC WAYS TO RECOVER A FLYING MODEL ROCKET!



PARACHUTE: Normally for medium to to extra large rockets. Some rockets use two, chutes together or separately to "Let Down" the component parts.

STREAMER: Drag Streamers are for light & very high fliers — so they won't drift as far as parachutes. The fall is sufficiently "Braked" by the streamer for a soft landing.

GLIDING: A section or sometimes all of the rocket glides to earth on "wings" for a safe landing.

HIGH DRAG: These rockets "Tumble" slowly to earth due to high air resistance (drag). They are designed to land safely, and usually weigh less than ½ ounce.

GYRO ACTION: Lightness, forward center of gravity and air flowing past the structure causes a slow-falling Gyro-Spin to a soft earth landing.

Centuri C.A.T.

Centuri Aerospace Team

SEE INSIDE BACK COVER:

- New Flying Saucer Contest!
- Winners of "Cone-Test" Contest!
- Meet some rocketeers!
- Find out how to join!
- It's for everbody!

Table of contents.

*Indicates Pages With Newest Products

What it takes to build and fly.

ABOUT YOUR ROCKETS:

All Centuri Rockets come in kit form, most include colorful decal sheets. Engines are NOT included except with Kits in "Outfits" All kits contain complete instructions and all necessary parts – most are pre-formed, molded or pre-cut. Simplicity, quality parts, easy construction and clear instructions make Centuri model rockets hard to beat!

CHOOSING ROCKETS: SKILL-LEVEL

Each Centuri rocket has a Skill-Level number assigned in this catalog, indicating a level of building & flying complexity. If you are a newcomer to this hobby, we suggest building a Skill-Level 1 rocket. The Eagle Power Outfit gives you everything you need to build & fly including a launch system - all at a bargain price! Here's a Skill-Level number system found on many packages.

TYPICAL SYMBOL: "Lil' Herc" is Skill Level 1

SKILL LEVEL

1	2	3	4	5
Beginner		Intermediate		Advanced

1-For the beginner who has no previous modeling experience of any kind.

2-Build & flown Skill Level 1 or have some experience in other modeling hobbies.

3-Experience in Skill Level 1 & 2 – Average modeling challenge.

4-Continued experience such as staging, boost gliders & scale model rockets.

5-Special configuration on high detail, multi-engine, or advanced gliding models requiring a solid background in model rocketry.

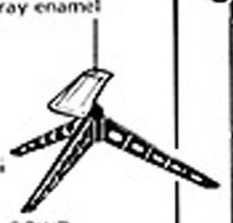
HERE'S WHAT YOU NEED:

Not all kits require all types of tools. Generally, you need a good X-acto type modeling knife, a ruler, scissors, a pencil & a small paint brush. Some kits, like "Screaming Eagle" require no tools at all!

FINISHING MATERIALS:

The best glue is an "Aliphatic" (Wilhold Titebond) or common "White Glue" like Elmer's. Model airplane cement is NOT recommended as it dries too fast & does not hold well. Kits with balsa parts require "Sanding Sealer" and a fine (220-400) sandpaper. Use spray enamel for smooth painting.

LAUNCH SYSTEMS:



There are 2 systems. POWR-PAD is included in all Centuri basic starter outfits, and is complete except for battery. POWER TOWER requires the POWR-CONTROL launch controller.

POWER SUPPLY:

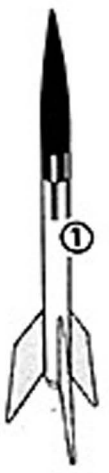
Any standard 6 volt lantern battery as shown here works with Powr-Pad. Any 6 or 12 volt system (including an auto battery) works with Power Tower & Power-Control. Do not use house current or a lower voltage than recommended.

ROCKET ENGINES:

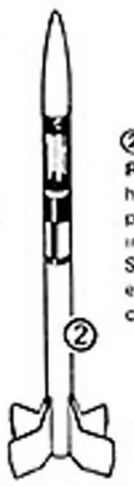
Centuri offers 27 engine types & sizes including Mini-Motors. Pick the power to fit your rocket for flights from 50 to over 2000 feet! Sure-Shot igniters & complete instructions are included in each 3-engine package.

Things to do and try.

CENTURI'S KIT VARIETY LETS YOU EXPERIENCE JUST ABOUT EVERY-THING FROM PAYLOAD EXPER-MENTS TO THE CLUSTERED ENGINE LIFT-OFF OF A GIANT ROCKET.

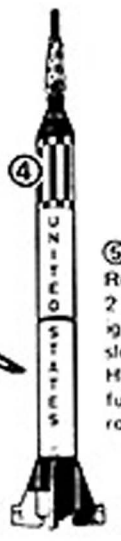


①SPORT MODELS: These are just plain "FUN" rockets – many shapes to choose from. Some are extra-high flyers!



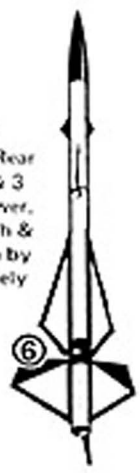
②PAYLOAD ROCKETS: These have special compartments to carry insects and the like. Study acceleration effects and see who can go the highest!

③BOOST GLIDERS: They blast off & up like a rocket and glide-return like an airplane. Hold a contest on who's stays up the longest!



④SUPER-SCALE: Exact replicas of the real thing! Some are very easy to build-others are a real challenge to the experienced modeler – ALL are rewarding!

⑤CLUSTER ENGINES: Realism at its best when 2 or 3 thundering engines ignite to lift a giant rocket slowly toward the heavens! Here's the ultimate in the fun & challenge of model rocketry!



⑥MULTI-STAGER: Rear action in 2 & 3 stages of power. These go high & stages return by tumbling safely to earth.

Safety code.

1. CONSTRUCTION — My model rockets will be made of lightweight materials such as paper, wood, plastic, and rubber without any metal as structural parts.

2. ENGINES — I will use only pre-loaded factory made model rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.

3. RECOVERY — I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.

4. WEIGHT LIMITS — My model rocket will weigh no more than 453 grams (16 ozs.) at lift-off, and the engines will contain no more than 133 grams (4 ozs.) of propellant.

5. STABILITY — I will check the stability of my model rocket before its first flight, except when launching models of already proven stability.

6. LAUNCHING SYSTEM — The system I use to launch my model rockets must be remotely-controlled and electrically operated and will contain a switch that will turn to "off" when released. I will remain at least 10 feet from any rocket that is being launched.

7. LAUNCH SAFETY — I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.

8. FLYING CONDITIONS — I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft or under any conditions which might be dangerous to people or property.

9. LAUNCH AREA — My model rockets will always be launched from a cleared area free of any easy to burn materials, and I will only use non-flammable recovery wadding in my rockets.

10. JET DEFLECTOR — My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly.

11. LAUNCH ROD — To prevent accidental eye injury I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use I will always store it so that the launch rod is not in an upright position.

12. POWER LINES — I will never attempt to recover my rocket from a power line or other dangerous places.

13. LAUNCH TARGETS & ANGLES — I will not launch rockets so their flight path will carry them against targets on the ground, and will never use an explosive warhead, nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.

14. PRE-LAUNCH TEST — When conducting research activities with unproven designs or methods, I will when possible determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.

SAFETY FIRST!

NAR. NATIONAL ASSOCIATION OF ROCKETRY

The NAR is THE official non-profit organization working for the advancement of model rocketry nation-wide. Open to all serious rocketeers, membership includes competition sporting license, decals, insurance, and subscription to MODEL ROCKETEER magazine. The NAR establishes safety rules, certifies rocket engine performance, sanctions rocket contests, certifies national and world records, charters official NAR clubs, produces rocket plans, handbooks, and technical materials, and promotes model rocketry as a safe, exciting activity. For information, write:

NAR Headquarters, Dept. C78
P.O. Box 725
New Providence, New Jersey 07974

Canada.

Centuri has dramatically increased retail distribution in Canada. We still honor mail orders from Canada, but Canadian rocketeers can avoid the costly red tape involved in importing rocketry products by purchasing Centuri rockets at their local retailer. If your local retailer doesn't yet carry Centuri products, have him contact International Games of Canada, Ltd., 3227 Lenworth Drive, Mississauga, Ontario, Canada L4X 2G8 for more information.

Canadian model rocketeers have associations similar to the NAR (see above) in the United States. These are the organizations to contact for information about local model rocketry clubs and contests:

Canadian Association of Rocketry
A Program of the Youth Science Foundation
Dept. C-78
Suite 302
151 Slater St.
Ottawa, Ontario K1P 5H3

Conseil de la Jeunesse Scientifique Inc.
Dept. C-78
1415-est, rue Jarry
C.P. 61
Montréal, Québec H2E 227

Learn more.

SCHOOLS & CLUBS:

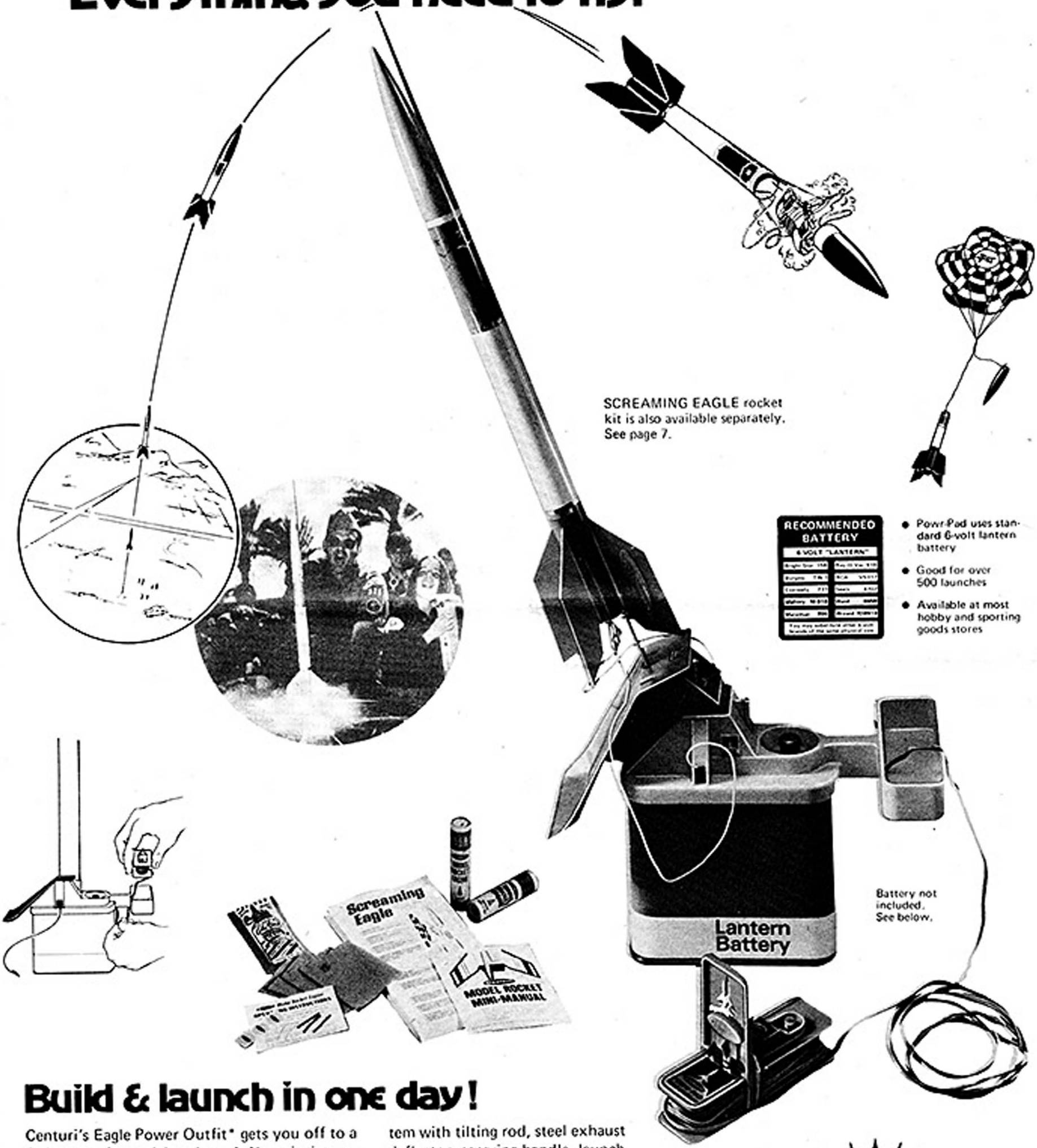
There are hundreds of independent model rocket clubs in the U.S., Canada, & Europe. Others are sponsored by groups like the Boy Scouts, YMCA, 4-H or Civil Air Patrol. Some are organized by school teachers or groups like Kiwanis or city Recreation Departments. Ask around!

Consumer & Educator Services

Centuri's Consumer Relations Manager, Jeff Flygare (right) is available to handle many questions you may have about your operating your own model rocketry program. Jeff can help you in forming rocket clubs, using model rocketry in schools and youth groups, and other rocketry functions. Educators are particularly encouraged to contact Jeff for help in preparing a "motivating" model rocketry program for schools. You can contact Jeff by writing: Jeff Flygare
Consumer Relations
Centuri, Dept. C-78
P.O. Box 1988
Phoenix, AZ 85001

Centuri Outfits.

Everything you need to fly.



SCREAMING EAGLE rocket kit is also available separately. See page 7.

RECOMMENDED BATTERY

6 VOLT "LANTERN"

- Power-Pad uses standard 6-volt lantern battery
- Good for over 500 launches
- Available at most hobby and sporting goods stores

Battery not included. See below.

Build & launch in one day!

Centuri's Eagle Power Outfit* gets you off to a flying start in model rocketry! No painting, no sanding & no special tools. Look at what you get ● SCREAMING EAGLE rocket kit with pre-formed tail fin assembly, plastic nose cone, pre-colored body wrapper, decals & parachute. ● POWR-PAD LAUNCH SYSTEM Launch System with tilting rod, steel exhaust deflector, carrying handle, launch controller & safety key, (battery not included*). ● Plus 2 powerful rocket engines, glue, Mini-Manual on model rocketry, parachute wadding, igniters, and complete instructions – THE WORKS! GET GOING WITH "EAGLE POWER" today!

PROD. NO. 5404 (Formerly SK-110) SKILL LEVEL 1

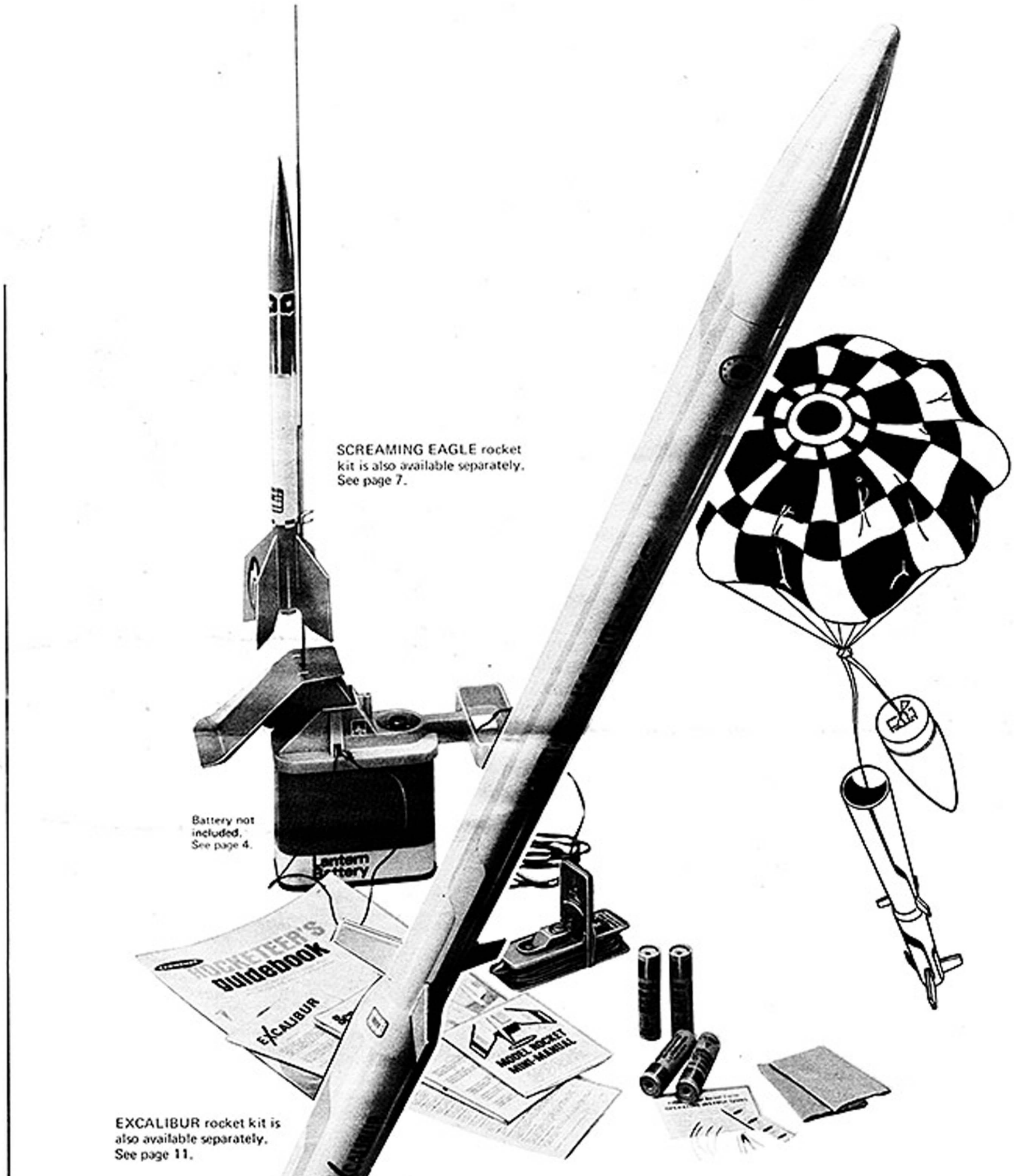
Shipping Wt. 3 lbs.

$14.67 VALUE YOU SAVE $1.72

Eagle Power™

Flying Model Rocket Outfit $12.95

EAGLE POWER™



Two big rockets and everything else you need to fly!

Centuri's Big Shot is really loaded! Includes everything you get in the Eagle Power Outfit . . . plus more! Includes ● SCREAMING EAGLE almost-ready-to-fly rocket kit for super-easy start. ● Long tall EXCALIBUR rocket kit to get you into regular rockets. ● POWR-PAD launch system . . . universally praised as the best there is. ● Enough engines, igniters and parachute wadding for FOUR thundering flights. Illustrated instructions, mini-manual, and glue for assembly. ● Plus our big 36 page ROCKETEER'S GUIDEBOOK loaded with tech info on multi-staging, altitude tracking and much more. For a flying rocket start — go with BIG SHOT!

PROD.NO. 5406
SKILL LEVEL 1

(Formerly SK-210)

Shipping Wt. 4 lbs

Big Shot™

BIG SHOT™

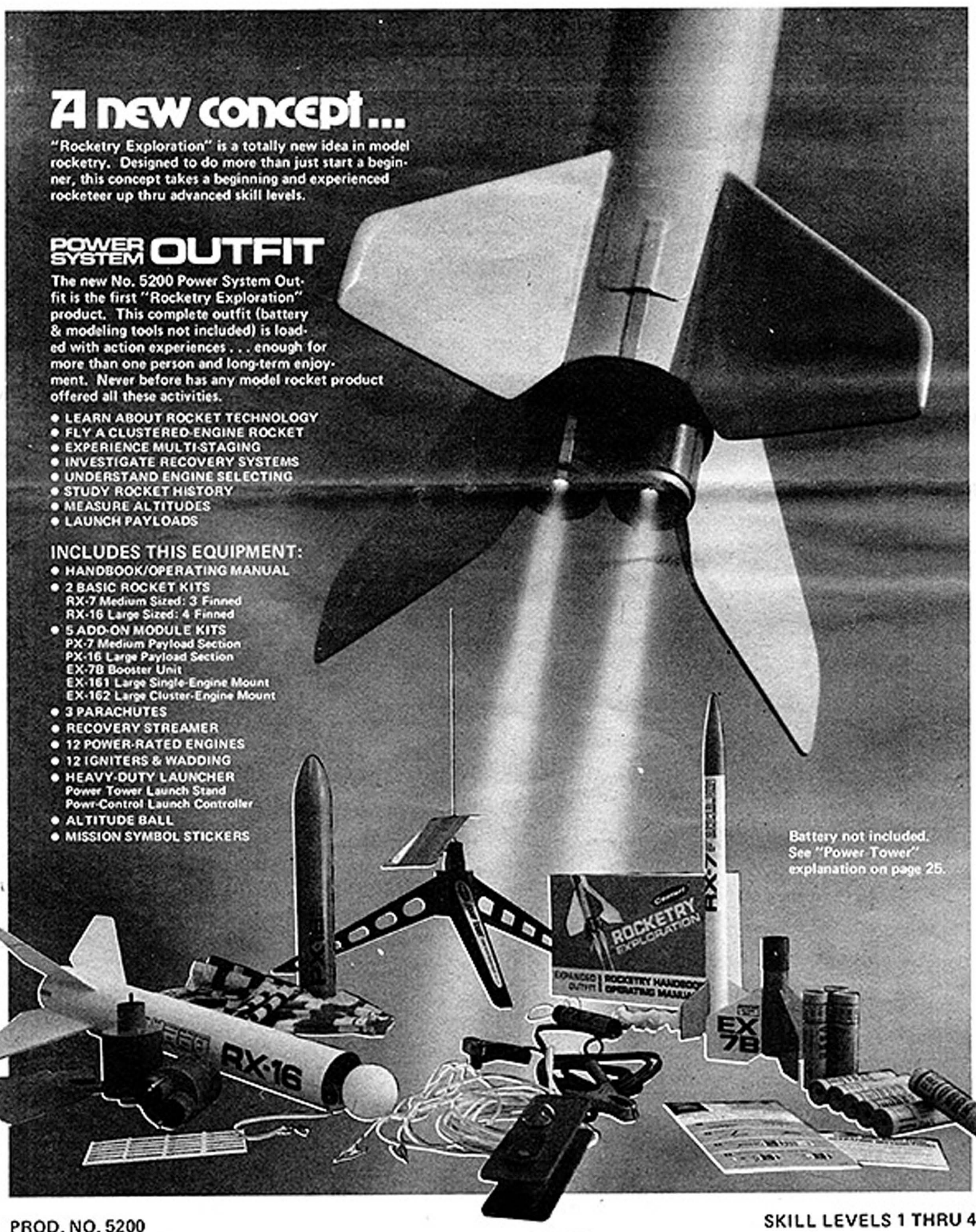
$20.02 VALUE YOU SAVE $2.07

Deluxe Rocket Outfit $17.95

Conturi

Rocketry EXPLORATION™

Complete system for advancing.



A new concept...

"Rocketry Exploration" is a totally new idea in model rocketry. Designed to do more than just start a beginner, this concept takes a beginning and experienced rocketeer up thru advanced skill levels.

POWER SYSTEM OUTFIT

The new No. 5200 Power System Outfit is the first "Rocketry Exploration" product. This complete outfit (battery & modeling tools not included) is loaded with action experiences . . . enough for more than one person and long-term enjoyment. Never before has any model rocket product offered all these activities.

- LEARN ABOUT ROCKET TECHNOLOGY
- FLY A CLUSTERED-ENGINE ROCKET
- EXPERIENCE MULTI-STAGING
- INVESTIGATE RECOVERY SYSTEMS
- UNDERSTAND ENGINE SELECTING
- STUDY ROCKET HISTORY
- MEASURE ALTITUDES
- LAUNCH PAYLOADS

INCLUDES THIS EQUIPMENT:

- HANDBOOK/OPERATING MANUAL
- 2 BASIC ROCKET KITS
  RX-7 Medium Sized: 3 Finned
  RX-16 Large Sized: 4 Finned
- 5 ADD-ON MODULE KITS
  PX-7 Medium Payload Section
  PX-16 Large Payload Section
  EX-7B Booster Unit
  EX-161 Large Single-Engine Mount
  EX-162 Large Cluster-Engine Mount
- 3 PARACHUTES
- RECOVERY STREAMER
- 12 POWER-RATED ENGINES
- 12 IGNITERS & WADDING
- HEAVY-DUTY LAUNCHER
  Power Tower Launch Stand
  Powr-Control Launch Controller
- ALTITUDE BALL
- MISSION SYMBOL STICKERS

Battery not included. See "Power Tower" explanation on page 25.

- 24 pages
- Rocketry Theory
- 7 Project Guides
- Rocket History
- Kit Instructions
- Loaded with Photos

PROD. NO. 5200

SKILL LEVELS 1 THRU 4

$32.00 VALUE YOU SAVE $6.05

Power-System

Advanced Model Rocket Outfit

$25.95

Shipping Wt. 5 lbs.

Centuri Kits.

Flying Model Rockets.

PLANETARY SPACE CRUISER — FUTURISTIC MARKINGS!

Almost 2 feet tall, TAURUS has the look of the future! This kit is so highly detailed, (one of our most detailed decal sheets), that you'll be proud to fly it or display it! Plastic body reducers, a large molded nose cone, simulated cluster boosters, chrome trim, pre-cut balsa fins & a large parachute make TAURUS a standout-anywhere! Build it — detail it & get ready for REALISTIC SPACE ACTION with TAURUS!

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	23.3"	A8-3	B4-4
Body Dia.	1.34"	B6-4	C6-5
Net Wt.	2.6 oz.		

PROD. NO. 5033 (Formerly KB-3)

Taurus

SKILL LEVEL-3

$5.00 *Shipping Wt. 15 oz. Engines not included.*

HI-PERFORMING BEGINNER'S ROCKET!

EASY FLIGHTS TO 800'!

Get perfect high altitude flights every time with a proven design. This swift rocket has super-stabilizing tail fins. And it goes as good as it looks! Pre-cut balsa fins, plastic nose cone, "quick-change" engine lock, large colorful chute and decals make ASTRO-1 THE CHOICE for the beginner.

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	16"	½A6-2	B6-4
Body Dia.	1.04"	A8-3	B14-5
Net Wt.	1.1 oz.	B4-4	C6-5

PROD. NO. 5047 (Formerly KB-17)

Astro 1

SKILL LEVEL-1

$3.25 *Shipping Wt. 12 oz. Engines not included.*

AMERICA'S FIRST SUPERSONIC ROCKET

1/37 SCALE!

Get in on history with MX-774! A Convair design, this sleek rocket was inspired by the famous German V-2 rockets. And the "MX" gets up there fast with flights as high as ¼ mile! And it recovers so gently by parachute. Streamlined "Boat-Tail" fins, a molded nose section & a special 2-page scale data sheet makes MX-774 an interesting & exciting project!

PROD. NO. 5003 (Formerly KA-3)

MX-774

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	11"	½A6-2	B4-6
Body Dia.	0.91"	B6-6	B14-7
Net Wt.	1.1 oz.	C6-7	

SKILL LEVEL-3

$2.75 *Shipping Wt. 9 oz. Engines not included.*

FLY A ROCKET POWERED FIGHTER

ACTION GALORE!

How about a jet-style fighter that roars skyward to 500', ejects a streamer recovered target marker, then smoothly circles for a soft-landing. Talk about action—MACH-10 has it! Pre-cut balsa wings & tail plus a rugged plastic-coned belly tank & Centuri's lift-generating "T-TAIL" makes this easy-to-construct "BIRD" a show-stealer—every flight!

PROD. NO. 5004 (Formerly KA-4)

Mach 10

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	12"	A8-3	B4-2
Body Dia.	1.64"	B6-4	C6-3
Wing Span	11"		
Glide Wt.	1.35 oz.		
Net Wt.	1.85 oz.		

SKILL LEVEL-4

$4.75 *Shipping Wt. 14 oz. Engines not included.*

CAN BE FLOWN WITH THE NEW SUPER C
SEE PAGE 27

TWO-STAGE GIANT — 3 FEET TALL!

Get ready for Action when this one lifts-off! Slim & trim, LONG TOM streaks up to ¼ mile high & returns gently with its large parachute. Colored plastic body reducer & nose cone with decal emblems make this one really fun to build & fly. Add Centuri's exclusive "Passport" Staging * and Baffle/Chute Ejection * (no chute wadding necessary!) You've got "SURE-FIRE" PERFORMANCE every launch!

SPECIFICATIONS	
Length	35.5"
Body Dia.	1.34"
Net Wt.	3 oz.

RECOMMENDED ENGINES	
1st Stage	2nd Stage
A8-0	B4-4
B6-0	B6-6
B14-0	C6-7
C6-0	
C5-0S	

PROD. NO. 5064 (Formerly KC-4)

Long Tom

SKILL LEVEL-4

$6.50

Shipping Wt. 16 oz. Engines not included

*U.S. Pat. No's 3,721,193 3,719,145

$22.00 VALUE
YOU SAVE $5.00

CAN BE FLOWN WITH THE NEW SUPER C
SEE PAGE 27

Recommended Engines C6-3 C5-3S

TWO EXCITING VERSIONS!

EAGLE TRANSPORTER KIT

Plastic blow-molded parts make the Eagle Transporter easy to assemble. Large kit includes decals and easy to follow instructions with info about the real Eagle. Recovery by big 20" chute; flight module returns by 12" chute, for dual recovery action!

COMPLETE "SPACE: 1999" OUTFIT

Start flying rockets with the unique SPACE: 1999 Eagle. Outfits also includes POWR-PAD launch system, 4 powerful "C" engines, Sure-Shot igniters, flight supplies and complete instructions. Everything you need to fly except battery, glue and tools . . . for a BIG start!

SPACE: 1999 Eagle Transporter

SKILL LEVEL 2

Length. . . . . 23.25"
Body Dia. . . . 5.1"
Net Wt. 4.25oz

Rocket kit only $9.00 Ship. Wt. 1 lb. 6 oz.
PROD. NO. 5316
Engines not included

Complete outfit $17.00 Ship. Wt. 3 lb.
PROD. NO. 5314
Outfit includes kit, engines and launcher

BEGINNERS FEATHERWEIGHT

A SNAP TO ASSEMBLE!

Watch this little "BIRD" move out to high altitudes! Super-simple to build, LIL' HERC has no parachute — at apogee the engine is "POPPED" free to let "HERC" tumble ever so gently to earth. Pre-cut balsa fins, a fibre body casing & plastic nose cone make this one an afternoon project of fun and action!

SPECIFICATIONS	
Length	6.5"
Body Dia.	0.76"
Net Wt.	0.3 oz.

RECOMMENDED ENGINES
½A6-2 ½A6-4

PROD. NO. 5001 (Formerly KA-1)

Lil' Herc

SKILL LEVEL-1

$1.75

Shipping Wt. 5 oz. Engines not included

2 PARACHUTES

FLY A WINNER!

TWO CHUTES AND MORE!

This slim speedster won the parachute duration event at the First International Model Rocket Championships! VERY sleek, VERY fast, STARFIRE goes VERY VERY HIGH-UP to 1,500'! Then floats VERY slowly down on its extra large chute. You get a small chute too! Pre-cut balsa fins, a streamlined plastic nose cone, boat-tail fin design & special "stars" decal make STARFIRE the real "PRO" at the launch pad!

SPECIFICATIONS	
Length	16"
Body Dia.	0.91"
Net Wt.	1 oz.

RECOMMENDED ENGINES		
½A6-2	B4-6	B6-6
B14-7	C6-7	

PROD. NO. 5072 (Formerly KC-12)

Starfire

SKILL LEVEL-2

$3.75

Shipping Wt. 10 oz. Engines not included

Centuri Kits.

Flying Model Rockets.

NASA'S SPECTACULAR DETAILS GALORE & IT FLYS!

So realistic, you'll thrill from the moment of its majestic lift-off to its breath-taking soft recovery to earth. Over 2 feet tall, Centuri's SKY LAB is probably the most exciting flying model rocket you'll ever build! And, we've made it easy with molded plastic parts, chromed solar panels, super-detail large decal sheet, a body wrapper & much, much more! ALL SYSTEMS ARE "GO" WITH THIS ONE—DON'T MISS THE FUN!

CAN BE FLOWN WITH THE NEW SUPER C SEE PAGE 27

SPECIFICATIONS
Length ..... 24.5"
Body Dia. ..... 2.04"
Net Wt. ..... 3.4 oz.

RECOMMENDED ENGINES
B4-2 C6-3 C5-3S

PROD. NO. 5034 (Formerly KB-4)

Sky-Lab

SKILL LEVEL-4 $8.50 *Shipping Wt. 16 oz. Engines not included.*

HI-FLYING SINGLE STAGER!
SEE-THRU PAYLOAD CAPSULE!

Watch this square-tailed performer go! See-thru payload capsule lets you send live insects aloft. And . . . the recovery is slow & safe by colored parachute. Plastic nose cone and body reducer plus colorful decals makes "HUNTER" EASY to build & FUN to fly!

SPECIFICATIONS
Length ..... 12.5"
Body Dia. ..... 0.76"
Capsule Dia. ..... 0.91"
Net Wt. ..... 0.85 oz.

RECOMMENDED ENGINES
½A6-2 A8-5
B6-6 B14-5 C6-7

PROD. NO. 5043 (Formerly KB-13)

Snipe Hunter

SKILL LEVEL-2 $3.25 *Shipping Wt. 10 oz. Engines not included.*

SPIN STABILIZED HI-FLYER
FLIGHTS TO ONE-QUARTER MILE!

Watch as the canted fins spin & stabilize TWISTER on its way up. At apogee the parachute "POPS" to let TWISTER down slow & easy. This ones' easy to build with plastic molded nose cone, extra colorful decals and precut balsa fins. Get in the spin—Fly TWISTER!

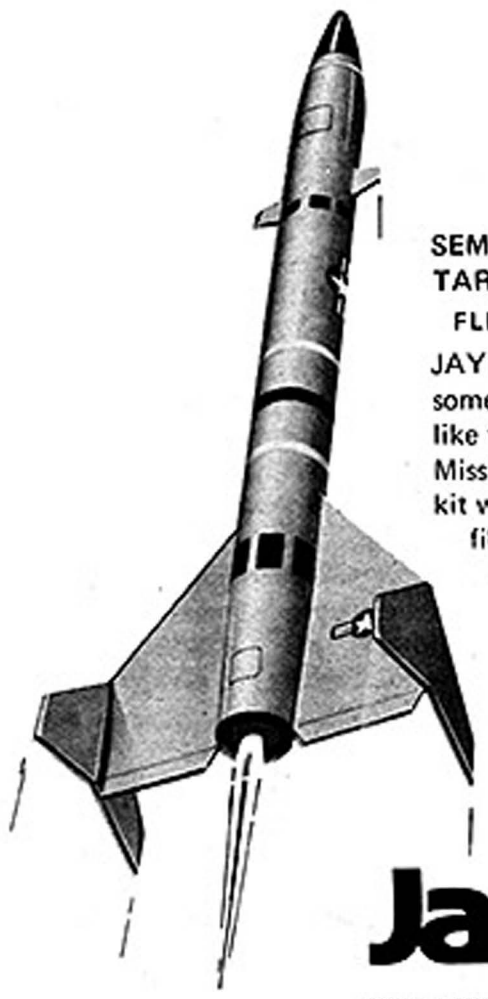
SPECIFICATIONS
Length ..... 11"
Body Dia. ..... 0.91"
Net Wt. ..... 0.9 oz.

RECOMMENDED ENGINES
½A6-2 B4-6 B14-7
A5-4 B6-6 C6-7

PROD. NO. 5002 (Formerly KA-2)

Twister

SKILL LEVEL-1 $3.00 *Shipping Wt. 8 oz. Engines not included.*



SEMI-SCALE NAVAL MISSILE TARGET DRONE
FLIGHTS TO 1,400'!

JAYHAWK has realism PLUS! With some variations, it looks and flys like the U.S. Navy AQM - 37A Missile Target. Details galore in this kit with 3-color decal, pre-cut fibre-fins, plastic nose cone and parachute. All you need is glue & spray paint and your JAYHAWK is ready for the sky!

SPECIFICATIONS
Length 12.6"
Body Diam. 0.91"
Net Wt. 1 oz.

RECOMMENDED ENGINES
½A6-2 A8-4 B4-6
B6-6 C6-7

PROD. NO. 5171 (Formerly KF-1)

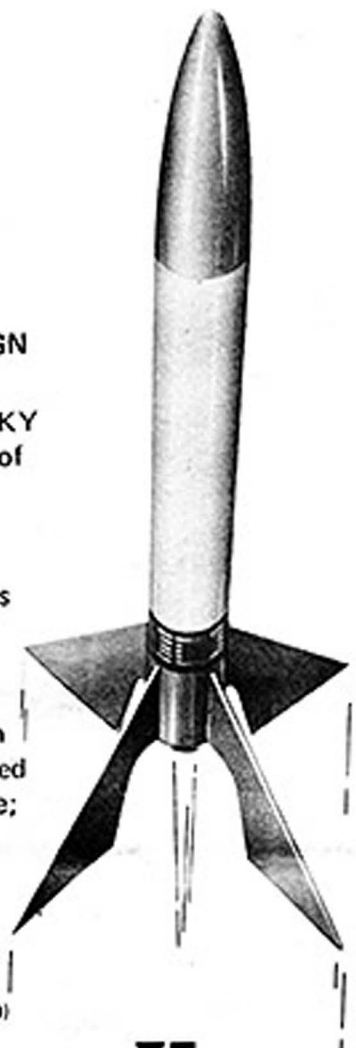
Jayhawk

SKILL LEVEL-2 $3.25 *Shipping Wt. 9 oz. Engines not included.*

CUSTOMIZED FIN DESIGN

8 TO CHOOSE FROM!

YOU DECIDE how your SKY DEVIL will look with one of 8 different tail fin designs! Then blast-off to altitudes as high as 1,800'! This foot - long performer comes with plastic nose cone, balsa fin sheet & colorful parachute and the price is right! How about these fin choices! Aero Bee-Hi; Raked Delta; Swept-Delta; Bastille; Swept-Subsonic; Cobra; Clipped-Delta & Elliptical. It's flyer's CHOICE with SKY DEVIL!



PROD. NO. 5040 (Formerly KB-10)

Sky Devil

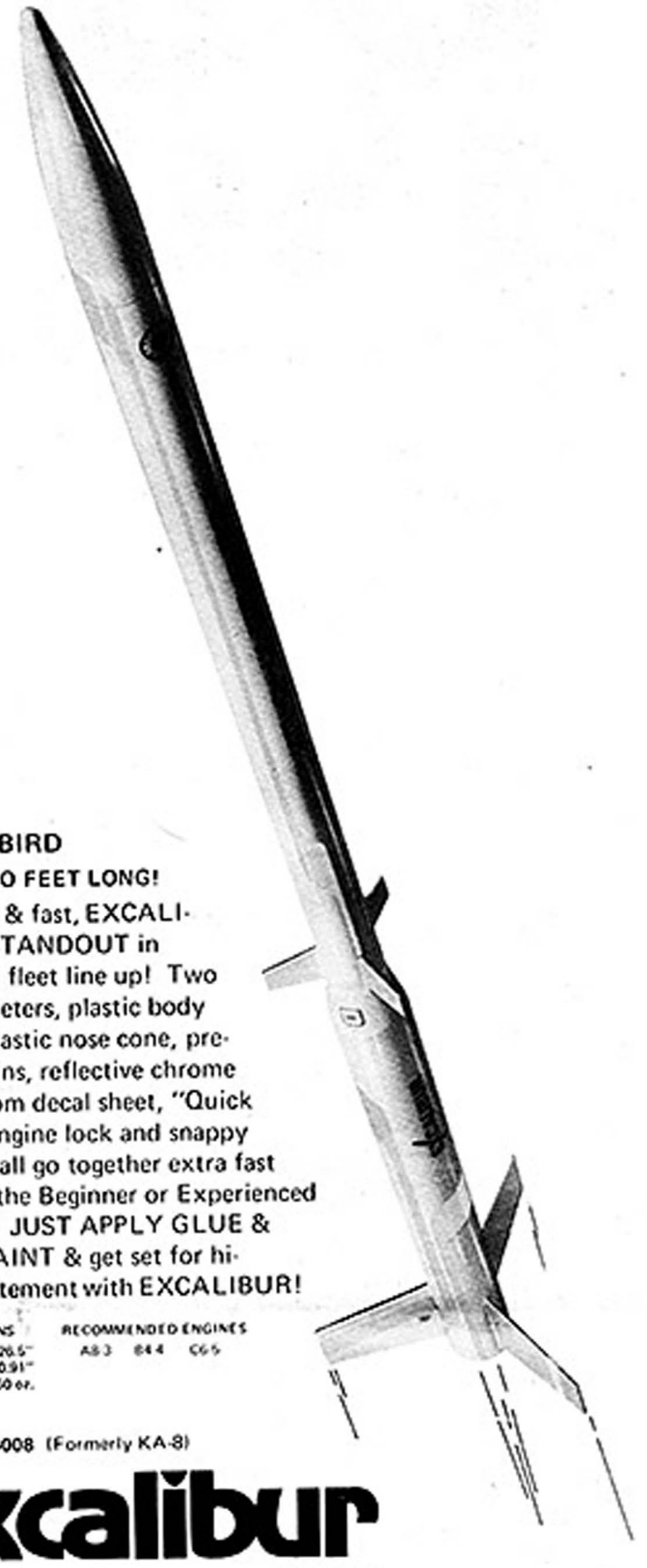
SPECIFICATIONS
Length 12" to 14"
Body Diam. 0.76"
Net Wt. 0.8 oz.

RECOMMENDED ENGINES
A64 A8-5 B4-6
B6-6 C6-7

SKILL LEVEL-2

$2.00

Shipping Wt. 6 oz.
Engines not included



BIG–BIG BIRD

OVER TWO FEET LONG!

Long, slim & fast, EXCALIBUR is a STANDOUT in any rocket fleet line up! Two body diameters, plastic body reducer, plastic nose cone, pre-cut fibre fins, reflective chrome trim, custom decal sheet, "Quick Change" engine lock and snappy parachute all go together extra fast for either the Beginner or Experienced rocketeer. JUST APPLY GLUE & SPRAY PAINT & get set for hi-flying excitement with EXCALIBUR!

SPECIFICATIONS
Length ..... 26.5"
Body Dia. ..... 0.91"
Net Wt. ..... 1.60 oz.

RECOMMENDED ENGINES
A8-3 B4-4 C6-5

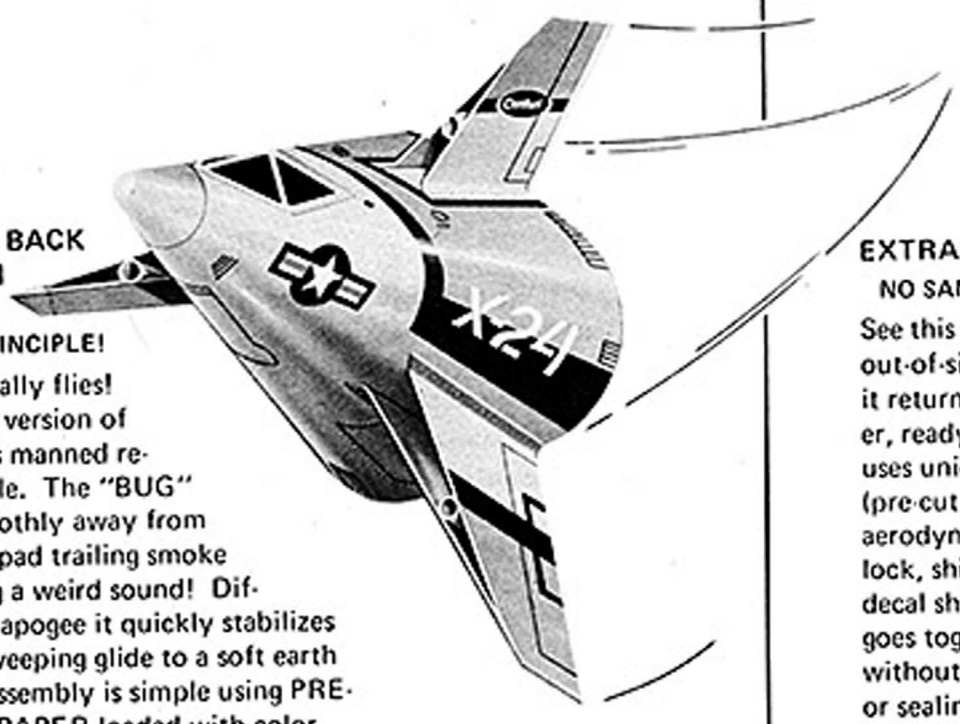
PROD. NO. 5008 (Formerly KA-8)

Excalibur

SKILL LEVEL-1

$3.75

Shipping Wt. 14 oz.
Engines not included



IT GLIDES BACK TO EARTH

LIFTING BODY PRINCIPLE!

Yes, it actually flies! X-24 is our version of tomorrow's manned re-entry vehicle. The "BUG" climbs smoothly away from the launch pad trailing smoke and making a weird sound! Different! At apogee it quickly stabilizes in a long sweeping glide to a soft earth landing. Assembly is simple using PRE-PAINTED PAPER loaded with color & details. Get the "BUG" and start your own test program!

PROD. NO. 5012 (Formerly KA-12)

X-24 Bug

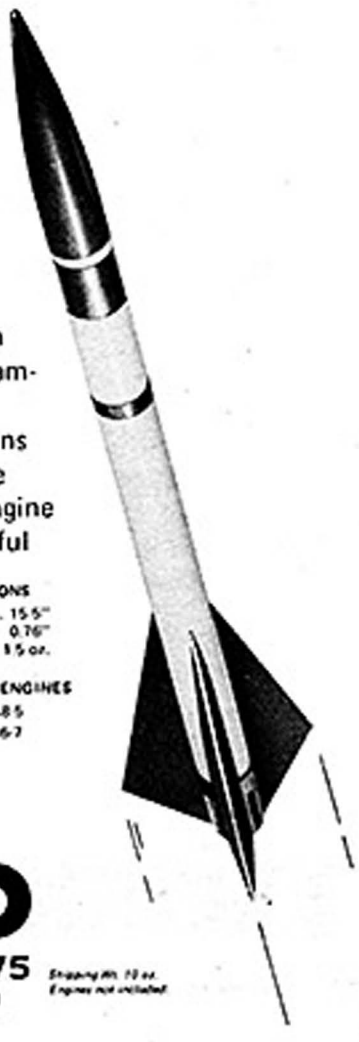
SPECIFICATIONS
Length ..... 7"
Wingspan ..... 7"
Net Wt. ..... 1 oz.

RECOMMENDED ENGINES
B4-2 C6-3 C6-0

SKILL LEVEL-3

$2.25

Shipping Wt. 10 oz.
Engines not included



EXTRA-HI FLYER

NO SANDING OR SEALING!

See this slim one streak to almost-out-of-sight altitudes! Then watch it return on a colorful drogue streamer, ready to go again! BANDITO uses unique wedge shaped speed fins (pre-cut fibre) designed to enhance aerodynamics, "Quick Change" engine lock, shiny chrome trim & a colorful decal sheet. And it goes together fast without any sanding or sealing. FLY THE HOT ONE – the BANDITO!

SPECIFICATIONS
Length ..... 15.5"
Body Dia. ..... 0.76"
Net Wt. ..... 1.5 oz.

RECOMMENDED ENGINES
A3-4 A8-5
B4-6 C6-7

PROD. NO. 5007 (Formerly KA-7)

Bandito

SKILL LEVEL-2

$2.75

Shipping Wt. 12 oz.
Engines not included

Centuri Kits.

Flying Model Rockets.

LAUNCH YOUR OWN!

Styled after the U.S. Naval missiles Tarter & Terrier, NOMAD has the look of the real thing. Slim and sleek. It really moves out with flights up to 1/6th mile! ! Recovery is by a colored parachute for launch after launch. AND WHAT DETAILS! Pre-cut fibre-fins & body vanes, chrome bands and a super-detailed 2-color decal sheet. Round out your rocket fleet with this fast flying performer—NOMAD!

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	18.0"	A8-3	B4-4
Body Diam.	1.0"	B6-4	C6-5
Net Wt.	1.75 oz.		

PROD. NO. 5035 (Formerly KB-5)

Nomad

SKILL LEVEL-3

$4.25

Shipping Wt. 12 oz. Engines not included

SHAPE OF THE FUTURE

QUICK ASSEMBLY AND NO PAINTING!

This is one of our most exotic Rockets. With a unique shape of its own, VULCAN flys beautifully without conventional rocket fins! Goes together quick with pre-colored parts & a minimum of fuss. Watch VULCAN streak skyward & return gracefully by its colorful parachute. Definitely NOT ANOTHER "ME TOO" ROCKET, VULCAN is really something special.

SPECIFICATIONS	
Length	10.5"
Max. Span	5.5"
Net Wt.	1.2 oz.

RECOMMENDED ENGINES
B4-2 C6-3

PROD. NO. 5010 (Formerly KA-10)

Vulcan

SKILL LEVEL-3

$3.25

Shipping Wt. 11 oz. Engines not included

PERFORMANCE PLUS!

FLIGHTS TO 1,800'

This kit is a must for the beginner who wants BIG SINGLE-STAGE PERFORMANCE in a small, fast rocket. Die cut fins & a plastic nose cone gets you to the launch pad—fast! Recovery is by colorful streamer for safe & happy landings — everytime! Every fleet needs this high-flying tiger — MICRON!

SPECIFICATIONS	
Length	8.5"
Body Dia.	0.75"
Net Wt.	0.4 oz.

RECOMMENDED ENGINES
½A6-4 A8-5 B4-6
B6-6 C6-7

PROD. NO. 5005 (Formerly KA-5)

Micron

SKILL LEVEL-1

$2.50

Shipping Wt. 6 oz. Engines not included

SPACE PROBE REALISM!

ALMOST TWO FEET TALL!

IMPRESSIVE just sitting on the launch pad—FANTASTIC in flight! This super-stable "bird" has realistic lift-offs and flys straight & true. Kit has pre-cut balsa fins, large parachute, body reducer and an extra-large customizing decal sheet. Build it & fly it-again & again!

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	21.5"	A8-3	B14-5
Body Dia.	1.34"	B6-4	C6-5
Net Wt.	1.75 oz.		

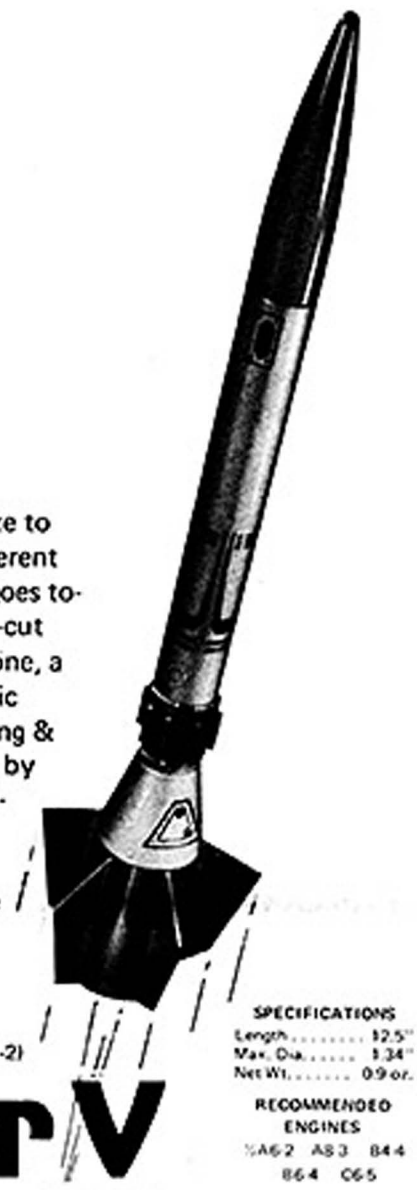
PROD. NO. 5110 (Formerly KC-50)

LaserX

SKILL LEVEL-3

$4.75

Shipping Wt. 14 oz. Engines not included



BUILDERS CHOICE

OVER 12 WAYS TO GO!

Here's one you customize to one of over a dozen different configurations. And it goes together fast too, with pre-cut fibre fins, plastic nose cone, a large decal sheet of exotic markings & super detailing & finishing ideas. Recover by parachute for a fast turn-around with Centuri's Quick Change Engine Lock. Get started in the Design-Your-Own game today with VECTOR-V!

PROD. NO. 5032 (Formerly KB-2)

Vector V

SKILL LEVEL-3

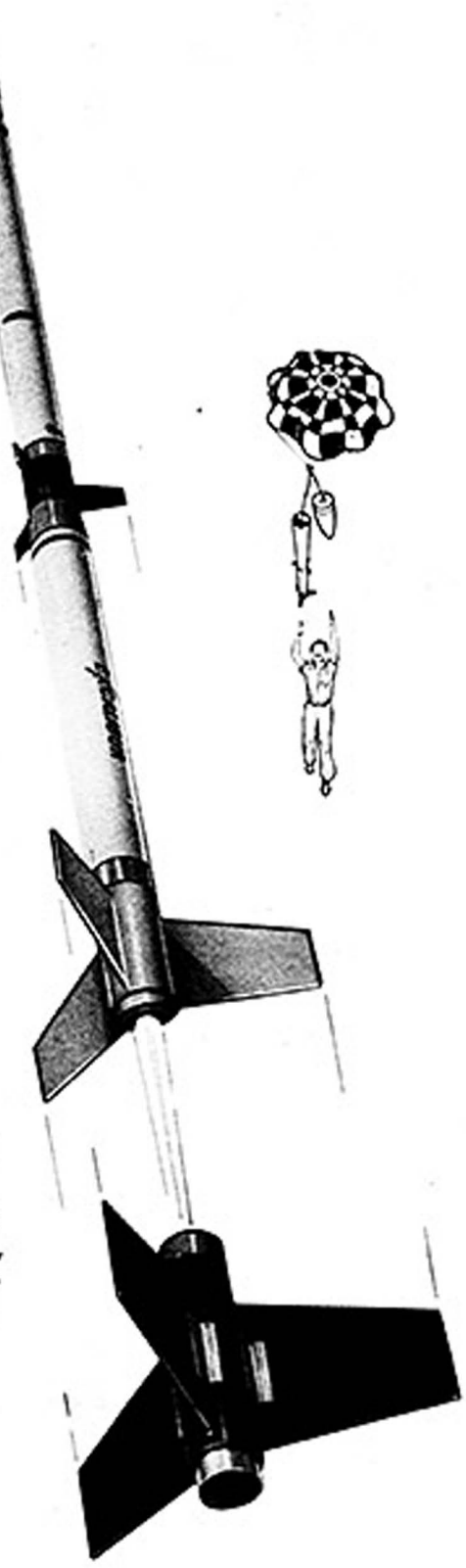
$3.00

SPECIFICATIONS
Length ..... 12.5"
Max. Dia. ..... 1.34"
Net Wt. ..... 0.9 oz.

RECOMMENDED ENGINES
½A6-2 A8-3 B4-4
B6-4 C6-5

Shipping Wt. 10 oz.
Engines not included

CAN BE FLOWN WITH THE NEW SUPER C SEE PAGE 27



ONE OF CENTURI'S LONGER ROCKETS!

This lean one is almost 2½ feet long! And two stages of thrust puts EXCALIBUR 2 high above most other rockets with FLIGHT TO 1800'! Comes with molded plastic nose cone & body reducer, pass-port staging*, colorful decals, bright chrome trim & a large parachute. Get above the crowd with this one!

SPECIFICATIONS
Length 29.5"
Max. Dia. 0.95"
Net Wt. 2.1 oz.

RECOMMENDED ENGINES
1st Stage A8-0 B6-0 B14-0 C6-0 C5-0S
2nd Stage A8-5 B4-6 B6-6 C6-7

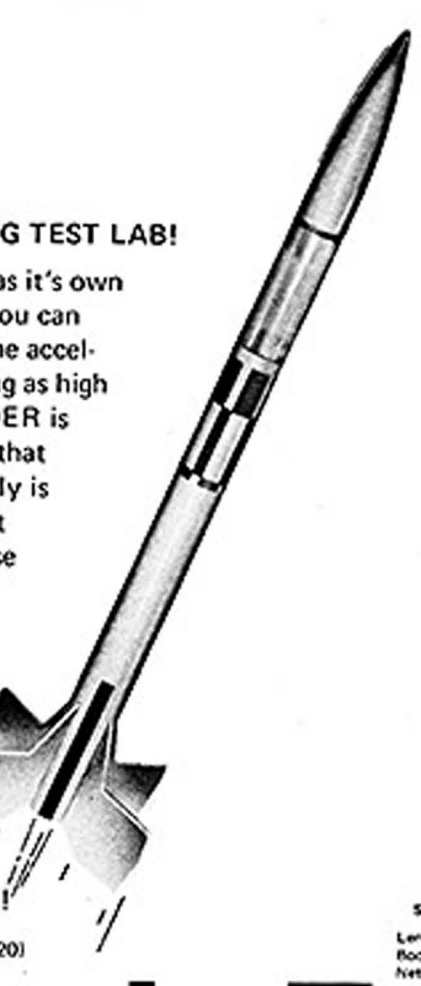
PROD. NO. 5175 (Formerly KF-5)

Excalibur 2

SKILL LEVEL-3

$4.75

Shipping Wt. 12 oz.
Engines not included



BEGINNER'S HI-FLYING TEST LAB!

This high-flying rocket has it's own clear plastic capsule, so you can launch insects to study the acceleration effects! Streaking as high as 1,000', the PAYLOADER is a great beginner's rocket that doubles the fun. Assembly is simple & fast with pre-cut balsa tail fins, plastic nose cone, custom decals and a clean plastic payload section. Both the rocket & capsule return safely to earth by sturdy parachute to FLY AGAIN & AGAIN. Fly with the Centuri "Carrier Rocket" PAYLOADER II!

PROD. NO. 5080 (Formerly KC-20)

Payloader II

SKILL LEVEL-2

$3.75

SPECIFICATIONS
Length ..... 18.5"
Body Dia. ..... 1.0"
Net Wt. ..... 1.2 oz.

RECOMMENDED ENGINES
A8-3 B14-5
B6-4 C6-5

Shipping Wt. 14 oz.
Engines not included

CAN BE FLOWN WITH THE NEW SUPER C SEE PAGE 27

FLIGHTS TO 2,200 FEET

TWO-STAGE PERFORMANCE AT ITS BEST!

One of our highest flying rockets. This long thin 2-stager slices upward to almost OUT-OF-SIGHT ALTITUDES! It recovers on dual streamers while the booster tumbles safely to earth. Pre-cut balsa fins & passport staging* gets this sleek performer in the air-fast! Put real "GO" on your launch pad—STILETTO!

*U.S. Pat. No. 3,721,193

SPECIFICATIONS
Length ..... 18.25"
Body Dia. ..... 0.76"
Net Wt. ..... 1.1 oz.

RECOMMENDED ENGINES

1st Stage	2nd Stage
A8-0	½A6-4
B6-0	A8-5
B14-0	B6-6
C6-0	C6-7
C5-0S	

PROD. NO. 5031 (Formerly KB-1)

Stiletto

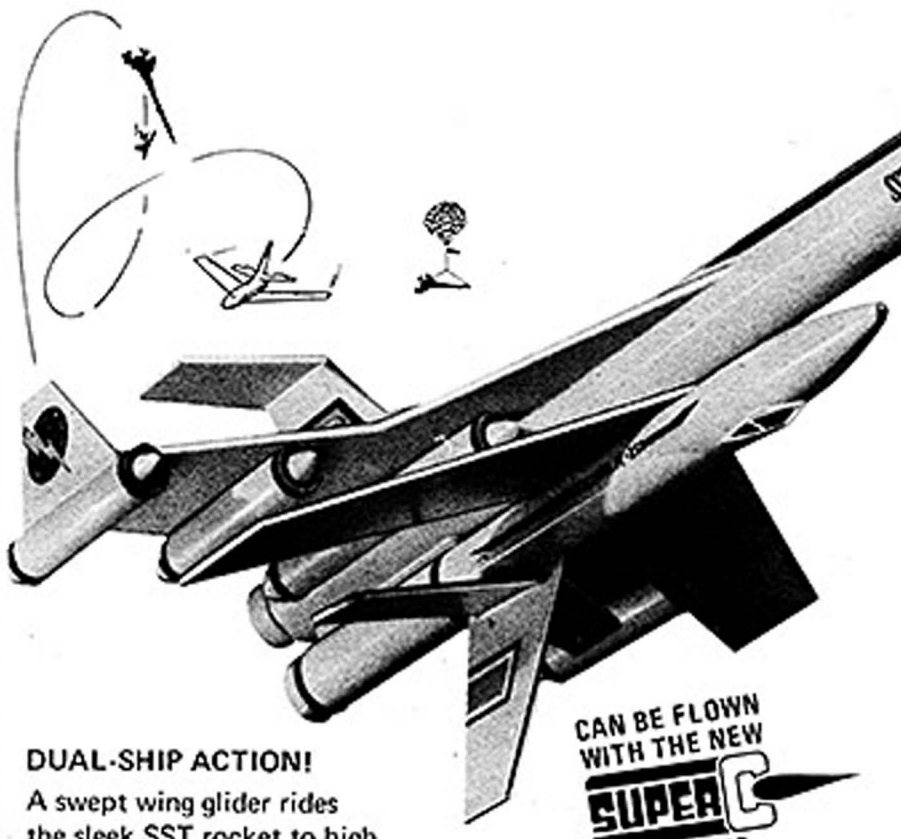
SKILL LEVEL-3

$3.75

Shipping Wt. 11 oz.
Engines not included

Centuri Kits.

Flying Model Rockets.



CAN BE FLOWN WITH THE NEW SUPER C
SEE PAGE 27

DUAL-SHIP ACTION!

A swept wing glider rides the sleek SST rocket to high altitudes, detaches & circles back to earth while the SST "carrier" deploys a large chute & drifts down in a horizontal position. Here's exciting dual-ship action that flys again & again! This kit is packed with colorful decals, pre-formed hi-detailed plastic parts, pre-cut balsa fins and wings – the works! Build it and fly it!

SPECIFICATIONS

	SST	GLIDER
Length	22.5"	8.5"
Body Dia.	1.04"	0.76"
Net Wt.	2 oz.	.6 oz.

RECOMMENDED ENGINES
B4-2 C6-3
C5-3S

PROD. NO. 5077 (Formerly KC-17)

SST Shuttle

SKILL LEVEL-5

$7.00

Shipping Wt. 18 oz. Engines not included.

LOOK – NO FINS!

FOR BOTH THE BEGINNER & EXPERIENCED ROCKETEER!

An easy to build rocket with a "DIFFERENT" look. You'll be happy with its stable vertical flights especially in windy conditions. And, you can put it together in an evening. No fins to sand; a plastic nose cone, custom decals & shiny chrome trim make it a cinch with just glue & spray paint. Surprise your buddies with this unusual rocket.

SPECIFICATIONS

Length	18.25"
Body Dia.	0.91"
Net Wt.	1.75 oz.

RECOMMENDED ENGINES
A8-3 B4-4 C6-5

PROD. NO. 5011 (Formerly KA-11)

Groove Tube

SKILL LEVEL-1

$3.75

Shipping Wt. 15 oz. Engines not included.

BEGINNER'S FUN!

DUAL CONFIGURATION!

Here's a quick moving midget with lots of action! Launch your MOONRAKER and watch it separate into 2 sections at apogee! Both gyro-tumble harmlessly to earth. You can also change the fin rake angles easily – it's two ships in one! Quick to assemble with plastic nose cone & durable pre cut fibre fins, MOONRAKER is a must "FUN SHIP" for every beginner!

PROD. NO. 5041 (Formerly KB-11)

SPECIFICATIONS

Length	5.5"
Body Diam.	0.70"
Net Wt.	0.3 oz.

RECOMMENDED ENGINES
1/4A6-4 A8-5

Moonraker

SKILL LEVEL-1

$1.50

Shipping Wt. 5 oz. Engines not included.

BEGINNERS CHOICE

FLIGHTS TO 1,800 FEET!

Get a flying start in model rocketry with JAVELIN. It's easy to assemble with plastic nose cone, colorful decals & pre-cut balsa fins. You'll see your "BIRD" streak hundreds of feet skyward. Then you'll hear the "POP" as the parachute deploys and the return to earth begins. Model Rocketry is fun and JAVELIN is where the fun begins!

SPECIFICATIONS

Length	12.5"
Body Dia.	0.76"
Net Weight	0.6 oz.

RECOMMENDED ENGINES
1/4A6-4 A8-5 B4-6 B6-6 B14-7 C6-7

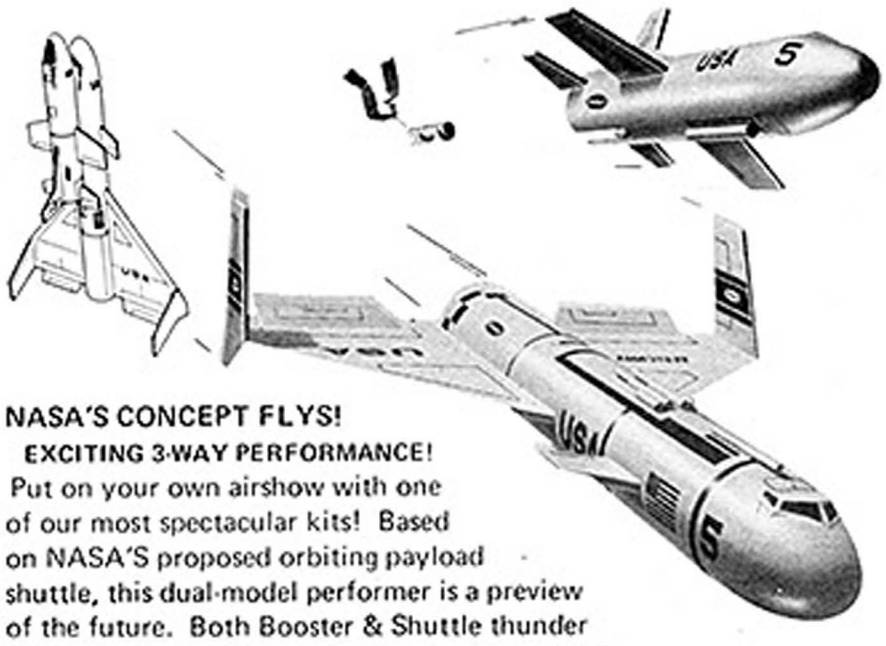
PROD. NO. 5091 (Formerly KC-31)

Javelin

SKILL LEVEL-1

$2.75

Shipping Wt. 10 oz. Engines not included.



NASA'S CONCEPT FLYS!

EXCITING 3-WAY PERFORMANCE!

Put on your own airshow with one of our most spectacular kits! Based on NASA'S proposed orbiting payload shuttle, this dual-model performer is a preview of the future. Both Booster & Shuttle thunder skyward together. At apogee the big rocket engine pod ejects & returns to earth on a streamer. The separated Booster & Shuttle then begin individual glides to soft landings. Plastic cones, cockpits, pre-cut balsa wings & fins and a big highly detailed decal sheet makes SPACE SHUTTLE exciting!

SPECIFICATIONS	Booster Ship	Shuttle Ship
Length	15"	9.5"
Body Dia.	1.64"	1.34"
Net Wt.	2.20 oz.	.85 oz.

RECOMMENDED ENGINE: C6-3 ONLY!

PROD. NO. 5066
(Formerly KC-6)

Space Shuttle

SKILL LEVEL-5

$8.00 Shipping Wt. 15 oz. Engines not included

CAN BE FLOWN WITH THE NEW SUPER C SEE PAGE 27

BIG 3 STAGER

OVER 3 FEET LONG!

This one's a real High-Flyer – reaches up to ½ mile high! Or, you can launch with only one or two stages. Try advanced staging & watch as each stage "POPS" free to tumble safely to earth. You get 12 pre-cut fibre-fins, a payload section, an extra large decal, parachute & much more. ARROW 300 means "ACTION" for the experienced rocket flyer!

*U.S. Pat. No. 3,721,193

SPECIFICATIONS	
Length	37.7"
Body Diam.	0.91"
Net Wt.	2.5 oz.

RECOMMENDED ENGINES	1st Stage	2nd Stage	3rd Stage
	B6-0	A8-0	1/2A6-4
	B6-0	B6-0	A8-5 or B4-6
	C6-0	C6-0	B6-6 or C6-7
	C5-0S	C5-0S	

PROD. NO. 5037
(Formerly KB-7)

Arrow-300

SKILL LEVEL-4

$5.50 Shipping Wt. 14 oz. Engines not included

CAN BE FLOWN WITH THE NEW SUPER C SEE PAGE 27

BIG 2-STAGE FUN with A GLIDING BOOSTER!

Here's a unique one! The extra large fins of the booster section cause a slow-sweeping glide return to earth. Meanwhile the "WIDOW's" upper section climbs away to over 2,000' to recover gently by chute. A plastic nose cone, custom decals, & reliable pass-port staging* makes this kit an excellent step up in 2-STAGE FUN!

*U.S. Pat. No. 3,721,193

SPECIFICATIONS	
Length	15"
Body Dia.	0.76"
Net Wt.	1.2 oz.

RECOMMENDED ENGINES	1st Stage	2nd Stage
	A8-0	A8-5
	B6-0	B4-6
	C6-0	C6-7
	C5-0S	

PROD. NO. 5036 (Formerly KB-6)

Black Widow

SKILL LEVEL-5

$4.25 Shipping Wt. 10 oz. Engines not included

SUPER DETAIL

MILITARY STYLED HIGH PERFORMER

Here's something really different from Centuri's Think-Tank! Unique off-center fins & dual stabilizing tubes make SCRAM-JET look like a fast-moving military target drone. And move it does to altitudes of ¼ mile! Pre-cut balsa fins, plastic nose cone and a super decal sheet puts a beautifully detailed rocket on your launch pad and – parachute recovery keeps you flying again & again! Something "DIFFERENT" for your model rocket fleet – SCRAM-JET!

SPECIFICATIONS	
Length	18.8"
Body Diam.	.76"
Net Wt.	1.3 oz.

RECOMMENDED ENGINES
1/2A6-4 A8-5 B4-6
B6-6 C6-7

PROD. NO. 5174
(Formerly KF-4)

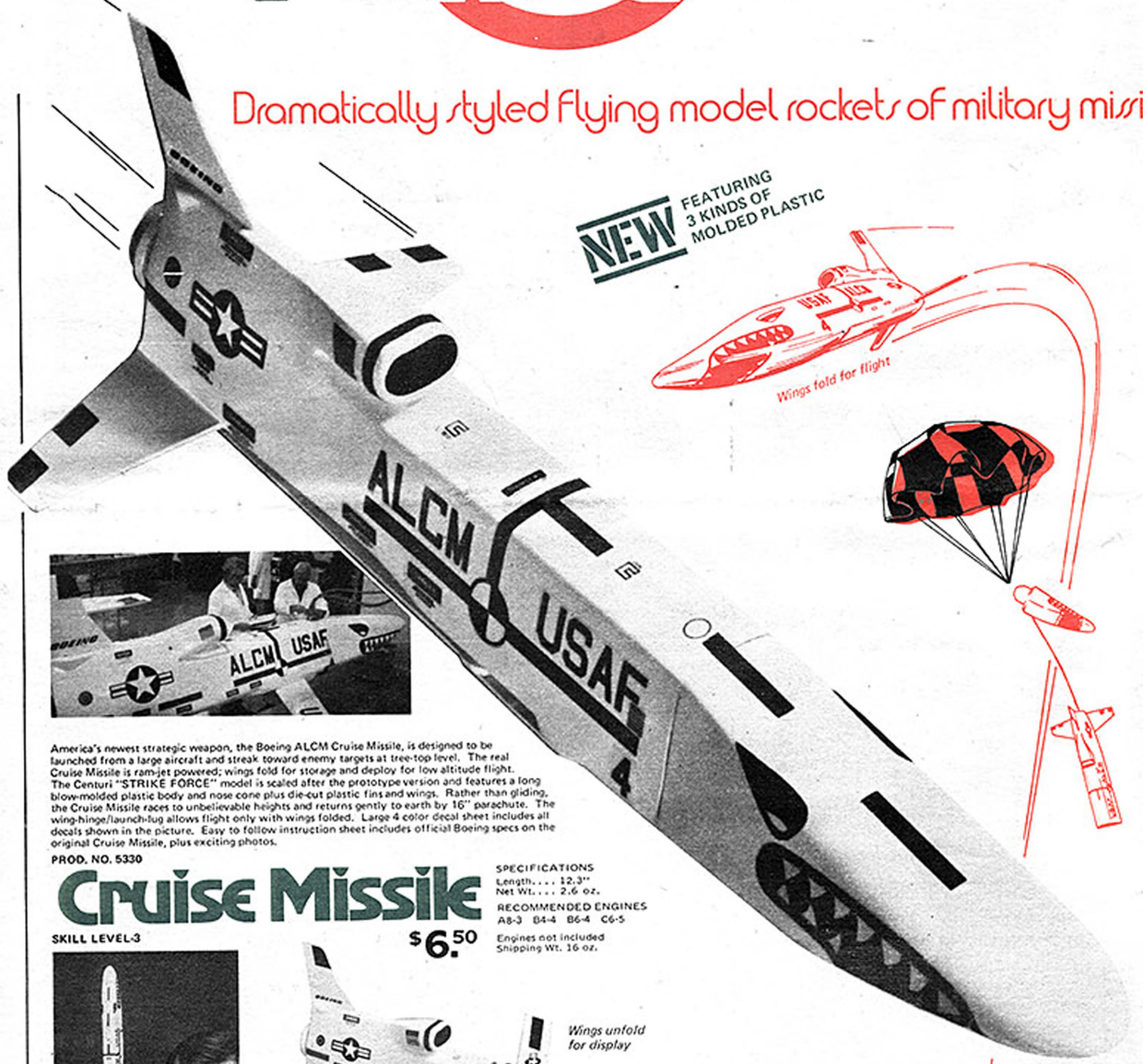
Scram-Jet

SKILL LEVEL-3

$3.50 Shipping Wt. 11 oz. Engines not included

Centuri STRIKE FORCE

Dramatically styled flying model rockets of military missiles from around the world.



America's newest strategic weapon, the Boeing ALCM Cruise Missile, is designed to be launched from a large aircraft and streak toward enemy targets at tree-top level. The real Cruise Missile is ram-jet powered; wings fold for storage and deploy for low altitude flight. The Centuri "STRIKE FORCE" model is scaled after the prototype version and features a long blow-molded plastic body and nose cone plus die-cut plastic fins and wings. Rather than gliding, the Cruise Missile races to unbelievable heights and returns gently to earth by 16" parachute. The wing-hinge/launch-lug allows flight only with wings folded. Large 4 color decal sheet includes all decals shown in the picture. Easy to follow instruction sheet includes official Boeing specs on the original Cruise Missile, plus exciting photos.

PROD. NO. 5330

Cruise Missile

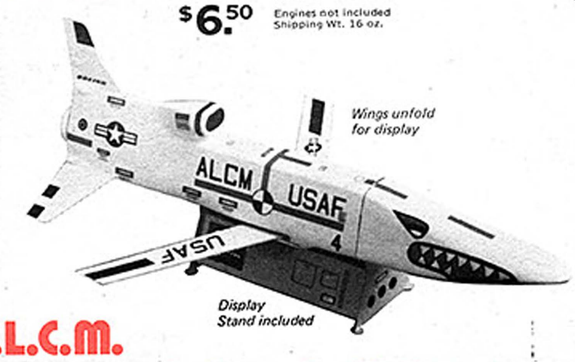
SKILL LEVEL-3

$6.50

SPECIFICATIONS
Length.... 12.3"
Net Wt.... 2.6 oz.

RECOMMENDED ENGINES
A8-3 B4-4 B6-4 C6-5

Engines not included
Shipping Wt. 16 oz.



Wings unfold for display

Display Stand included

BOEING A.L.C.M. CRUISE MISSILE

NEW FEATURING 3 KINDS OF MOLDED PLASTIC

Styled after Italy's surface-to-surface ship launched missile, this "Strike Force" kit has realistic Italian markings, die-cut balsa fins, balsa nose cone, tech data and illustrations, and impressive body detailing. New camouflage parachute brings model gently back from altitudes over 1000 feet. Important to Italy's defense system, the Sea Killer is important to your rocket fleet. Fly it today!

ITALIAN PROD. NO. 5331

Sea Killer

SKILL LEVEL-3

$3.75

SPECIFICATIONS
Length.... 14"
Body Dia.... .908"
Net Wt.... 1.2 oz.

Engines not included
Shipping Wt. 13 oz.

RECOMMENDED ENGINES
½A6-2 A8-3 B4-6 B6-6 C6-7

Available May 15, 1978

INTERNATIONAL SERIES

TACTICAL MISSILES

NEW MILITARY CAMOUFLAGE PARACHUTE

This impressive model, patterned after the Israeli surface-to-surface missile, features die-cut balsa fins, balsa nose cone, military decals with authentic Israeli markings and flights to over 1000 feet with a "C" engine. Easy to follow instructions include info and photos of the real Gabriel. Recovery by new 14" camouflage parachute. Add this one to your own "STRIKE FORCE"!

ISRAELI PROD. NO. 5333

Gabriel

SKILL LEVEL-3

$3.75

SPECIFICATIONS
Length.... 14.25"
Body Dia.... .908"
Net Wt.... 1.4 oz.

Engines not included
Shipping Wt. 13 oz.

RECOMMENDED ENGINES
½A6-2 A8-3 B4-6 B6-6 C6-7

Available May 15, 1978

NEW ALL TACTICAL MISSILES INCLUDE BALSA NOSE CONES & FINS

This modified scale version of Russia's famous SAM-3 surface-to-surface close-range missile features extensive body detailing, genuine military decals, balsa nose cone, die-cut balsa details and fins, and recovery by new 14" camouflage parachute. Instructions include photos and info of real SAM. Two-stage appearance, but requires only one engine per flight. Flights over 1000 feet with a "C" engine make this a favorite "STRIKE FORCE" kit!

RUSSIAN PROD. NO. 5332

Sam-3

SKILL LEVEL-3

$3.75

SPECIFICATIONS
Length.... 13.5"
Body Dia.... 1.04"
Net Wt.... 1.2 oz.

Available May 15, 1978

Engines not included
Shipping Wt. 13 oz.

RECOMMENDED ENGINES
½A6-2 A8-3 B4-6 B6-6 C6-7

Centuri

SUPER KITS™

A whole new direction in big kits!

Each Super Kit includes these deluxe features:

- Dual Chute Recovery . . . 2 big parachutes.
- Patented Baffle/Chute Ejection system.*
- Long length and impressive size.
- Big 6" x 12" Four-color decal.
- Richly illustrated instructions.
- Rocket-Rack display stand.
- Sturdy molded nose cones.
- Quick-change engine lock.
- "Exploded View" plan.
- Pre-shaped fins.
- Decal Guide.

The E.S.S. Raven is the proud flagship of the Earth Science Service (E.S.S.). The Service was founded in 1981 when leading scientists united in a world federation that cuts across national boundaries and politics. The E.S.S. Raven has pushed the frontiers of science ever outward with the recently announced Faster-Than-Light Drive and the rumors of time travel. The Raven is part of the E.S.S. Ozone Research Project which tests the upper stratosphere. Based somewhere in the Sierra Mountains, the Raven can fly to the very limits of the atmosphere. The huge lower scoop gathers air samples to be analyzed by the vast shipboard computer buried within the huge vessel.

E.S.S. RAVEN

Length 30.5" Fin Span 10.5"
Net Wt. 5.3 oz. Diam. 1.6"

Recommended Engines
C6-3 C5-3S

*U.S. Pat. No. 3,719,145

Realistic Wing Pods

Quick-Change Engine Lock

Rocket-Rack Display Stand

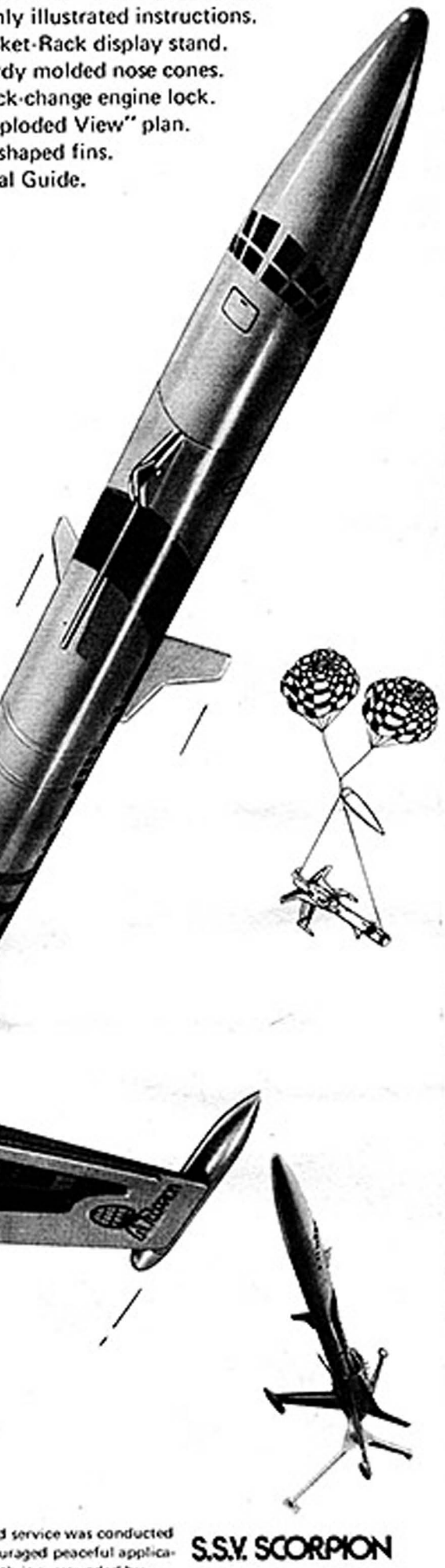
PROD. NO. 5312

E.S.S. RAVEN™

SKILL LEVEL 3

Shipping Wt. 1 lb., 8 oz.
Engines not included

$9.95



Up until 1988 most satellite repair and service was conducted with NASA Space Shuttles. This encouraged peaceful applications of space travel so that today Earth is surrounded by thousands of solar-energy collecting satellites. The Satellite Service Vehicle (S.S.V.) Scorpion maintains this complex network which conserves our dwindling natural fuels. Its name comes from the stinger-shaped rudder that magnetically launches and retrieves satellites from Earth orbit. These slide down the rudder into storage slots on the hull, and are later brought into the open hanger. Maintenance crews work in the vacuum of space to prevent atmospheric damage to these satellites so vital in the 21st century.

S.S.V. SCORPION

Length 29.7" Fin Span 8.6"
Net Wt. 5.7 oz. Diam. 2.0"

Recommended Engines
C6-3 C5-3S

*U.S. Pat. No. 3,719,145

Super Detail

Quick-Change Engine Lock

Rocket-Rack Display Stand

PROD. NO. 5307

S.S.V. SCORPION™

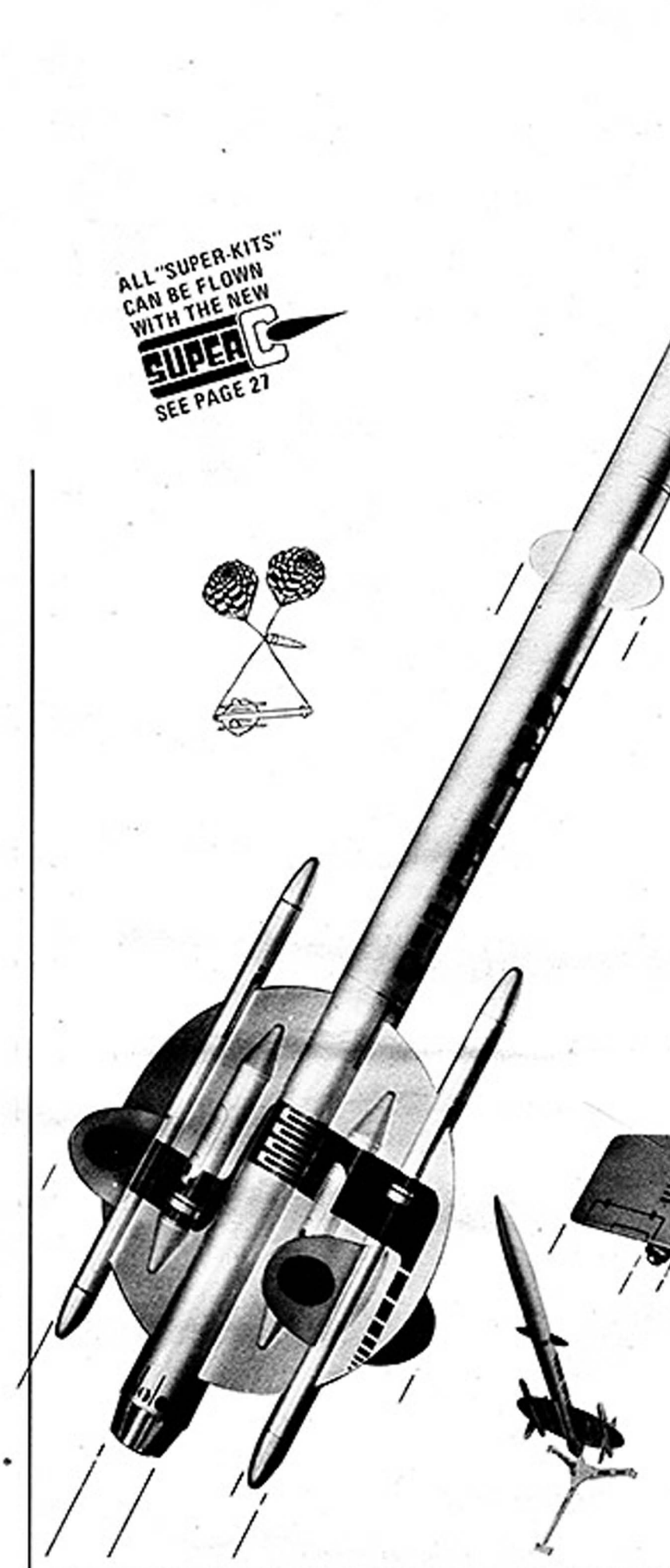
SKILL LEVEL 3

Shipping Wt. 1 lb., 8 oz.
Engines not included

$9.95

ALL "SUPER-KITS" CAN BE FLOWN WITH THE NEW SUPER C

SEE PAGE 27



This year is 1980 and at last the existence of flying saucers is a proven fact. First sighted in the mysterious Bermuda Triangle, the U.F.O. Invader has been observed by countless eye witnesses. The Invader is a submarine as well as a deep-space ship. . . able to travel on the ocean surface, buoyed by its wing pods. It submerges to a hidden undersea base where the aliens perhaps study Earth and its people. Little is known about the aliens, but we know this: we are not alone in the universe!

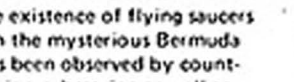
U.F.O. INVADER

Length 30" Fin Span 9.3"
Net Wt. 4.7 oz. Diam. 1.34"

Recomended Engines
C6-3 C5-3S

*U.S. Pat. No. 3,719,145

Realistic Wing Pods



Quick-Change Engine Lock

Rocket-Rack Display Stand

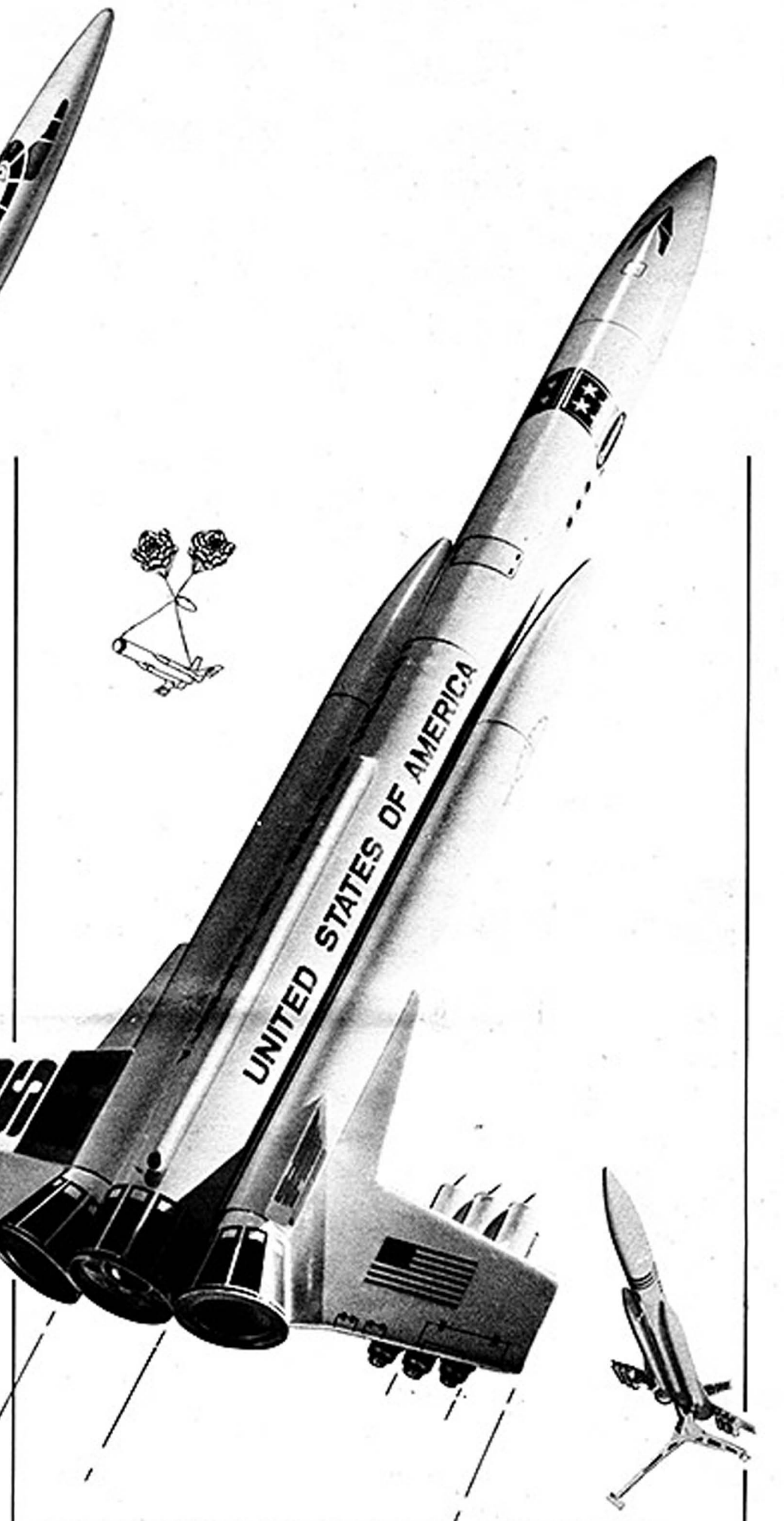
PROD. NO. 5308

U.F.O. INVADER™

SKILL LEVEL 3

Shipping Wt. 1 lb., 8 oz.
Engines not included

$9.95



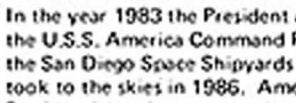
In the year 1983 the President approved the building of the U.S.S. America Command Post. The keel was laid at the San Diego Space Shipyards and the great bird first took to the skies in 1986. America now serves as a Presidential aerial command post center and diplomatic courier. Able to land at large conventional airports, the America helps maintain peace on earth as well as in space. The ship's Orville/Stine nuclear rocket engines place the craft in earth orbit and augment the six ramjets used for atmospheric travel. These combined systems economically transport high government officials to global trouble spots.

U.S.S. AMERICA

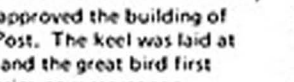
Length 25" Fin Span 12"
Net Wt. 5.5 oz. Diam. 1.6"

Recommended Engines
C6-3 C5-3S

*U.S. Pat. No. 3,719,145



Realistic Wing Pods



Quick-Change Engine Lock

Rocket-Rack Display Stand

PROD. NO. 5310

U.S.S. AMERICA™

SKILL LEVEL 3

Shipping Wt. 1lb., 8 oz.
Engines not included

$9.95

FIGHTER FLEET™

Centuri **Flying Rocket-Jets.**

THERE ARE LOTS OF VERY REALISTIC LOOKING JET MODELS AVAILABLE, BUT THESE ARE QUITE DIFFERENT FROM PLASTIC MODEL KITS . . . CENTURI FIGHTERS ACTUALLY FLY! "FIGHTER FLEET" ARE FLYING MODEL ROCKET KITS WITH NEAR-SCALE APPEARANCE, MODIFIED TO ALLOW STABLE UPWARD FLIGHT. INTENDED ONLY FOR STANDARD VERTICAL MODEL ROCKET FLIGHT.

EVERY "FIGHTER FLEET" KIT INCLUDES:

- **CLEAR PLASTIC COCKPIT**
  First time ever, in model rocket kit!
- **SIMULATED MISSILES**
  Includes molded nose cones & fins!
- **SIMULATED FUEL TANKS**
  Pods with molded ends!
- **PRE-CUT FIBRE PARTS**
  Sturdy wings & fins; they really fast!
- **BIG 4-COLOR DECAL!**
  Includes every emblem shown!
- **PARACHUTE RECOVERY**
  Damage-resistant horizontal type!
- **DATA SHEET**
  Scale info on the real fighter

Designed in 1952, the F-104 Starfighter broke tradition by using razor-thin straight wings instead of the usual sharply-raked wings. It was the first supersonic fighter developed by Lockheed and strongly resembled their early research missile, the "X-7". In 1955 it became the first operational combat plane that could sustain a speed of MACH-2. The F-104's exceptional performance was a major selling point in the international market and it became the basic fighter for the NATO allies; especially West Germany.

KIT SPECIFICATIONS Length 15.0"
Body Diam. 1"
Span 6.7"
Net Wt. 2.0 oz.

Recommended Engines: A8-3, B4-4, B6-4, C6-5

PROD. NO. 5320

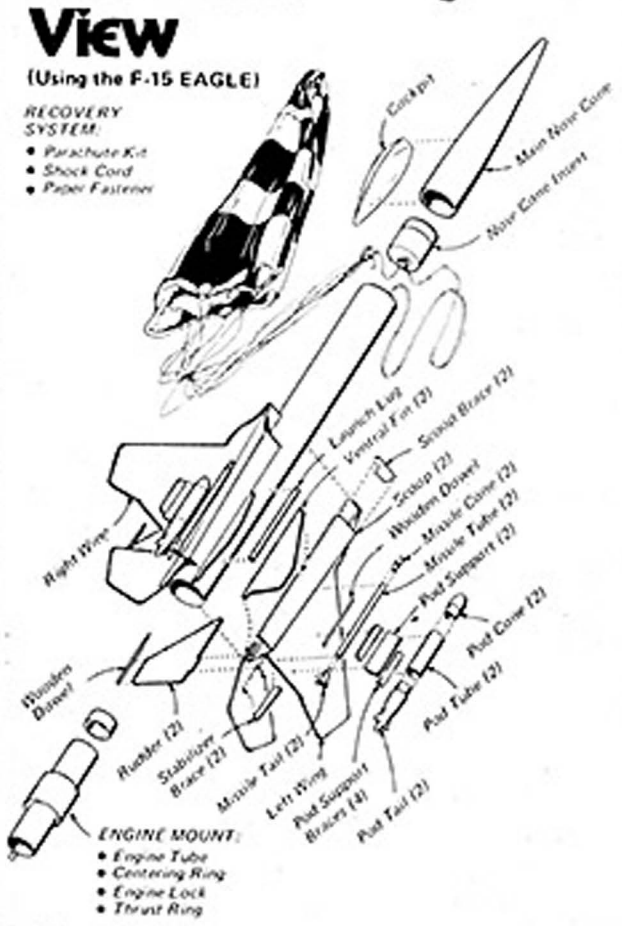
F-104 Starfighter

SKILL LEVEL 3

$4.75

Engines not included
Ship Wt. 16 oz.

TYPICAL
Exploded View
(Using the F-15 EAGLE)



The 5J Israeli Mirage is from the French Dassault "Mirage" air combat family. It has a relatively low price due in part to its lack of sophisticated electronics. The 5J can be used as a fighter/interceptor when flown with a Sidewinder missile under each wing, or it can be made a "bargain basement bomber" with a great variety of bombs, rockets or fuel tanks as payload. The legend of this fighter arose during the "Six Days War", Perhaps the most successful campaign in Israeli military history.

KIT SPECIFICATIONS Length 14.1"
Body Diam. 1"
Span 6.9"
Net Wt. 2..3 oz.

Recommended Engines: A8-3, B4-4, B6-4, C6-5

PROD. NO. 5321

5J Israeli Mirage

SKILL LEVEL 3

$4.75

Engines not included
Ship Wt. 16 oz.

The United States Air Force F-15 is the world's most manueverable high-performance aircraft. Though larger than the F-4 Phantom, it is nearly 6,000 pounds lighter thanks to new space-age materials. During flight tests in 1974 the F-15 broke all existing fast-climb world records, previously held by the Soviet Union and U.S. Navy.

KIT SPECIFICATIONS Length 15.7"
Body Diam. 1"
Span 7.7"
Net Wt. 2.1 oz.

Recommended Engines: A8-3, B4-4, B6-4, C6-5

PROD. NO. 5318

F-15 Eagle

SKILL LEVEL 3 **$4.75**

Engines not included
Ship Wt. 16 oz.

The F-4 Phantom has been built in many versions for the Air Force, Navy, and Marines. Since 1963 the Phantom in it's various forms has seen action as a fighter, bomber, and reconnaissance plane. Also used by Canada and Great Britian, the F-4 has been the basic Free World fighter for over 10 years.

Over 650 of these planes are expected to enter the United States Air Force inventory, as the F-16 becomes the basic general-purpose fighter of the 1980's. NATO and certain European countries are also buying it. The F-16 has been especially designed for economy of purchase and ease of repair . . . the same idea as with a compact car!

KIT SPECIFICATIONS Length 15"
Body Diam. 1"
Span 7"
Net Wt. 2.0 oz.

Recommended Engines: A8-3, B4-4, B6-4, C6-5

PROD. NO. 5317

F-16 Fighter

SKILL LEVEL 2 **$4.75** Engines not included
Ship Wt. 16 oz.

KIT SPECIFICATIONS Length 14.5"
Body Diam. 1"
Span 8.5"
Net Wt. 2.3 oz.

Recommended Engines: A8-3, B4-4, B6-4, C6-5

PROD. NO. 5319

F-4 Phantom

SKILL LEVEL 3 **$4.75** Engines not included
Ship Wt. 16 oz.

Centuri Super Scale.

Flying Model Rockets.

Super-Scale are loaded with far more exotic parts and detail than found in other kits. We recommended a heavy-duty launch stand and 3/16" diameter rod for the Saturns. See page 25 for "POWER-TOWER" and LR-188 rod.

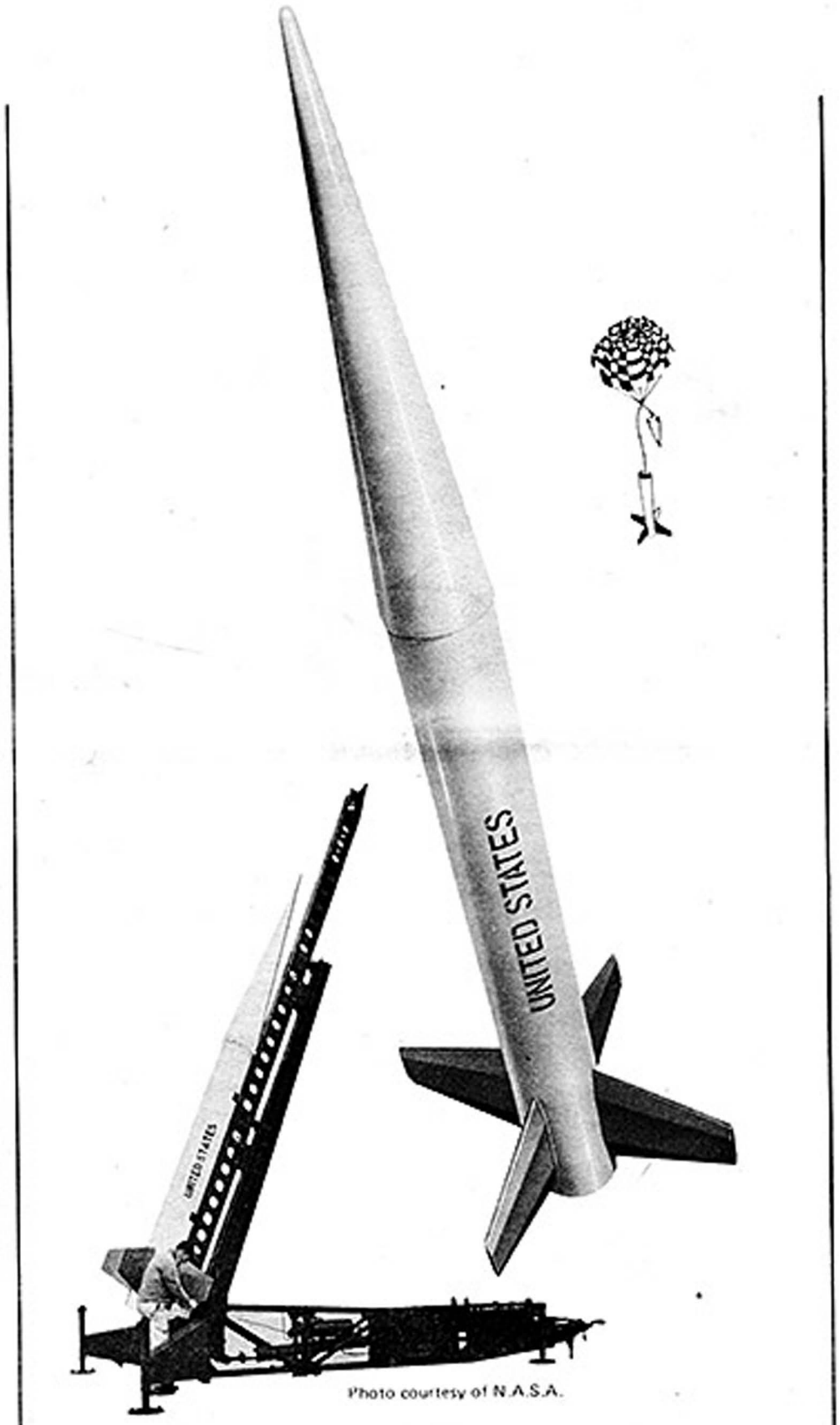


Photo courtesy of N.A.S.A.

MODEL OF ACTUAL NASA ROCKET

EASY TO BUILD

Here's an IMPRESSIVE BIRD 1/10 the size of NASA'S 75,000' altitude Research Rocket. It's big, almost two feet tall! Watch it swoosh almost out of sight to return softly with its large chute. Goes together fast with a high-detail molded nose cone. Pre-cut balsa fins & special baffle/ejection* & authentic decal sheet. Beautiful in flight or as a scale display. A "MUST" for the scale rocketeer!

SPECIFICATIONS		RECOMMENDED ENGINES	
Length	23.7"	B4-2	C6-5
Body Dia.	1.64"		
Net Wt.	2.3 oz.		

*U.S. Pat. No. 3,719,145

PROD. NO. 5145 (Formerly KS-15)

Nike Smoke

SKILL LEVEL-2

$5.25 Shipping Wt. 15 oz. Engines not included.

MERCURY CAPSULE KIT
Plastic tower & capsule; for replacement on "own-designs". Fits #20 tube.
(MR 36) $1.50

CAN BE FLOWN WITH THE NEW SUPER C
SEE PAGE 27

NUMBER ONE IN SPACE!

PRE-FORMED PLASTIC PARTS!

Accurate in scale to the LAST DETAIL, Centuri's Redstone is the best flying replica of of Alan Shepard's "FREEDOM 7". Nearly 2½ feet long the "Redstone" lifts-off beautifully with tower separation at apogee (500 feet!) — then the TWO CHUTES "POP" to let tower & booster gently back to earth. Hi-detail molded plastic tower, baffle-ejection,* balsa pre-cut fins plus and extra-large scale decal sheet make "REDSTONE" a reality on your launch pad!

SPECIFICATIONS	
Length	29"
Body Dia.	2.04"
Net Wt.	3.7 oz.

RECOMMENDED ENGINES
B4-2 C6-3 C5-3S

*U.S. Pat. No. 3,719,145

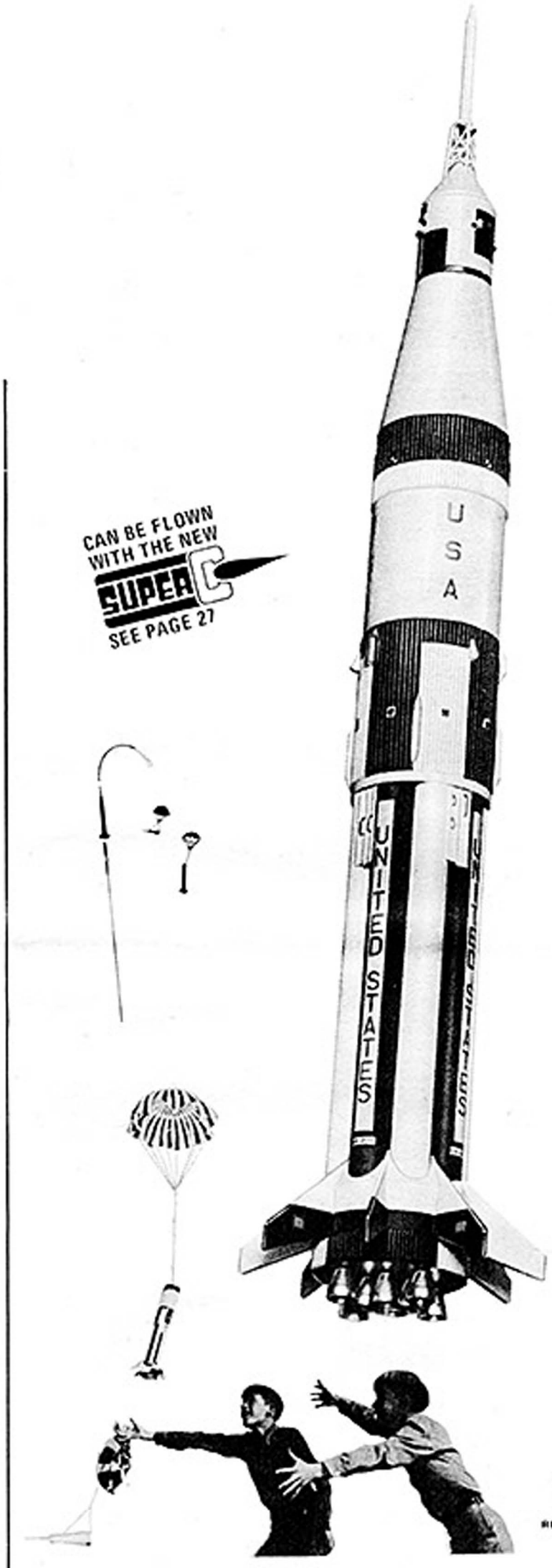
PROD. NO. 5131 (Formerly KS-1)

Mercury Redstone

1/36 SCALE

SKILL LEVEL-5

$9.00 Shipping Wt. 15 oz. Engines not included.



SPECIFICATIONS

Length	26.8"
Body Dia.	2.62"
Net Wt.	4.4 oz.

RECOMMENDED ENGINES

2 – B6-4
2 – C6-5
2 – C5-3S

DUAL-ENGINE MOONSHOT FORERUNNER!

This is a true 1/100 flying scale model of the manned Apollo Mission warm-up! EVERY DETAIL IS CORRECT down to the original ship's markings! We designed it so the average modeler can create his own museum piece! This Big "Bird" is OVER 2 FEET TALL, flys on a 2-engine cluster and recovers via two separate chutes. Many pre-molded plastic parts, Apollo Historical booklet, a Cluster Report and large decal sheet makes your "1B" a "STANDOUT" in flight or on display!

PROD. NO. 5140 (Formerly KS-10)

Saturn 1B

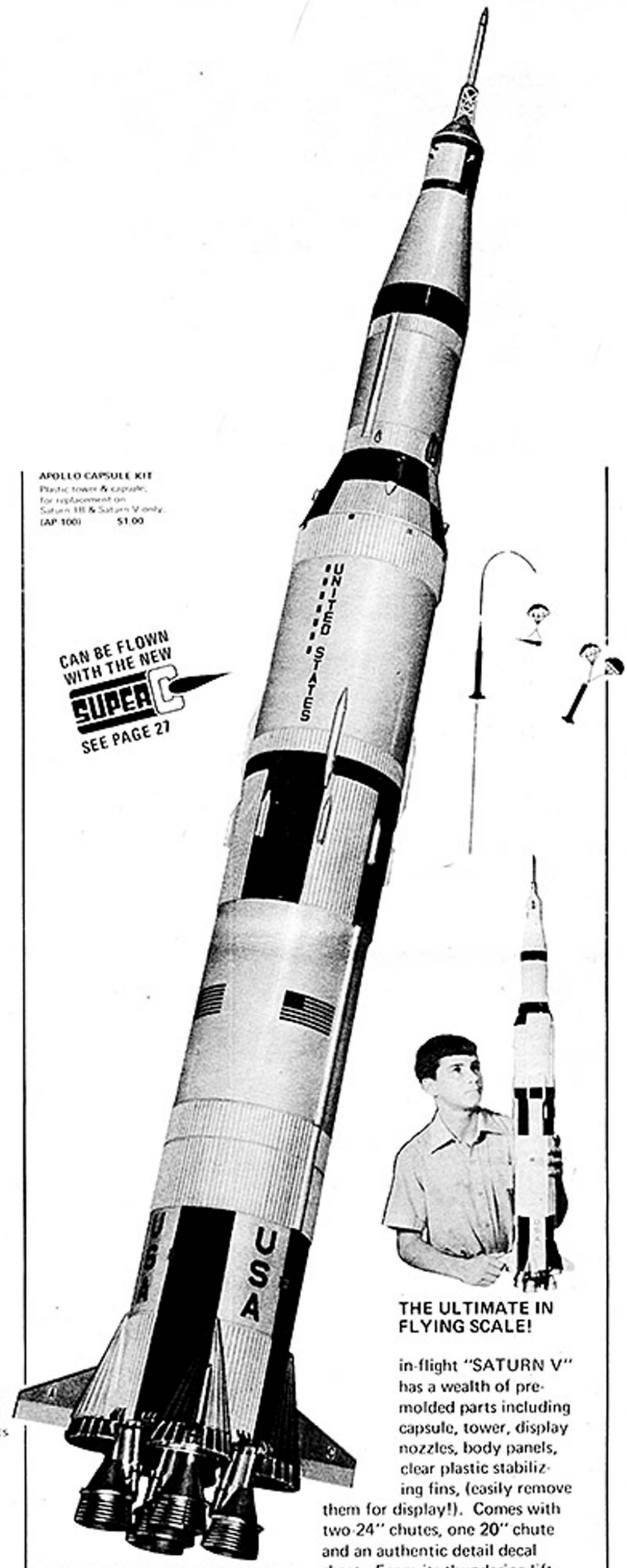
1/100 SCALE

SKILL LEVEL-5

$17.00

Shipping Wt. 2 lbs. Engines not included

APOLLO CAPSULE KIT
Plastic tower & capsule, for replacement on Saturn IB & Saturn V only.
(AP-100) $1.00



THE ULTIMATE IN FLYING SCALE!

in-flight "SATURN V" has a wealth of pre-molded parts including capsule, tower, display nozzles, body panels, clear plastic stabilizing fins, (easily remove them for display!). Comes with two 24" chutes, one 20" chute and an authentic detail decal sheet. From its thundering lift-off to a triple-chute return – SATURN V commands the scene!

SPECIFICATIONS

Length	43.6"
Body Dia.	3.96"
Net Wt.	9.2 oz.

RECOMMENDED ENGINES

3 – C6-3
3 – C5-3S

A 3-engine show stopper, this flying replica of the Man-On-the-Moon-Mission, is scaled from actual NASA blueprints! Absolutely authentic at rest, or

PROD. NO. 5142 (Formerly KS-12)

Saturn V

1/100 SCALE

SKILL LEVEL-5

$28.00

Shipping Wt. 3 lbs. Engines not included

Centuri Mini Line.

Flying Model Rockets.

These neat little rockets are powered by Centuri Mini-Motors (not included; see page 27) which fit our small #5 tubes. Mini kits are generally thinner and lighter than standard rockets . . . so they really Get-Up and Go!

EVEL KNIEVEL

If you're already a model rocketeer, add Evel's exciting Sky Cycle to your fleet. This little "Power-House" gets off the launch pad quickly and returns safely time after time. No painting or "Sand n' Seal" required! All parts pre-colored white and pre-cut. Includes engine lock, sturdy molded nose cone and official Evel Markings. The finished red, white, blue and gold rocket will knock your eyes out!

SPECIFICATIONS:

Length	10.5"
Body Diam.	1.34"
Net. Wt.	1.5 oz.

RECOMMENDED MINI-MOTORS

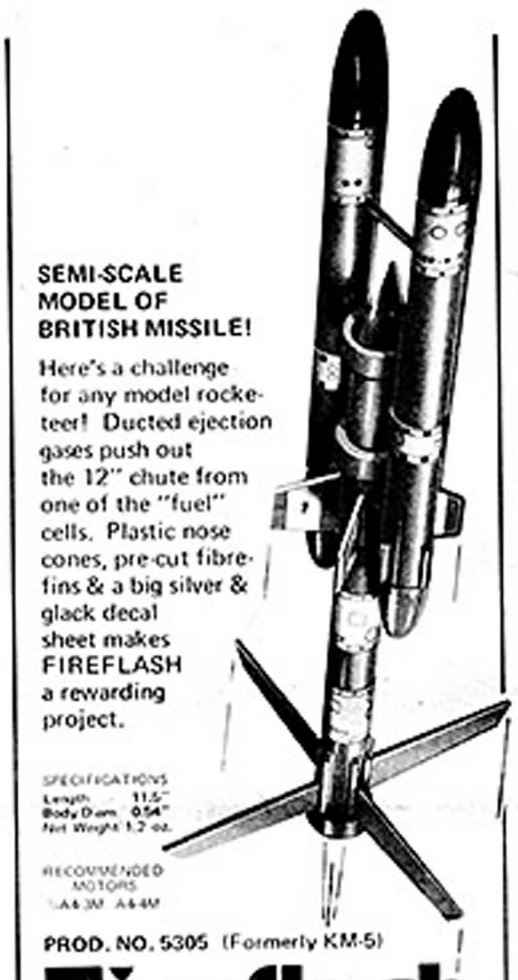
½A4-3M A4-4M

PROD. NO. 5350

Sky Cycle

SKILL LEVEL-1 $3.50

Shipping Wt. 12 oz. Engines not included



SEMI-SCALE MODEL OF BRITISH MISSILE!

Here's a challenge for any model rocketeer! Ducted ejection gases push out the 12" chute from one of the "fuel" cells. Plastic nose cones, pre-cut fibre-fins & a big silver & glack decal sheet makes FIREFLASH a rewarding project.

SPECIFICATIONS

Length	11.5"
Body Diam.	0.54"
Net Weight	1.2 oz.

RECOMMENDED MOTORS

½A4-3M A4-4M

PROD. NO. 5305 (Formerly KM-5)

Fireflash

SKILL LEVEL-5 $3.00

Shipping Wt. 10 oz. Engines not included

BEAUTIFUL FLIGHTS
YOU CHOOSE THE RECOVERY SYSTEM!

NOVA gets up and away to 700'! Then according to your desires, returns to earth by a NOSE-EJECTED parachute or by a TAIL-EJECTED streamer. UNIQUE! Comes with pre-cut balsa tail fins, a parachute, drag streamer & a long balsa nose cone. For fun flying – try NOVA!

SPECIFICATIONS

Length	12.4"
Body Diam.	0.76"
Net Weight	0.6 oz.

RECOMMENDED MOTORS

½A4-2M A4-4M
½A4-3M

PROD. NO. 5304
(Formerly KM-4)

Nova

SKILL LEVEL-3 $2.50

Shipping Wt. 10 oz. Engines not included

YOU GET 2 ROCKETS
UNUSUAL CONSTRUCTION!

Join the beginner's fun with these two ultra-light performers that go very, very high & fast. The return is a soft flutter to earth. Exciting? You bet! Pre-painted sheets make it quick and easy to get started in model rocketry today!

SPECIFICATIONS

Length	4.5"
Body Width	0.54"
Net Weight	0.2 oz.

RECOMMENDED MOTORS

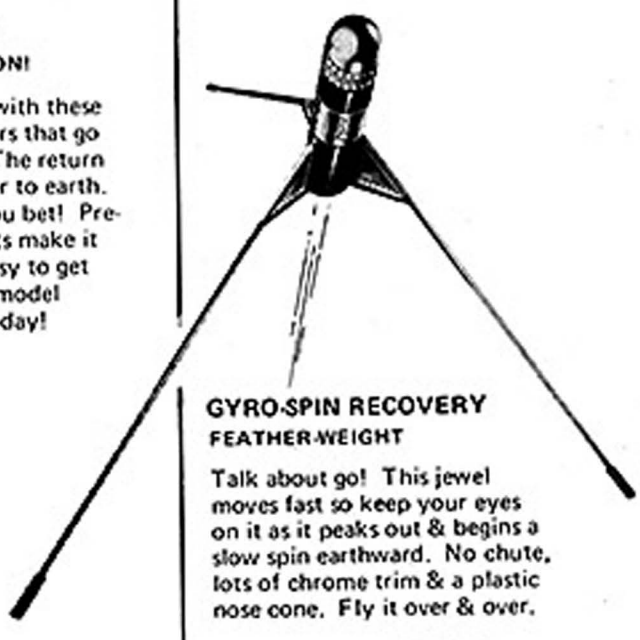
½A4-2M A4-4M
½A4-3M

PROD. NO. 5301 (Formerly KM-1)

Two-Bitz

SKILL LEVEL-2 $1.00

Shipping Wt. 6 oz. Engines not included



GYRO-SPIN RECOVERY
FEATHER-WEIGHT

Talk about go! This jewel moves fast so keep your eyes on it as it peaks out & begins a slow spin earthward. No chute, lots of chrome trim & a plastic nose cone. Fly it over & over.

SPECIFICATIONS		RECOMMENDED MOTORS
Length	8.0"	½A4-4M A4-6M
Body Diam.	0.54"	½A4-5M
Net Weight	0.2 oz.	

PROD. NO. 5302 (formerly KM-2)

Satellite 62SL

SKILL LEVEL-1 $1.25

Shipping Wt. 6 oz. Engines not included

CONTEST BOOST GLIDER!
EXTREME TIME DURATION

Put one or two – (both are included) gliders onto the thrust pod. This is a true CONTEST KIT that can put your glider above the competition. Pod recovers by streamer. All balsa parts pre-cut. Includes large decal sheet and balsa cone. MINI-DACTYL – the choice of champions!

SPECIFICATIONS

Length	15.0"	Wing Span	4.5"
Body Diam.	0.54"	Glider Wt.	0.15 oz.

RECOMMENDED MOTORS

DOUBLE: ½A4-3M A4-2M
SINGLE: ½A4-2M ½A4-3M A4-4M

PROD. NO. 5306
(Formerly KM-6)

Mini-Dactyl

SKILL LEVEL-4 $3.50

Shipping Wt. 10 oz. Engines not included

TOPKICK!
FLIGHTS TO 600' ON "A" POWER!

Look up fast when this one moves! And move it does with a REAR-EJECTED streamer. Now that's different! And it lands soft too! Plastic nose cone, pre-cut balsa fins, special "Trooper" decals and an alternate "long" version makes STAR TROOPER a contest winner!

SPECIFICATIONS

Length	5.6"
Body Diam.	0.54"
Net Weight	0.3 oz.

RECOMMENDED MOTORS

½A4-4M A4-6M
½A4-5M

PROD. NO. 5303
(Formerly KM-3)

Star Trooper

SKILL LEVEL-2 $1.50

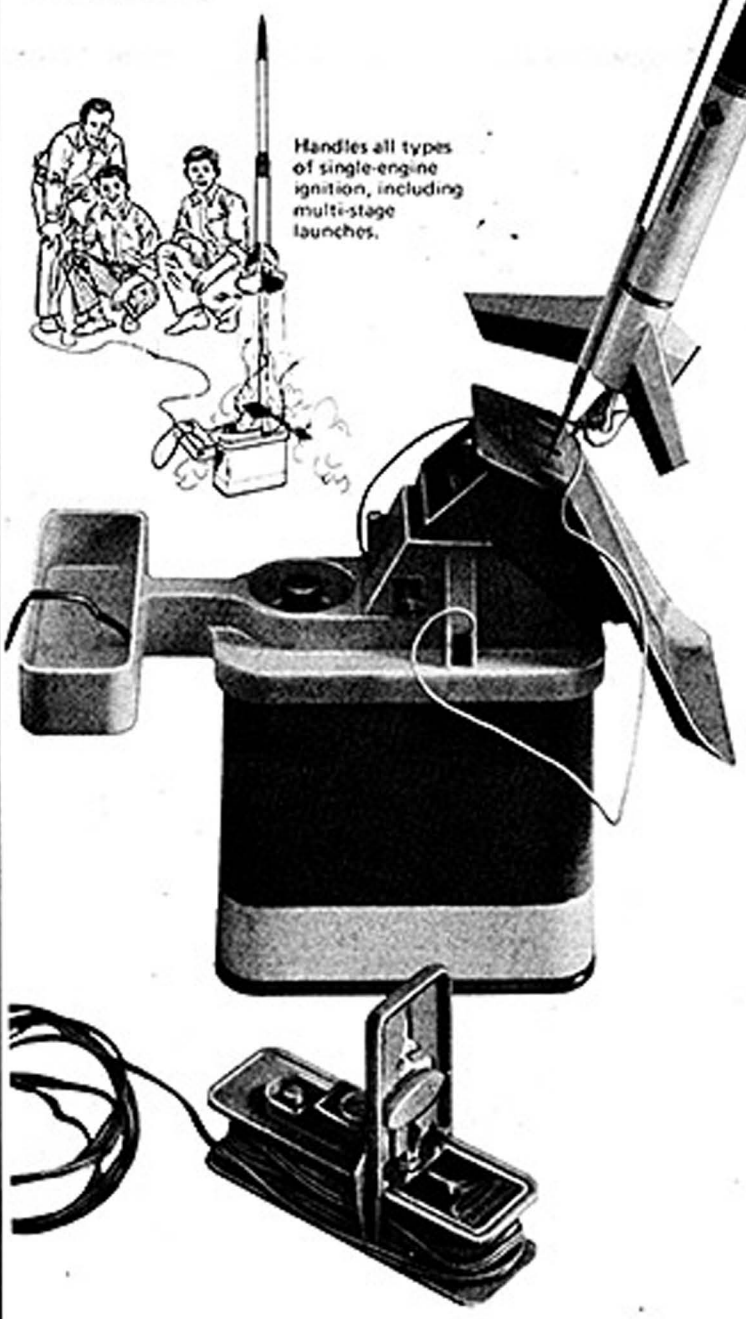
Shipping Wt. 6 oz. Engines not included

Launch systems.

Powr-Pad

WORLD'S MOST PRACTICAL MODEL ROCKET LAUNCH SYSTEM!

For all mini and standard rockets. POWR-PAD is the most compact & portable launcher – ever! Assemble & mount on top of any standard 6 volt lantern battery (not included) and you're ready to fire! You get everything, including TILTER for wind drift correction, large STEEL BLAST DEFLECTOR and a neat CARRYING HANDLE that transports the LAUNCH CONTROLLER. This controller is safety-engineered with 15' of wire, a safety-recessed firing button, check light & large "unloseable" safety key. For reliable launches everytime its POWR-PAD!



POWR PAD ™

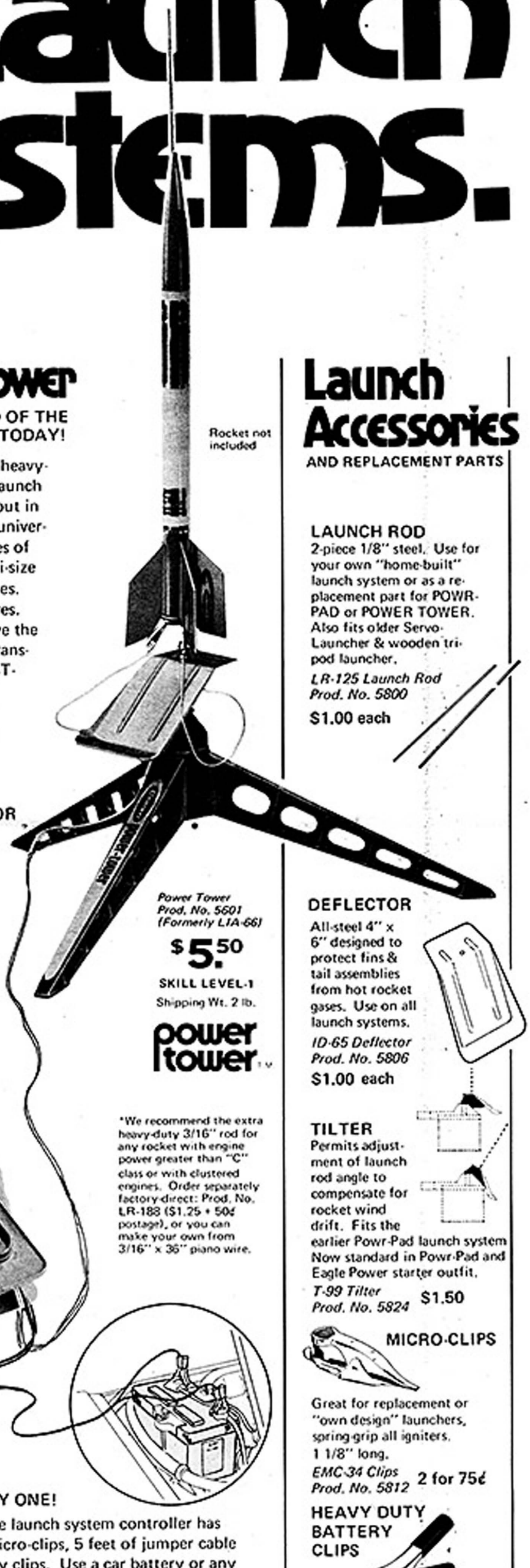
PROD. NO. 5609 (Formerly LIA-99) **$9.95**

SKILL LEVEL-1 Shipping Wt. 1lb. 8oz.

Power Tower

THE LAUNCH PAD OF THE FUTURE IS HERE TODAY!

This highly detailed heavy-duty plastic tripod launch stand is a real standout in the field! And, it's universal design fits all sizes of model rockets; mini-size thru clustered engines. Look at these features. COMPACT – remove the legs for storage or transport; TILT–ADJUSTMENT for flight angle direction & drift compensation; TWO-PIECE 1/8" DIAMETER LAUNCH ROD*; BLAST DEFLECTOR – made of steel to protect fins from hot gases; METALLIC "SPEC-PLATES" for useful launch site data. POWER TOWER is where the action starts!



Power Tower
Prod. No. 5601
(Formerly LIA-66)

$5.50

SKILL LEVEL-1

Shipping Wt. 2 lb.

power tower ™

*We recommend the extra heavy-duty 3/16" rod for any rocket with engine power greater than "C" class or with clustered engines. Order separately factory-direct: Prod. No. LR-188 ($1.25 + 50¢ postage), or you can make your own from 3/16" x 36" piano wire.

Powr-Control

THE HEAVY-DUTY ONE!

This general purpose launch system controller has 15' of firing line, micro-clips, 5 feet of jumper cable & extra-large battery clips. Use a car battery or any 6 or 12 volt heavy-duty battery. Launcher has a recessed firing button – continuity light & safety clip. Fly big cluster systems and super-scale with the versatile POWR-CONTROL. A perfect mate for the Power Tower!

PROD. NO. 5623 (Formerly EFC-3) SKILL LEVEL-2 Shipping Wt. 12oz.

POWR-CONTROL ™ **$7.00**

Launch Accessories

AND REPLACEMENT PARTS

LAUNCH ROD

2-piece 1/8" steel. Use for your own "home-built" launch system or as a replacement part for POWR-PAD or POWER TOWER. Also fits older Servo-Launcher & wooden tripod launcher.

LR-125 Launch Rod
Prod. No. 5800

$1.00 each

DEFLECTOR

All-steel 4" x 6" designed to protect fins & tail assemblies from hot rocket gases. Use on all launch systems.

ID-65 Deflector
Prod. No. 5806

$1.00 each

TILTER

Permits adjustment of launch rod angle to compensate for rocket wind drift. Fits the earlier Powr-Pad launch system Now standard in Powr-Pad and Eagle Power starter outfit.

T-99 Tilter
Prod. No. 5824 **$1.50**

MICRO-CLIPS

Great for replacement or "own design" launchers, spring-grip all igniters. 1 1/8" long.

EMC-34 Clips
Prod. No. 5812 **2 for 75¢**

HEAVY DUTY BATTERY CLIPS

These copper clips will connect to a car battery. Jaws open to 1-1/8". Colored handles to identify polarity.

EMC-46 Clips
Prod. No. 5818 **2 for $2.00**

Centuri Engines.

Flying Model Rockets.

Safe and reliable.

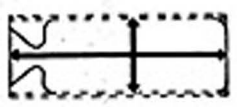
Our safe & reliable solid propellant engine is at the heart of every Centuri Flying Model Rocket. These little power packages are safely ignited by remote electrical control. These "one-shots" cannot be re-loaded or re-used. We manufacture engines to precise tolerances on special automatic equipment. It is not practical or safe for individuals to attempt to make their own engines. Look for the National Association of Rocketry Emblem on Centuri rocket engines - it means they are regularly tested by NAR to meet exacting performance & safety standards.

What makes a rocket fly.

Centuri's rocket engines power the rocket to peak altitudes (apogee) and after a delay time provide ejection thrust to push-out the rocket's recovery system.

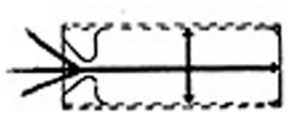
Here's why a rocket engine moves. It's called the action-reaction principle.

Engine at rest (no ignition). Equal pressure on all-sides – no movement.



AT REST

Engine Burning (Ignition). Burning gases escape only through nozzle. Pressure imbalance causes engine to move away from the open ended nozzle. The gases speed up due to nozzle restriction. Rocket engines do not need to "Push against the air" . . . or real rockets couldn't fly in outer space!



MOVEMENT

Basic types.

THE END BURNER

Most engines are end burners, for flying regular rockets.

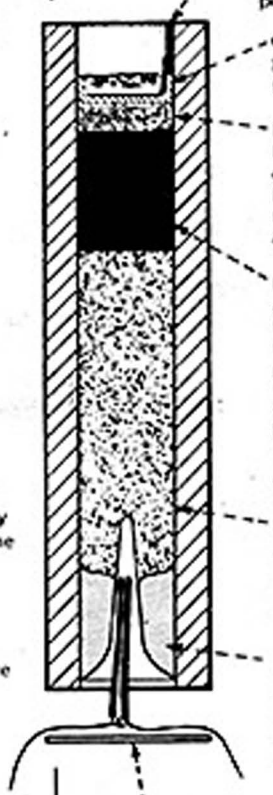
NOT PORTED

The "PORT BURNER" consumes propellant faster because the propellant "core" has a hole in it. This gives higher thrust and acceleration. B-14's and C5's are port burners ideal for lifting payloads or "heavy" rockets.

PORTED

How a model engine works.

Centuri rocket engines operate like many large atmospheric solid propellant rockets. The basic engine layout is shown below.

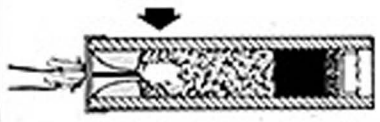


- **ENGINE CASING** Strong, lightweight rolled paper. Houses all components safely.
- **CLAY END CAP** Keeps ejection charge from falling out.
- **EJECTION CHARGE*** Ignited by "Burn-Thru" of delay. Loose granular charge "expels" the parachute, nosecone & recovery system.
- **DELAY CHARGE** A slow-burning material; the delay charge sets the time between thrust phase of flight till ejection of the recovery system. This charge burns during the "coasting" phase of flight.
- **PROPELLANT** A controlled mixture of solid propellant pressed into the casing under special conditions.
- **NOZZLE** Made of a special clay, its shape produces a maximum amount of propellant thrust.
- **"SURE-SHOT" IGNITER** Starts propellant burning when heated by electrical launch system.

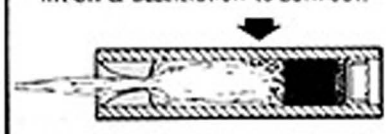
*Booster engines do not contain delay or ejection charges.

FROM IGNITION TO EJECTION IN 4 STEPS

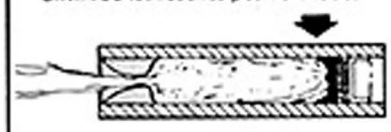
Battery-operated launch system heats igniter in engine nozzle – propellant starts burning almost instantly.



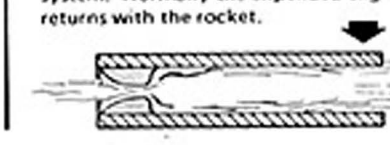
Propellant burns rapidly to maximum thrust level. Reaction principle causes lift-off & acceleration to burn-out.



Rocket coasts upward after propellant expended. Delay charge burns slowly until rocket reaches peak altitude.



At end of delay, the ejection charge is ignited and hot gases activate the recovery system. Normally the expended engine returns with the rocket.



How to select engines.

Always use the engines recommended for successful flights. See next column for tips on selecting engines for "own"-design rockets.

ALL CENTURI ENGINES ARE CODED BY COLOR AND LETTER NUMBERS

COLOR – always refers to delay time.
GREEN – A delay best suited to a single stage rocket.
PURPLE – A longer delay usually for multi-stage rockets or very high flying lightweight single stagers.
RED – Always a "BOOSTER" engine for staged rockets with zero (0) delay. NEVER USE A BOOSTER IN A SINGLE STAGE ROCKET! When the propellant burns out, the ejection charge immediately ignites the next stage. This "blows-off" the expended stage which tumbles safely to earth.

LETTER–NUMBERS – coded to show thrust & delay times.

A LETTER – This is the TOTAL THRUST code. Each higher letter class has double the power of the previous letter. (½A has up to 1.25 newton-seconds of total impluse; A has 2.50; B has 5.00 and C has 10.00).

8 FIRST NUMBER–This is the AVERAGE THRUST coded to indicate how the thrust is delivered. (8-4 means long duration-low thrust and 8-6 means short duration-high thrust). The higher the number (Newton-Seconds) - the higher the average thrust. The reason for this is that various rockets require different kinds of thrust levels & duration due to weight, frontal area, etc. We've already done the math to recommend engines for best all-around performance & that all-important safe return to mother-earth!

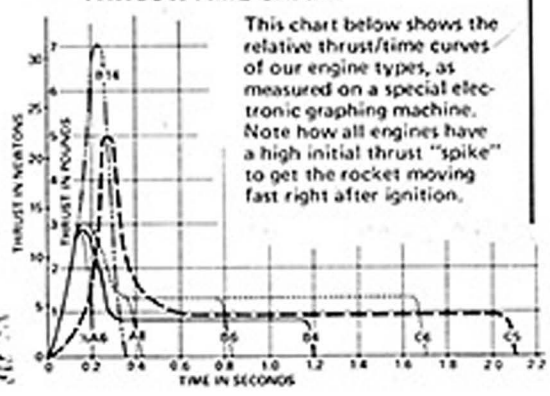
3 SECOND NUMBER –This is the delay code in seconds . . . The actual delay between burn-out & ejection. It's important to use the correct delay time as you want the chute to eject at the peak of flight, not on the way up or down!

NOTE: Newtons (or pounds) are a measure of force in the Metric System.

CODED TOTAL IMPULSE CHART	Engine Type	Total Impulse in Newton-Seconds	Total Impulse in Pound-Seconds
	¼A	0.626 to 1.25	0.15 to 0.28
	A	1.26 to 2.50	0.29 to 0.56
	B	2.51 to 5.00	0.57 to 1.12
	C	5.01 to 10.00	1.13 to 2.24

THRUST/TIME CHART

This chart below shows the relative thrust/time curves of our engine types, as measured on a special electronic graphing machine. Note how all engines have a high initial thrust "spike" to get the rocket moving fast right after ignition.

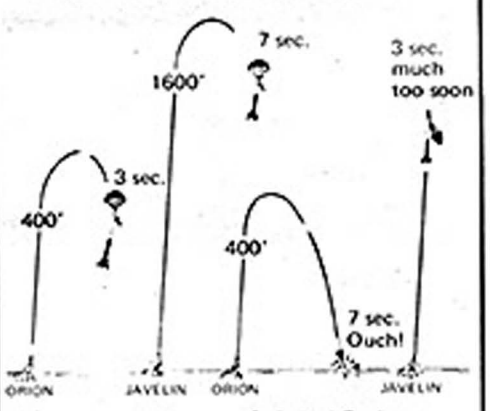


Rocket performance.

Various landing sites & conditions may limit how high you want your rocket to go. That's the reason we recommend different engines for each kit. Make your first test flight with the less powerful engine & then move up!

ALWAYS USE THE RECOMMENDED ENGINE!

Big & heavy rockets or boost gliders usually need high thrust to lift them off and they do not coast as high as smaller rockets. Look at the comparison below between the slim "Javelin" & the bulkier "Orion". The recommended C6-7 engine flys the Javelin to over 1,600 feet! The Orion goes only to 400 feet with the C6-3 engine. What happens if we switch? The heavy Orion has too much delay - goes only to 400 feet & returns to earth with no chute ejection - CRASH! The lighter Javelin is coasting merrily on its way when "POP" the chute is ejected 4 seconds too soon - perhaps ripping it away for a fast-fast return to earth – SMASH!



Recommended Engines — Switched Engines

CHOOSING ENGINES FOR "OWN DESIGNS"

What engines should you use in rockets you design? Take the guesswork out of it by flipping thru this catalog until you find a Centuri kit of roughly similar size, diameter, weight, etc. Then just use the engines recommended! Generally you should use short delays for large rockets, long delays for small rockets, and medium delays for average sized "birds".

CHOOSE YOUR LAUNCH AREA CAREFULLY!

Launching in too small an area may cause you to lose your rocket. You'll be surprised at how far they drift, even in a slight breeze. Here's some valuable tips sometimes learned the "hard-way":

1. Choose a site large enough for you to recover by walking to the rocket without crossing roads, walls, rivers or fences. Don't launch in your back yard . . . Unless you live on a farm!
2. Avoid launching in winds over 15 mph. Look at a flag, if it's standing out so you can see almost all of it - there's too much wind!
3. You can cut a 2" spill-hole in your canopy to keep the recovery more vertical.
4. Stay away from forested areas! Take a look down-wind, that's where it will end up So keep tree-highlines, houses, streets & buildings away from your rocket by finding that ideal area. Be sure to check with local authorities if there's a possibility of trespassing Keep it careful, courteous & you'll fly smart with Centuri rockets–Again & Again!

SUPER C T.M.

MODEL ROCKET ENGINES
"BUILT FOR THE BIG ONES!"

C5-3S PROD. NO. 5592

Use the single stage "Super-C" engine (C5-3S) in these large Centuri kits.

- Eagle Transporter (5316)
- E.S.S. Raven (5312)
- Mercury Redstone (5131)
- Saturn 1-B (5140)
- Saturn V (5142)
- Sky Lab (5034)
- S.S.T. Shuttle (5077)
- S.S.V. Scorpion
- Orion (5068)
- U.F.O. Invader (5308)
- U.S.S. America (5310)
- Little Joe II (5138)

C5-0S PROD. NO. 5590

Use the booster "Super-C" engine (C5-0S) in these staged Centuri kits.

- Arrow 300 (5037)
- Black Widow (5036)
- Excalibur 2 (5175)
- Long Tom (5064)
- Stiletto (5031)

The new "SUPER-C" engine is designed to boost big rockets and multi-stagers higher and straighter! In the same size casing as a standard "C", it fits regular engine mounts; requires no new equipment. "SUPER-C" yields greater performance and reliability for recommended rockets. It does not replace the standard "C" engine but adds a new dimension to rocket flying. Packed 3 to a box; includes SURE-SHOT igniters. See catalog specifications for more information.

Centuri

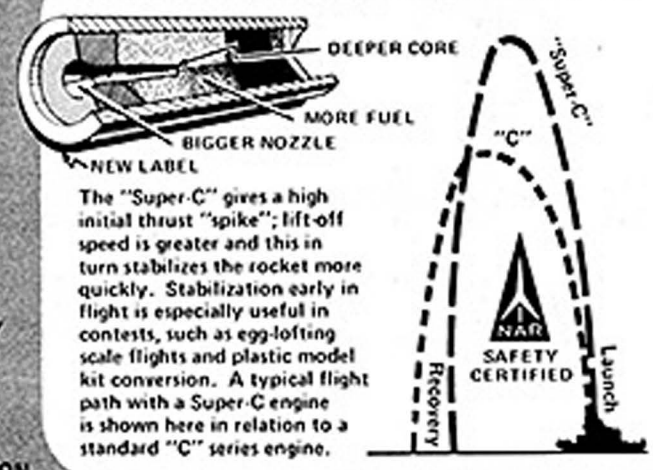
25% GREATER ALTITUDE

67% HIGHER THRUST

33% MORE LIFTING ABILITY

24% LONGER THRUST DURATION

HERES WHAT MAKES THE DIFFERENCE:



The "Super-C" gives a high initial thrust "spike"; lift-off speed is greater and this in turn stabilizes the rocket more quickly. Stabilization early in flight is especially useful in contests, such as egg-lofting scale flights and plastic model kit conversion. A typical flight path with a Super-C engine is shown here in relation to a standard "C" series engine.

Specifications.

Rocket Engines listed on these charts are designed for use with Centuri kits and for your own rocket designs. Our standard engine line comes in 3-pack boxes; the Mini-Motors are sold in 4-packs. Both types contain Centuri's SURE-SHOT Igniters complete with illustrated instructions for rocket prepping and launching.

ACTUAL SIZE COMPARISONS

Standard engines.

Prod. Number	Type	PRICES 3 FOR	Total Impulse N-sec.	Average Thrust Newtons	Thrust Duration seconds	Delay Time ± 15% seconds	Engine Weight ounces	Recom. Max. lift-off wt. (with engines) ounces
Single-stage engines (Green Label)								
5550	½A6-2	$1.65	1.25	6.23	.20	2	.53	2.5
5560	A8-3	$1.75	2.50	7.81	.32	3	.57	4.5
5564	B4-2	$1.85	5.00	4.15	1.20	2	.70	5.0
5566	B4-4	$1.85	5.00	4.15	1.20	4	.74	4.5
5572	B6-4	$1.85	5.00	6.00	.83	4	.78	5.5
5578	B14-5	$2.05	5.00	14.23	.35	5	.69	6.5
5584	C6-3	$2.05	10.00	5.86	1.70	3	.88	6.0
5586	C6-5	$2.05	10.00	5.86	1.70	5	.91	5.0
Single-stage engines for lightweight rockets (Purple Label)								
5552	½A6-4	$1.65	1.25	6.23	.20	4	.54	1.5
5562	A8-5	$1.75	2.50	7.81	.32	5	.62	2.5
5568	B4-6	$1.85	5.00	4.15	1.20	6	.78	2.5
5574	B6-6	$1.85	5.00	6.00	.83	6	.71	3.5
5580	B14-7	$2.05	5.00	14.23	.35	7	.73	4.0
5588	C6-7	$2.05	10.00	5.86	1.70	7	.95	4.0
Booster engines (Red Label)								
5558	A8-0	$1.75	2.50	7.81	.32	0	.51	4.5
5570	B6-0	$1.85	5.00	6.00	.83	0	.58	5.5
5576	B14-0	$2.05	5.00	14.23	.35	0	.61	6.5
5582	C6-0	$2.05	10.00	5.86	1.70	0	.80	6.0

Super C™ engines.

A detailed technical information report on the "Super-C" is available free. Send a stamped, self-addressed envelope; ask for TIR-25.

Single-stage engines (Green Label)								
5592	C5-3S	$2.15	10.00	4.76	2.10	3	.90	8.0
Booster engines (Red Label)								
5590	C5-0S	$2.15	10.00	4.76	2.10	0	.82	8.0

Mini-motors.™

Single-stage Mini-Motors (Green Label)								
5500	¼A4-2M	$1.75	.63	3.6	.16	2	.22	1.5
5504	¼A4-3M	$1.85	1.25	3.6	.31	3	.25	2.0
5508	A4-2M	$1.95	2.50	3.6	.63	2	.29	3.0
5510	A4-4M	$1.95	2.50	3.6	.63	4	.30	2.5
Single-stage Mini-Motors for lightweight Rockets (Purple Label)								
5502	¼A4-4M	$1.75	.63	3.6	.16	4	.23	1.0
5506	¼A4-5M	$1.85	1.25	3.6	.31	5	.26	1.5
5512	A4-6M	$1.95	2.50	3.6	.63	6	.31	2.0

SURE-SHOT® "DOT" IGNITERS

This igniter system is probably the world's most efficient – complete & accurate ignition – everytime! Perfect for standard engines, mini-motors, super C's & clusters! Keep plenty on hand. Comes in kit form with complete instructions. Ready in seconds!

® Reg. T.M. Centuri
U.S. Pat. No. 3,422,763

PROD. NO. 5836 (Formerly IG-12) Kit of 12 **$ 1.25**

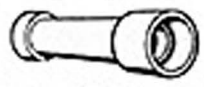
Estimated maximum altitude.

The chart below tells how high an expertly built standard-shape rocket can go depending on the tube diameter & the engine combination. Altitudes can vary according to rocket drag, length, weight, shape and other factors. Use this chart as a guide to tell you how large an area you should launch in. Blank spaces in the chart indicate that the specific engine/rocket diameter should generally not be used. Of course there are exceptions to every "rule". This chart is only a general guide.

Type	Largest tube diameter of model					
	#7	#8	#10	#13	#16	#20
½A6-2	250	200	100			
A8-3		375	275	150		
B4-2				300	275	200
B4-4	950	750	550	400	375	
B6-4	850	650	450	325	200	
B14-5	700	500	400	200	100	
C6-3				600	500	450
C6-5		1100	850	700	575	450
½A6-4	300	250	125			
A8-5	550	425	350	250		
B4-6	1100	900	750	500		
B6-6	1000	800	650	450		
B14-7	900	700	550			
C6-7	1800	1500	1200	800		
A8-0						
B6-0	Staged model flights may go as high as a half-mile, depending on engine configuration.					
B14-0						
C6-0						
C5-3S				750	625	560
C5-0S	Staged Flights: See Above					

Type	Largest tube diameter of model.					
	#5	#7	#8	#10	#13	#16
¼A4-2M	225	175	125			
¼A4-3M		300	200	150	100	
A4-2M			350	250	150	
A4-4M	750	550	450	375	300	125
¼A4-4M	300	225	175			
¼A4-5M	500	400	325	225		
A4-6M	900	700	600	400		

MINI-MOTOR ADAPTER

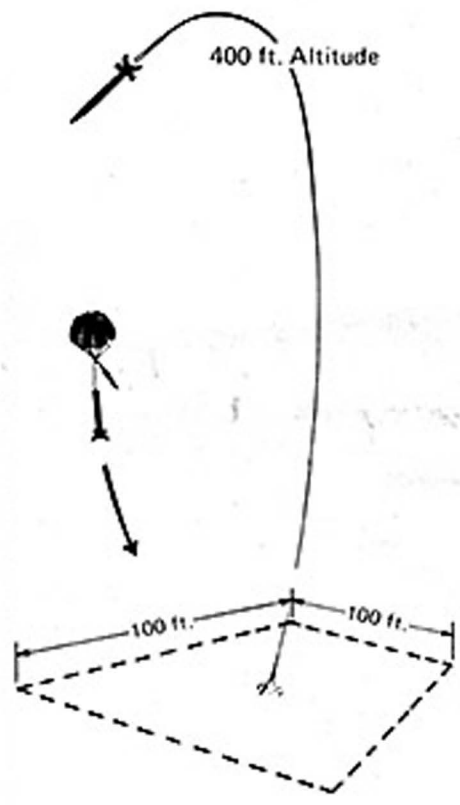


Now you can fly your Standard-Engine rockets with Mini-Motors, too! Instructions include recommended Mini-Motors for dozens of Centuri rockets.

PROD. NO. 6050 (Formerly EM-57) 70¢

Choosing a launch site.

The best launch site is one with side dimensions of at least one-quarter the estimated peak altitude of your rocket. Pace off the area to make sure! And don't forget to allow for wind-drift by locating up-wind a ways.



Follow these common sense rules and those found in "Rocket Performance" for many exciting flights!

1. Launch in areas where you're sure there is no hazard to persons or property. This includes crops or grass that could burn if exposed to hot exhaust gases.

2. Do not fly near power or telephone lines, motor highways, hi-rise buildings or other obstacles such as radio towers or air fields. Watch out for "Rocket Eating" trees!

3. Keep attention during your launches to people, aircraft, cars, or equipment moving into the launch/recovery area.

4. Make a short count-down prior to each launch, to alert spectators.

5. Do not fire your rocket at an angle of more than 30 degrees from the vertical.

6. Keep a clear circle at least 20 feet in diameter around your launch pad.

7. It is best to avoid standing directly up or down wind during launch.

8. Do not hook up or disconnect the ignition leads until you have removed the safety key. Always keep the key with you so that launching is totally under YOUR control!

Design your own.

Centuri

Flying Model Rockets.

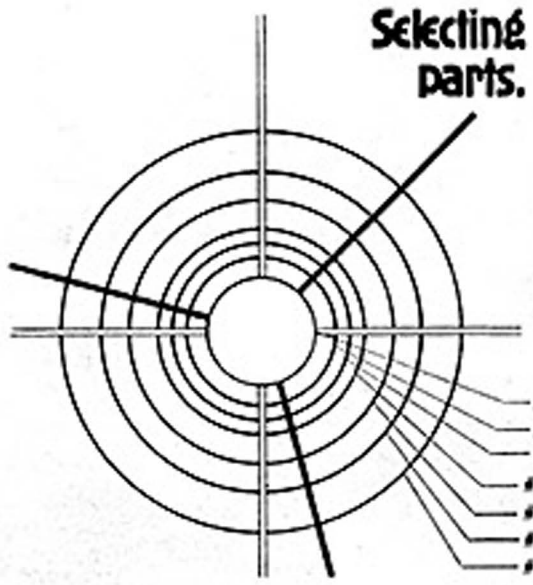
Fun and easy.

After launching & building several Centuri rocket kits, you'll no doubt have some ideas of your own on what YOUR "Bird" should look like. Check our Centuri's DESIGN MANUAL, it's loaded with construction techniques, design tips & theories, rocket plans and flight data!

Building.

The best advice is "Plan-Ahead"! Get everything you need by sketching your rocket "idea" in advance & making a list of parts. Keep the fin area toward the tail—too much forward fin area creates instability. The Design Manual explains this and many more technical points.

Selecting parts.



All mating parts have the same Series Number for simplicity. That is, a No. 8 series body tube will fit a No. 8 series nose cone, No. 8 engine mount, or No. 8 connector. The pattern to the left is to scale and can be used to order parts by series number. It's also a fin-guide for neat alignment.

	DIAMETERS Inside	Outside
#5 SERIES	.515"	.543"
#7 SERIES	.715"	.759"
#8 SERIES	.865"	.908"
#10 SERIES	1.000"	1.040"
#13 SERIES	1.300"	1.340"
#16 SERIES	1.600"	1.640"
#20 SERIES	2.000"	2.040"

Custom parts assortments.

Each of these special Parts Assortments includes a complete set of all parts needed to build a fleet of rockets. The Design Manual included (see description at right) teaches basic principles for building your own designs from these parts.

DESIGNER SPECIAL

You can build up to 8 big rockets with this fantastic assortment of parts. Great for groups, clubs, or the rocketeer who really wants to "move-up" at a bargain price. Check this list of parts. Over $25.00 worth of parts for only $15.00!

NOSE CONES: (Balsa & Plastic)
3 - No. 7
3 - No. 8 Assorted balsa
2 - No. 10 & Plastic

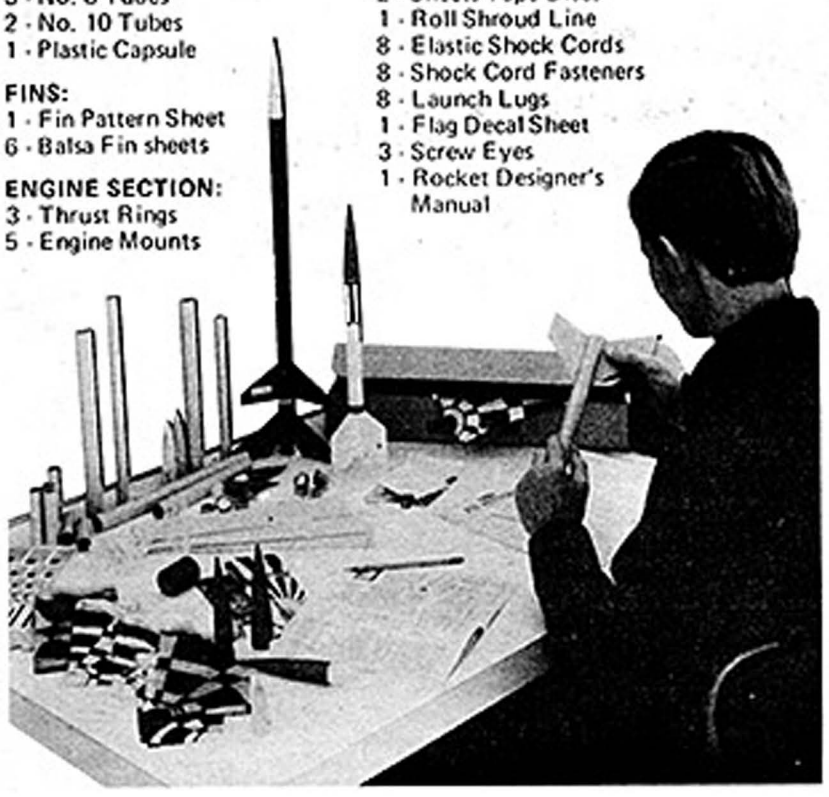
BODY TUBES:
3 - No. 7 Tubes
3 - No. 8 Tubes
2 - No. 10 Tubes
1 - Plastic Capsule

FINS:
1 - Fin Pattern Sheet
6 - Balsa Fin sheets

ENGINE SECTION:
3 - Thrust Rings
5 - Engine Mounts

PARACHUTES:
3 - 12" Chutes
3 - 16" Chutes
2 - 20" Chutes

MISC:
1 - No. 8 Connector
2 - Sheets Tape Discs
1 - Roll Shroud Line
8 - Elastic Shock Cords
8 - Shock Cord Fasteners
8 - Launch Lugs
1 - Flag Decal Sheet
3 - Screw Eyes
1 - Rocket Designer's Manual



PROD. NO. 5458 (Formerly SPA-8)

Designer Special $15.00

SKILL LEVEL-3

BEGINNER SPECIAL

Here's the ideal kit for the new designer. With it you can build 6 medium size rockets. And it's made easy in the Designer's Manual. For a "perfect start" in model rocket design, you can't miss with this value-packed assortment. A BIG-BIG $15.00 value for only $10.00.

6 - Body Tubes (No. 7)
6 - Nose Cones (Balsa & Plastic)
4 - Fin Material Sheets
1 - Fin Pattern Sheet
4 - 12" Chutes
2 - 16" Chutes
3 - Screw Eyes
1 - Sheet Tape Discs
1 - Roll Shroud Line
6 - Elastic Shock Cords
6 - Thrust Rings
6 - Launch Lugs
6 - Shock Cord Fasteners
1 - Rocket Designer's Manual

PROD. NO. 5454 (Formerly SPA-4)

Beginner Special $10.00

SKILL LEVEL-2

Rocket Publications

MANUALS, GUIDEBOOKS, TECHNICAL INFORMATION REPORTS

POWER SYSTEM HANDBOOK

Specially prepared Handbook/Operating Manual is the heart of the "Power System" series. Includes principles of rocket power, rockets in history and the movies, info on launchers, engines, construction and advanced projects. Nearly 200 illustrations.

24 Pages, Prod. No. 81527 $1.00

Design Manual

By Grant Boyd

Totally revised edition; for building "own-design" rockets. Loaded with tips on construction and design, and detailed info on high-altitude birds, payloaders, boost-gliders . . . and more! Includes over 200 illustrations.

32 Pages, Prod. No. 81899 $1.00

Rocketeer's Guidebook

By Col. Larson & W. Matson

The good basic reference for all rocketeers. Info from "A to Z". Also includes chapters on altitude measurement, competitive events and launch ranges. Richly illustrated with charts & photos.

36 Pages, Prod. No. 81900 $1.25

Educator's Guide

By Dr. Wayne Matson

A teacher's guide for rocketry in schools and classrooms. Includes tests for measuring knowledge. Developed for Centuri by one of the country's leading aerospace educators.

64 Pages, Prod. No. 81916 $2.00

TIR-30 STABILITY OF A MODEL ROCKET IN FLIGHT

By Jim Barrowman

Complete explanation of aerodynamic stability in flight. Good theory background prepares the reader for properly engineered rocket design.

16 Pages, Prod. No. 81903 $1.00

TIR-33 CALCULATING THE CENTER OF PRESSURE

By Jim Barrowman

Easy-to-use graphs for balancing rockets for efficiency. A practical application of the concepts learned in TIR-30. Simplified equations and sample problems.

36 Pages, Prod. No. 81904 $1.00

TIR-100 MODEL ROCKET ALTITUDE PERFORMANCE

By Douglas Malewicki

Easy-to-use graphs for predicting model rocket altitudes, for any engine power of ½A thru C. Includes charts for selecting best delay time.

40 Pages, Prod. No. 81906 $1.00

Centuri Parts.

Flying Model Rockets.

The parts shown here are the most popular. Additional parts (too specialized for most hobby stores) are available factory-direct. All parts sold in kit-form, such as Engine Mounts, include complete assembly instructions.

Air frame.

This is the "tubing" section of your rocket. Use the fin guide shown in the "Design Your Own" section for correct sizing. Remember the size-codes fit each other – A #5 body tube will fit a #5 connector, etc.

BODY TUBES

Heat-welded, strong, smooth, lightweight.

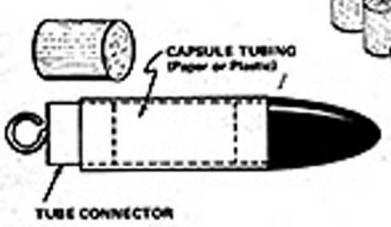
Prod. No.	Desc.	Size	Length	Price
6002	ST-518	#5	18"	.50
6004	ST-718	#7	18"	.60
6006	ST-818	#8	18"	.75
6008	ST-1018	#10	18"	.90
6010	ST-1318	#13	18"	1.00
6012	ST-1618	#16	18"	1.25
6014	ST-2018	#20	18"	1.75

CLEAR PLASTIC TUBES

Prod. No.	Desc.	Size	Length	Price
6110	CPT-72	#7	2.75"	.30
6112	CPT-83	#8	3.5"	.35
6114	CPT-103	#10	3.5"	.40
6116	CPT-134	#13	4.0"	.50

BALSA TUBE CONNECTORS

Solid balsa plugs for connecting payload sections to body tubes when a solid wall is needed.



Prod. No.	Desc.	Size	Length	Price
6270	BTC-7	#7	1"	.50
6272	BTC-8	#8	1"	.60
6274	BTC-10	#10	1¼"	.70
6276	BTC-13	#13	1⅜"	.80
6278	BTC-16	#16	1¾"	.90

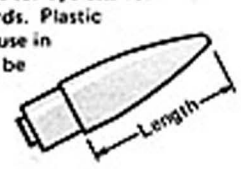
HOLLOW TUBE COUPLERS

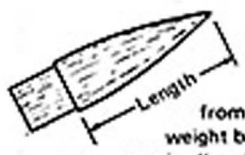
Great for multi-staging connections & cutting guides for body tubing. Joins equal diameter tubes. Extremely strong.

Prod. No.	Desc.	Size	Length	Price
6420	HTC-5	#5	¾"	.30
6422	HTC-7A	#7	1"	.30
6426	*HTC-7CDH	#7	Staging Coupler	.40
6428	HTC-8	#8	1"	.40
6430	HTC-10	#10	1"	.40
6434	HTC-13	#13	1.5"	.50
6438	HTC-16	#16	1.75"	.60
6440	HTC-20	#20	1.75"	.70

Nose cones.

Plastic nose cones are precision-molded in a wide variety of shapes and sizes. Most have bases with lugs (or eyelets) for attaching shock cords. Plastic cones are ready-to-use in bright colors. May be painted with enamel.

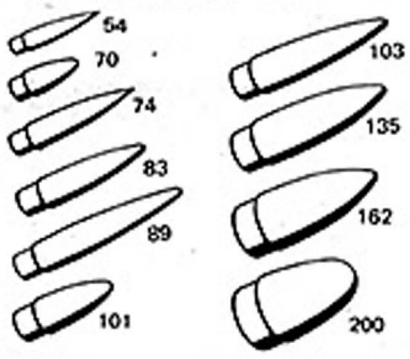




Balsa nose cones are machined from high grade lightweight balsa lumber. They require "sand-n'-seal" finishing before painting, and a screw eye (not included) for shock cord attachment.

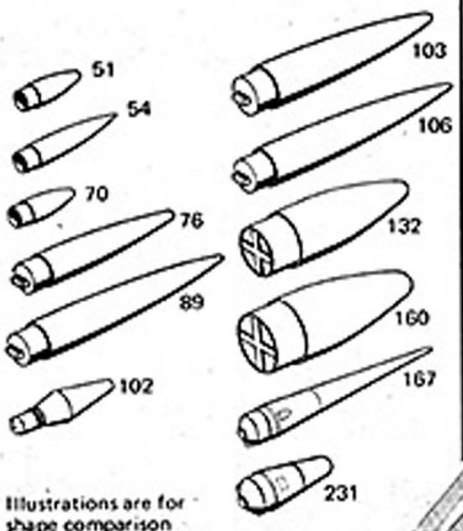
BALSA NOSE CONES

Prod. No.	Desc.	Size	Length	Price
6130	BC-54	#5	2.4"	.60
6134	BC-70	#7	1.6"	.60
6136	BC-74	#7	3.5"	.70
6140	BC-83	#8	3.2"	.90
6144	BC-89	#8	4.8"	1.50
6148	BC-101	#10	2.0"	.90
6150	BC-103	#10	3.9"	1.00
6156	BC-135	#13	3.9"	1.35
6160	BC-162	#16	3.4"	1.50
6164	BC-200	#20	2.5"	1.75



PLASTIC NOSE CONES

Prod. No.	Desc.	Size	Length	Price
6202	PNC-51	#5	1.0"	.40
6204	PNC-54	#5	2.2"	.50
6210	PNC-70	#7	1.5"	.40
6214	PNC-76	#7	3.0"	.50
6220	PNC-89	#8	4.6"	.90
6226	PNC-102	#10	4.3"	1.30
6227	PNC-103	#10	4.1"	.90
6228	PNC-106	#10	4.5"	.90
6232	PNC-132	#13	2.7"	.85
6236	PNC-160	#16	2.5"	1.00
6240	PNC-167	#16	9.3"	1.30
6244	PNC-231	#20	3.2"	1.30



Illustrations are for shape comparison only. They are NOT in scale to each other.

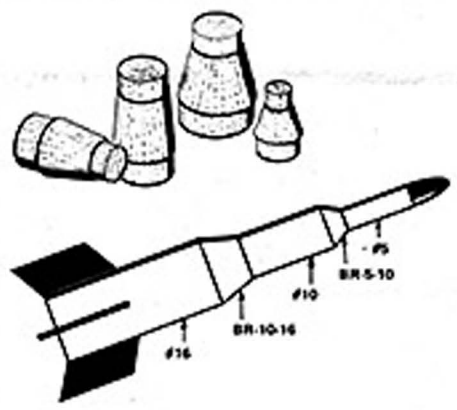
Reducers.

Reducers connect body tubes of different diameters. They can be solid (balsa) or hollow (plastic - paper). You would want a solid reducer just above your recovery system and a hollow reducer where ejection gases must pass through to activate the recovery system.

PLASTIC REDUCERS

Prod. No.	Desc.	Fits	Price
6386	PSR-78	7 to 8	.50
6388	PSR-813	8 to 13	.65
6390	PSR-1620	16 to 20	.85

BALSA REDUCERS



Prod. No.	Desc.	Fits	Price
6352	BR-58	5 to 8	.60
6354	BR-510	5 to 10	.60
6358	BR-710	7 to 10	.60
6360	BR-713	7 to 13	1.00
6362	BR-810	8 to 10	.60
6364	BR-816	8 to 16	1.20
6366	BR-1013	10 to 13	1.00
6368	BR-1016	10 to 16	1.10
6370	BR-1316	13 to 16	1.10

Rocket Rack.

MODEL ROCKET DISPLAY STAND

Another innovation from Centuri! The ROCKET-RACK (included in every SUPER KIT) is available separately for use with almost ANY model rocket. Simple skill-level 2 assembly of pre-cut and pre-colored white fibre parts.

Shipping Wt. 8oz.

Prod. No.	Desc.	Price
6500	Rocket Rack	$1.25

Miscellaneous.

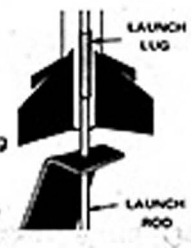
These mounts hold and center the rocket engine in the "Airframe" body tube. They can be adapted to #8, 10, 13, 16 & 20 body tube sizes. You get everything you need including centering rings, engine mount tube, thrust ring & sleeve tube.

ENGINE MOUNTS

Prod. No.	Desc.	Fits	Price
6052	EM-8	#8	.70
6060	EM-10A	#10	.80
6064	EM-13	#13	.90
6068	EM-16	#16	1.00
6072	EM-20	#20	1.25

LAUNCH LUGS

Slender tube glued to side of the rocket. The launch rod passes thru to guide the rocket during lift-off.

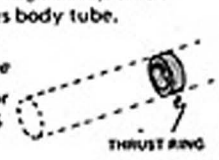


Prod. No.	Desc.	Price
5928	LL-3	6 for .50

THRUST RINGS

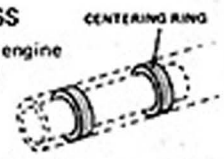
These featherweight fibre rings are 3/8" long. Used as forward engine stop when glued into any #7 series body tube.

Prod. No.	Desc.	Price
5966	TR-7	6 for .75



CENTERING RINGS

These rings center the engine tube (#7) in #8 & #10 body tubes.



Prod. No.	Desc.	Fits	Price
5970	CR-8	#8	6 for .75
5974	CR-10	#10	6 for .75

ENGINE LOCKS

Includes mylar holding ring & steel lock strip. Keeps engine firmly in place in flight & during ejection thrust.

Prod. No.	Desc.	Price
5980	EL-1	3 for .90

DECALS

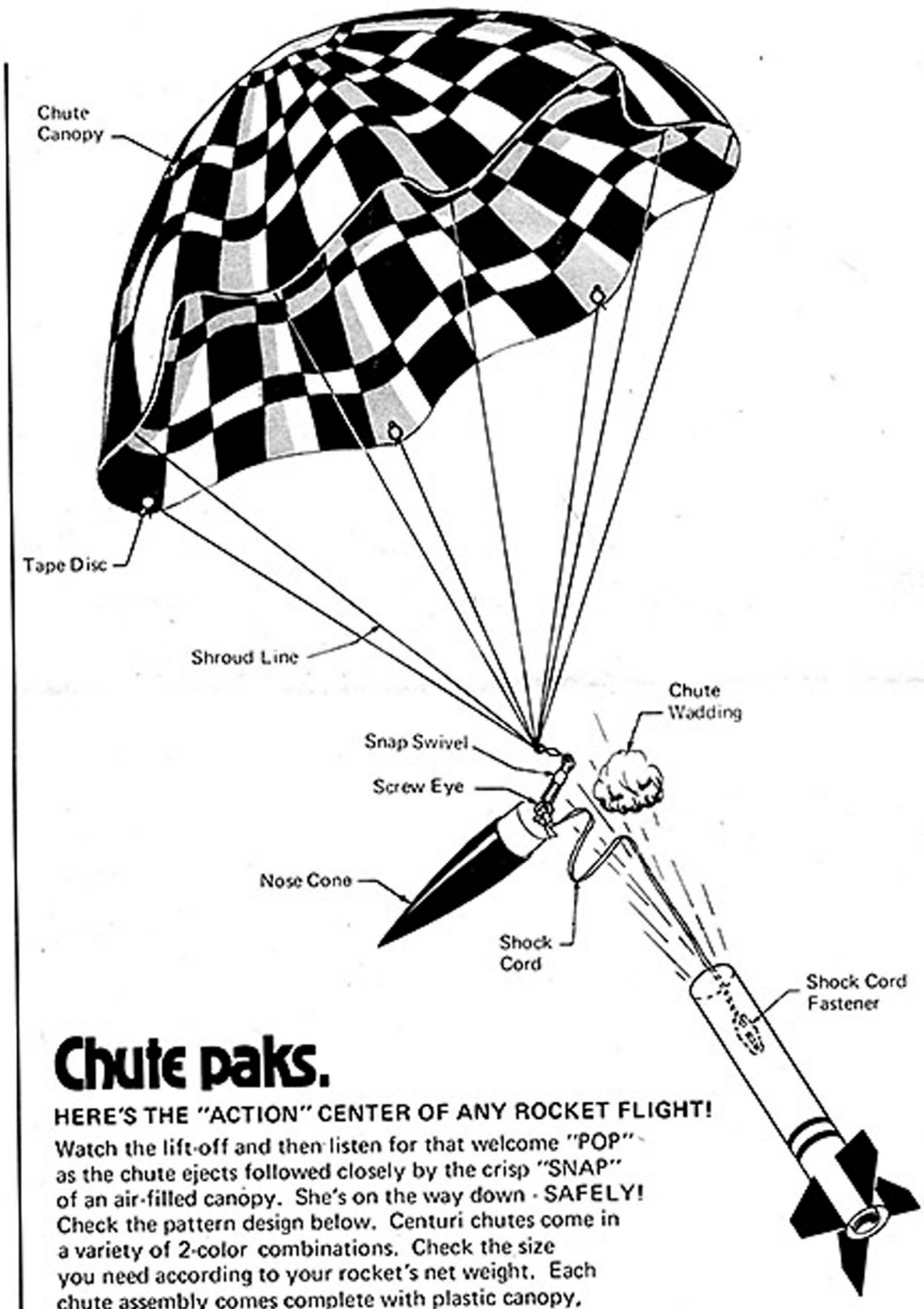
While nearly all Centuri rocket kits have their own decals, these below are ideal for taking your kit one step further. The sheets are large (approx. 4"x10") and made in two three and four rich colors.

Prod. No.	Desc.	Price
36603	M-314 Centuri Emblems	.75
36607	DC-3 Military Insignias	.90
36608	DC-4 Missile Markings	.90
36630	DC-35 U.S. Flags	.90

Recovery devices.

Centuri

Flying Model Rockets.



Chute paks.

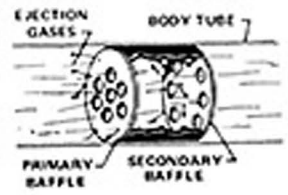
HERE'S THE "ACTION" CENTER OF ANY ROCKET FLIGHT!

Watch the lift-off and then listen for that welcome "POP" as the chute ejects followed closely by the crisp "SNAP" of an air-filled canopy. She's on the way down - SAFELY! Check the pattern design below. Centuri chutes come in a variety of 2-color combinations. Check the size you need according to your rocket's net weight. Each chute assembly comes complete with plastic canopy, heavy-duty shroud lines, super-stick tape discs and complete instructions.

DESC.	PROD. NO.	DIA.	MAX WT	EACH
CP-12	(5854)	12"	3 oz.	.75
CP-16	(5860)	16"	6 oz.	.90
CP-20	(5866)	20"	9 oz.	1.00
CP-24	(5872)	24"	12 oz.	1.25

Ejection baffles.

U.S. Pat. No. 3,719,145



For use in long large diameter "own designs". Centuri's baffle/ejection system is permanently installed to protect the chute from heat. A great idea! Reduces launch turn-around time too!

"Own-designs" require at least 4 inches of space between engine mount and baffle.

Desc.	Prod. No.		
EB-13	(6090)	Fits #13	.75
EB-16	(6094)	Fits #16	.80
EB-20	(6098)	Fits #20	1.00

Shock cord fasteners.

Made of special foil-woven nylon, Centuri's shock cord fastener attaches permanently to any body tube without glue! It's simple, just pull the backing off the fastener, slip the shock cord thru & press into place for a heat-resistant installation. Check before each launch for permanent bond!

SCF-1 Fasteners 6 for .75
Prod. No. 5908

Plastic drag streamers.

For soft-recovery of rockets weighing up to one oz. A bright day-glo orange, these streamers are over 1" wide & 36" long! They eject the same as a chute and are highly visible for those almost-out-of-sight flights! Includes tape discs plus instructions. Net weight is .09 oz.

RS-20 Streamers 3 for .75
Prod. No. 5914

Shock cord.

This super strong elastic cord connects recovery chute or streamer to the rocket body. Use SC-18 cord with birds powered by ½A thru "C" engines.

SC-18 Shock Cord 3 for .75
Prod. No. 5894

Tape discs.

Attach streamer or parachute shroud lines permanently with these super-stick discs! 36 discs per sheet.

TD-35 Discs .50
Prod. No. 5890 Per Sheet

Chute wadding.

TWO KINDS!

CREPE-TYPE:

Most flame-resistant. All purpose, easy to use: Just count number of sheets. Enough for 25 #7 rockets.

SPW-19 Crepe Wadding 1.25
Prod. No. 5846

COTTON TYPE

Flame-resistant and soft! Also recommended for Rocket diameters above 2 inches, enough for 20 flights in #7 rockets.

PW-19 Cotton Wadding 1.50
Prod. No. 5842

Parachute powder.

Keep that chute "POPPING" SMOOTHLY" with Centuri's special chute powder lubricant. Sprinkle it on during folding and look for a small dust cloud at apogee. It really works!

PDR-17 Chute Powder 1.50 2 oz. shaker can
Prod. No. 5880

NEW C.A.T.
Centuri Aerospace Team

- FLYING SAUCER CONTEST!
- "CONE-TEST" WINNERS!
- ROCKETEERS TO MEET!

Join us on the NEW Centuri Aerospace Team

10 GOOD REASONS FOR JOINING C.A.T.

The Centuri Aerospace Team is the growing world-wide special club for rocketeers who fly the Centuri way. Join the NEW expanded C.A.T. and you'll receive all this for only $1.50. ● A special kit of the 7 exciting materials explained below. ● Your own copy of the next new Centuri catalog. ● Bulletin of special programs (catalog and bulletins are automatically mailed when published). ● And best of all you get the chance to be right here in the Centuri catalog, as explained on this page.

YOUR $1.50 MEMBERSHIP KIT INCLUDES:

C.A.T. DATA FORM

Probably the most important part of your C.A.T. kit! You complete this simple form about your model rocketry activities, and return it to us. This is how you become eligible to have your photo in a future issue of this catalog under "Meet the C.A.T.".

IRON-ON SHIRT INSIGNIA

A large 6"x7" three-color Team Emblem for your T-shirt or jacket. Easily irons on and remains permanently. You'll be proud to identify with other Centuri Rocketeers.

MODEL ROCKET DESIGN MANUAL

Worth $1.00 by itself! Large 8½"x11" book, contains 32 illustrated pages. Explains design tips, rocket stability, recovery systems, multi-staging systems, construction techniques and plans, plus dozens of photos and over 100 diagrams.

AEROSPACE TEAM DECAL

Large impressive 3-color decal containing 16 Team insignias. Apply to car windows, rockets, field boxes, etc. Measures 3½"x9". Colors are red, white, and blue.

MEMBERSHIP CARD

Wallet size card indentifying you as a member of the "Team". Also has 14 point Model Rocket Safety Code imprinted on back of card.

WALL CERTIFICATE

A beautifully lithographed certificate with your name inscribed and ready for framing. Display it in your home or your club meeting room.

FIELD BOX STICKER

Apply this colorful I.D. sticker to your notebook, bicycle, car, brief case, field box, or even your rocket. Has place for name & address.

C.A.T. membership available only by mail, from Centuri.

Centuri, Dept. 202K, Box 1988, Phoenix, Arizona 85001

C.A.T. Membership Application

Enclosed is $1.50 for my Centuri Aerospace Team membership and kit of materials. I pledge to follow the Model Rocketeer Safety Code.

Signature:

Name *Fill out carefully: Print only one character in each space. Abbreviate if necessary.*

Address

City State Zip

Today's Date _____ Age ___ Birthdate - Mo. ___ Day ___ Yr. ___

C.A.T. News

WELCOME TO THE NEW C.A.T.

The Centuri Aerospace Team has been around many years and advertized in various Centuri publications. Now the C.A.T. has these new features: the team gets his own section right here in the Centuri catalog, new members are guaranteed to automatically receive the next new catalog, and best of all, C.A.T. members now have a chance to see their names and photos in print! (Old Team Members can get a free Data Form by asking me and sending a stamped self-addressed envelope.) Each issue we select a few people for "Meet the C.A.T.". When space allows, we include the best of whatever you send us: rocket drawings, snapshots, letters, new ideas, etc. All mail about the C.A.T. should be addressed to "C.A.T. Director," in care of Centuri.

"CONE-TEST" CONTEST WINNERS

We'd like to thank the hundreds of C.A.T. members who sent in entries for the "Cone-Test" Contest. As we stated in the last catalog, the first twenty entries received would receive the prize of the two kits which still have balsa nose cones. The correct answers were the Nova and the Mini-Dactyl. The winners are:

Jeffrey Doran, Canoga Park, CA
Ryo Miyaki, Long Beach, CA
Brian Schar, Huron, IN
Todd Stimpson, Provo, Utah
Rick Halverson, Colorado Springs, CO
G.A. Gomez, Luling, TX
Kirk Stocker, Winfield, KS
Dan Hansen, Dakota City, IO
Mike Rendahl, Mound, MN
Jim Manatel, Indianapolis, IN
Dan Vohasek, Chicago, IL
Bryan Cadwell, Manilla, IO
Eric Vassain, Culwohee, NC
Mike Hudson, Waco, GA
Ted Kunst, Newbury, OH
Steven LaCarra, Brooklyn, NY
Kevin Brady, McKeesport, PA
Peter Tarasewich, Glastonbury, CN
Doug Chitren, Las Vegas, NV
Bob Ess, Depew, NY

"NAME THAT SAUCER" CONTEST

Our latest product, the Alien Scoutship FLYING SAUCER, suggested the topic for the new C.A.T. contest. With all the talk nowadays about flying saucers and UFOs, no one ever seems to give them names. We know there are many C.A.T. members out there who may have seen flying saucers (maybe you've even talked to the occupants!). Well if you have, or even if you haven't, you can enter our newest contest by inventing a catchy and descriptive name for a flying saucer or other extraterrestrial vehicle.

Send us the name of the spaceship that delivered your latest galactic contact and tell us about the spaceship and the occupants. The twenty entries with the best name will each win one of the exciting new Centuri Alien Scoutship FLYING SAUCERS.

Here are the contest rules:

1. No entries will be accepted which are the names of model rocket kits (either currently in use or no longer in circulation).
2. Only C.A.T. members may enter.
3. Deadline for entry is December 1, 1978.
4. Send to:
   NAME THAT SAUCER CONTEST
   Centuri, P. O. Box 1988,
   Phoenix, AZ 85001

Meet the C.A.T.

You have a chance to appear here too, in a future issue, after you fill out and return the Data Form in your C.A.T. Membership Kit. Naturally we can't show every member, but we'll show you some interesting rocketeers!

BOBBY HUFF

STEVEN LAURIDSEN

Bobby Huff of Adrian, Missouri is pictured above with a robot that launches model rockets which he invented himself. Bobby has been an active model rocketeer for over two years and would like to build a robot that would take care of a household without the aid of humans. Looks like you've got a good start Bobby.

12 year old Steven Lauridsen of Sidney, Montana, is interested in science, music, and fiction. He'd like to be an ornithologist when he grows up and wants to remind all model rocketeers, "Don't forget the chute wadding!"

BENJAMIN BURRIS

CHARLES PATRICK

Benjamin Burris is 13 years old and lives in Hubert, North Carolina. He's just started in model rocketry, but wants to say "Hi!" to all other C.A.T. members and to let everyone know he's happy to be a member of the C.A.T. Benjamin is interested in science, space, and aviation and would like to be a pilot when he is old enough.

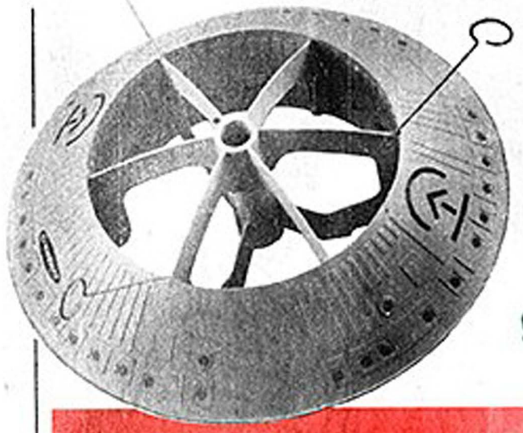
Charles Patrick wants to tell all C.A.T. members to "Fly Safe and Be Safe". He's 14 years old and lives in Palm Springs, California. Charles is interested in aviation, music, science fiction, and space. His dream job would be to test rockets for Centuri.

EARL CAGLE

JAMES GYORKO

Earl Cagle is 16 years old and lives in Augusta, Georgia. Earl couples his interest in space, science, and photography with model rocketry. His dream projects include competing in the national model rocket championships (N&RAM). . . . along with a date with Farrah Fawcet Majors!

James Gyorko, of Morgantown, West Virginia, represents our many adult C.A.T. members. James is interested in art, aviation, science fiction, and movies and wants to tell all C.A.T. members to "exercise extreme caution in designing and flying but have fun!"



NEW Centuri Flying Model Rockets

world's first model rocket-powered Flying Saucers.

ALIEN SCOUTSHIP FLYING SAUCER KIT $5.50

Prod. No. 5325

Recommended engines C5-0S(best) C6-0, B14-0

Diam. 9.125" Height 3.5" Net Wt. 2.4oz.

Skill Level-2

Streaking across the galaxy, flying saucers may bring alien life forms of all sorts to our planet. Centuri's model of this frequently observed craft features sturdy pre-cut, pre-formed fibre parts, embossed surface detail, aerials that double as landing gear plus an engine lock. All parts are pre-colored and no special tools are necessary—just white glue. The Flying Saucer fits any launcher and flies to surprising altitudes with a single "Super-C" booster engine. It glides back to earth for a safe landing ready to be flown again. Includes Mini Manual of basic rocket info and Tech Report on Flying Saucers. Alien emblem and special "Space Glow" decals make this a great display model for your room, too. Join the Centuri UFO Fleet and fly your FLYING SAUCER today!

FROM THE UFO FLEET

ALIEN SCOUTSHIP FLYING SAUCER OUTFIT $14.95

Prod. No. 5205

- FLYING SAUCER KIT
- POWR-PAD LAUNCHER
  Deluxe version, launches all standard rockets
- 3 POWERFUL SUPER-C ENGINES
  plus reliable "Sure-Shot" igniters
- COMPLETE INSTRUCTIONS
  including Mini-Manual & UFO Tech Report
- EVERYTHING INCLUDED
  except lantern battery and white glue

$18.32 VALUE YOU SAVE $3.37

1978 Catalog

Product Index

★ Stars indicate new items
• Dot indicates can use Super-C.

STRAIGHT FROM TOMMY'S HEADLINES!

FROM THE STRIKE FORCE

BOEING A.L.C.M. CRUISE MISSILE

SEE PAGES 16 & 17

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Mississauga, Ontario
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Centuri

Model Rocket Catalog