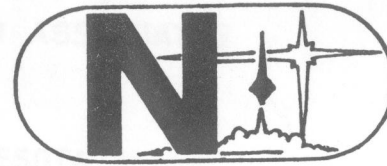


NOVA RESEARCH

P.O. BOX 309

LAKELAND, FLORIDA

33801



NOVA RESEARCH ASSOCIATES

Over 100

Novas Research Associates, Inc. was formed to bring a line of advanced model rocketry products to the hobbyist market. Backed by the experience of the highest quality rocketry plans are available.

MODEL ROCKET CATALOG

We plan to provide you with the most advanced techniques and materials available to provide you with the most advanced model and rocketry in your hobby.

1982

NOVA RESEARCH ASSOCIATES

P.O. BOX 305

LAKELAND, MINNESOTA 55043

612/436 5158



Greetings

Nova Research Associates, Inc. was formed to bring a line of advanced model rocketry products to the serious Model Rocketeer.

Our products are supplied in kit form to afford maximum versatility and economy. Highest quality materials and full-size plans are provided with each kit.

We plan to continue research into new techniques and materials in order to provide you with products that bring excitement and realism to your model rocketry program

"Reach for the stars"

David J. Babulski

David J. Babulski

NAR 29716

AMA 22834

LAUNCH COMMANDER

ORION CLASS LAUNCHER



KIT # 1020

The Launch Commander is a single station launcher incorporating features found in full-size professional launchers. Interchangeable launch rail assemblies allow launcher configuration for 1/8 inch, 3/16 inch or 1/4 inch launch rails. A steel blast bucket and mini-gantry ignitor lead support are provided as standard features. The launcher is fully steerable in azimuth when used with the optional Base Unit (kit 1021) and is fully steerable in elevation via a self locking jacking screw mechanism. The Launch Commander can be ground mounted, camera tripod mounted or used with the Base Unit. The Launch Commander is the ideal competition or sport launcher.

Launcher base area : _____ 64 Sq. inches

Height of blast surface from base : _____ 8.5 inches

Elevation range : _____ Vertical to -30 degrees

Diameter of blast bucket : _____ 3 inches

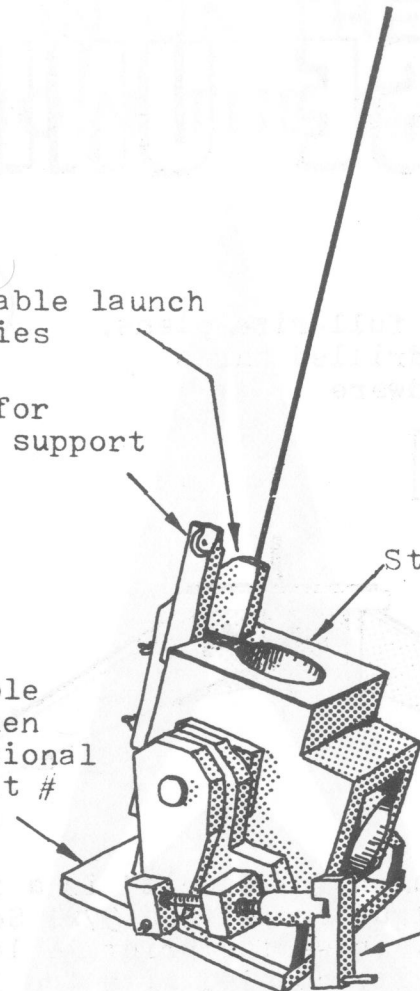
Interchangeable launch rod assemblies

Mini-gantry for ignitor lead support

Steel blast bucket

Fully steerable in azimuth when used with optional base unit (kit # 1021)

Fully steerable in elevation via jacking screw. vertical to -30 degrees.



Kit includes full-size plans, pre-cut and drilled parts plus all hardware. NOTE: launch rods not included in kit

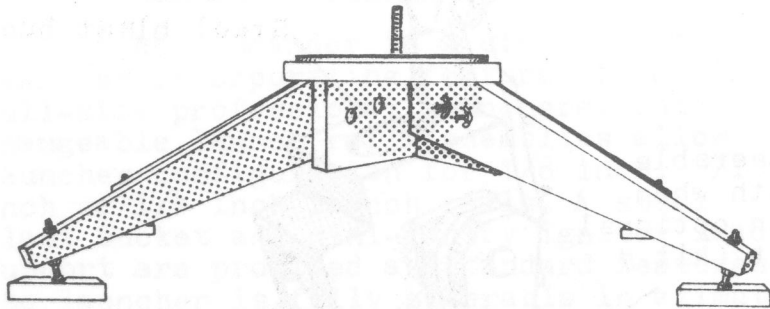
LAUNCH ROD ASSEMBLIES
816 - 1/8" - 3/16" rods
(supplied in kit)
250 - 1/4" rods

BASE UNIT

Kit includes full-size plans,
pre-cut and drilled parts
plus all hardware



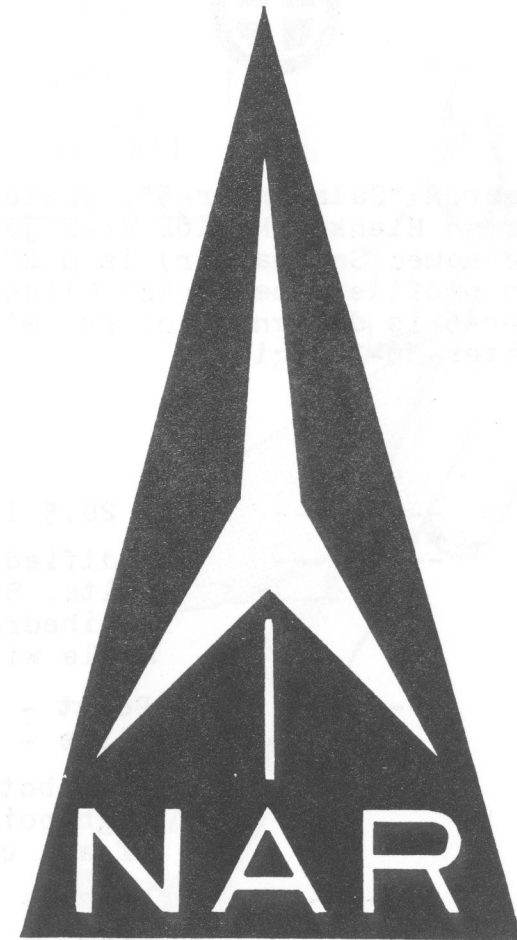
KIT # 1021



The Nova Research "Base Unit" is a four leg support structure with a 3721 Sq. cm. (4 Sq. Ft.) base footprint. A low center of gravity coupled with the large base footprint results in a highly stable launch platform. Each of the four legs is fitted with a gimballed foot pad. In addition, each of the four foot pads can be adjusted vertically to compensate for uneven ground. Each of the four legs can also be removed for ease of transportation.

The "Base Unit" is designed to mate with the Launch Commander and Launch Master launchers. The "Base Unit" can also be easily adapted for use with launchers of your own design.

GET IN ON THE FUN!
JOIN THE NAR



For information on the National
Association of Rocketry, write
to:

NATIONAL ASSOCIATION OF ROCKETRY
182 Madison Drive, Elizabeth, PA.

15037

SALAMANDER-5

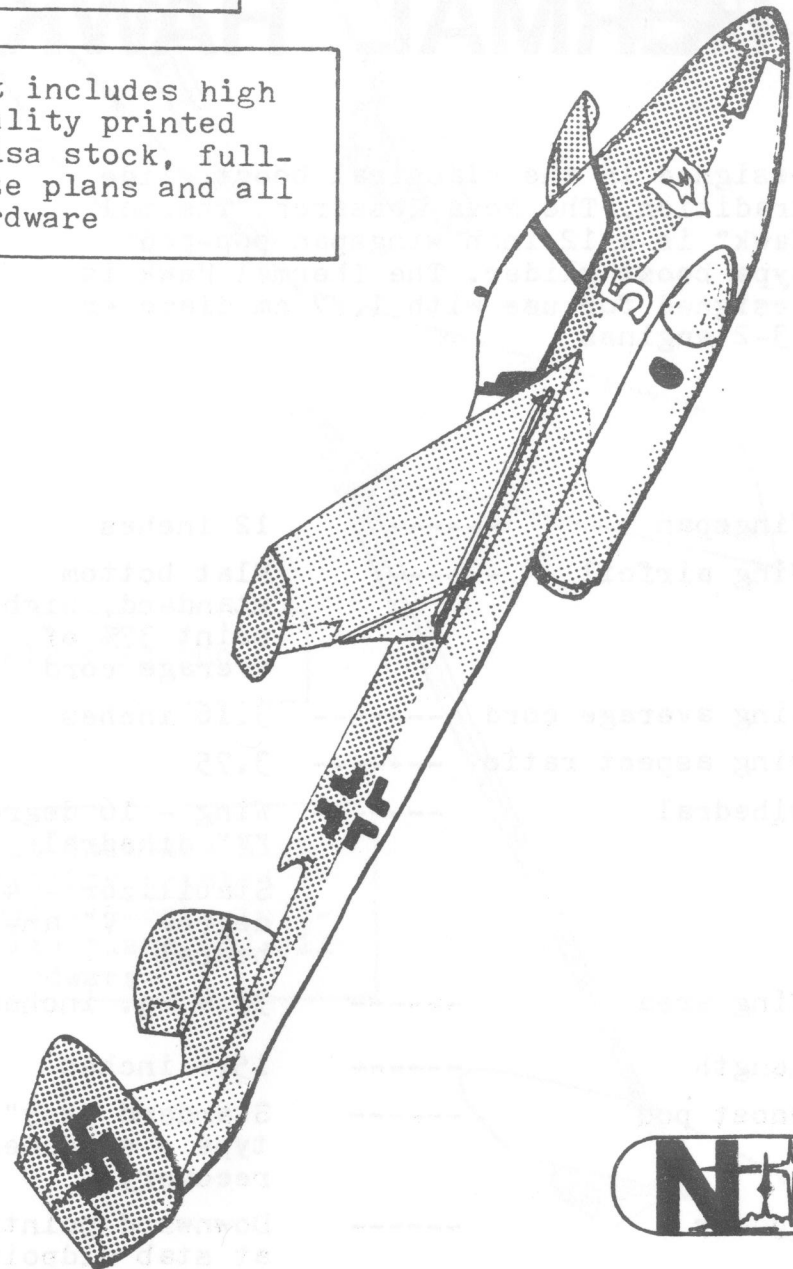


The Nova Research "Salamander-5", patterned after the German Hienkel He-162 WW-2 jet fighter (code named Salamander) is a 20.5 inch wingspan profile type Rocket Glider. The Salamander-5 is designed for use with 1.75 cm diameter B6-2 engines.

Wingspan	-----	20.5 inches
Wing type	-----	Modified clipped delta. Simple V dihedral, Neg. angle winglets
Wing area	-----	Boost - 28 Sq. In. Glide - 59 Sq. In.
Airfoil	-----	Flat bottom standard high point at 25% of av. cord
Aspect ratio	-----	Boost - 9.1 Glide - 7.5
Stabilizer	-----	Rectangular - V dihedral
Rudder	-----	Twin
Length	-----	17.75 inches
Boost attitude control	-----	Wing flaps. activated by burn through thread
Engine	-----	B6-2

KIT # RG 100 A

Kit includes high quality printed balsa stock, full-size plans and all hardware

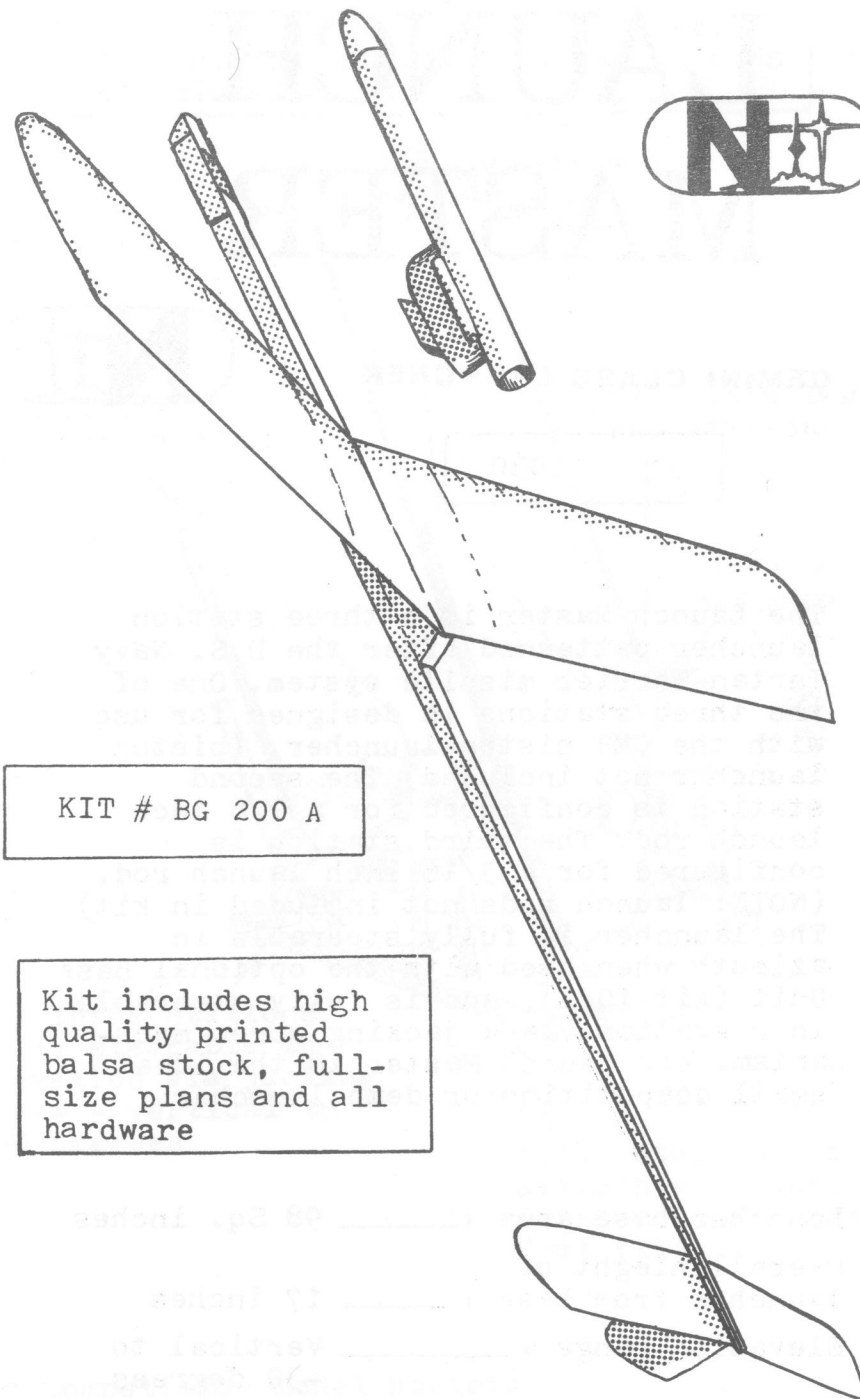




THERMAL HAWK

Designed in the classical boost glide tradition, The Nova Research "Thermal Hawk" is a 12 inch wingspan pop-pod type boost glider. The Thermal Hawk is designed for use with 1.27 cm diameter A3-2 engines

Wingspan	-----	12 inches
Wing airfoil	-----	Flat bottom standard, high point 37% of average cord
Wing average cord	-----	3.16 inches
Wing aspect ratio	-----	3.75
Dihedral	-----	Wing - 16 degree "V" dihedral
		Stabilizer - 4 degree "V" anhedral
Wing area	-----	37.4 Sq. inches
Length	-----	15.6 inches
Boost pod	-----	Standard "key" type - streamer recovery
Rudder	-----	Downward pointing at stab midpoint



KIT # BG 200 A

Kit includes high quality printed balsa stock, full-size plans and all hardware

LAUNCH MASTER

GEMINI CLASS LAUNCHER



KIT # 1030

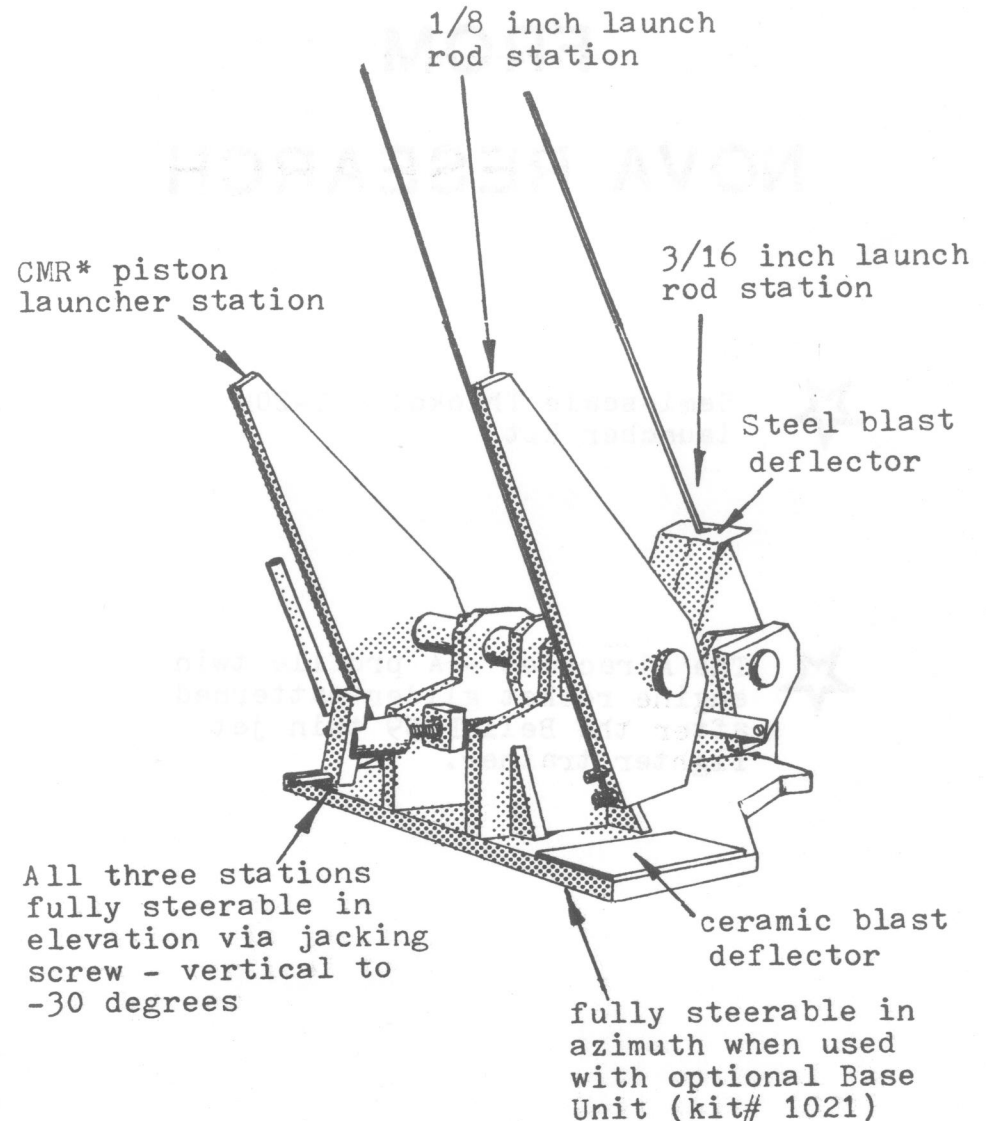
The Launch Master is a three station launcher patterned after the U.S. Navy Tartan-Terrier missile system. One of the three stations is designed for use with the CMR piston launcher. (piston launcher not included) The second station is configured for a 1/8 inch launch rod. The third station is configured for a 3/16 inch launch rod. (NOTE: launch rods not included in kit) The launcher is fully steerable in azimuth when used with the optional Base Unit (kit 1021), and is fully steerable in elevation via a jacking screw mechanism. The Launch Master is the ideal small competition or demo launcher.

Launcher base area : _____ 98 Sq. inches

Overall height of launcher from base : _____ 17 inches

Elevation range : _____ Vertical to -30 degrees

Kit includes full size plans, pre-cut and drilled parts plus all hardware.
NOTE : Piston launcher and launch rods not included in kit



* Competition Model Rockets
P.O. Box 7022
Alexandria, VA 22307

FUTURE PRODUCTS FROM NOVA RESEARCH



Semi-scale Thiokol AML-20K
launcher kit



The Airacomet - A profile twin
engine rocket glider patterned
after the Bell P-59 twin jet
fighter trainer.

NOTES

ROCKETRY GROUPS

- Canadian Association of Rocketry
Dept. N-82, Suite 302
151 Slater St.
Ottawa, Ontario K1P 5H3 Canada

- Rocketry Advancement Soc. of Australia
P.O. Box 287
Summer Hill, NSW 2130
Australia

- New Zealand Spaceflight Association
P.O. Box 2945, Dept. N-82
Wellington, New Zealand

- Swiss Astronautical Society (SAFR)
Lidostrasse 5
CH-6006 Luzerne
Switzerland

- Dutch Rocket Research Association
Box 323
3800 AH Amersfoort
Netherlands

- National Association of Rocketry
182 Madison Drive, Dept. N-82
Elizabeth, PA 15037

NOTICE OF RESPONSIBILITY

OUR MODEL ROCKETRY PRODUCTS ARE INTENDED FOR EXPERIMENTAL AND EDUCATIONAL USE. YOU ARE CAUTIONED TO EXERCISE UTMOST CARE IN THE USE OF OUR PRODUCTS. WE DO NOT ACCEPT ANY RESPONSIBILITY FOR ACCIDENTS. USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR HIS INTENDED USE, AND ASSUME ALL RISK AND LIABILITY IN CONNECTION THEREWITH.



NOVA RESEARCH ASSOCIATES

PRICE LIST

KIT #	PRICE
1020 - Launch Commander	\$28.00
1021 - Base Unit	14.00
1031 - Launch Master	36.00
250 - 1/4 inch launch rod mount for Launch Commander	1.50
RG 100A - Salamander-5	9.50
BG 200A - Thermal Hawk	6.50

ORDERING INFORMATION

Type or print your order on the order form provided. Calculate the total amount of your order (Minnesota residents include 5% sales tax) and add the 10% postage* and handling charge.

NOTE: Canadian residents order from -
Pan Axiom Autonetics
P.O. Box 158
Milton, Ontario L9T 1Y8

PAYMENT : Please do not send cash or stamps. Use checks or money orders for full payment (please remit in U.S. funds), which must accompany the order. C.O.D. requests will be returned without shipment

We can offer a 10% discount for educational buyers if the order is recieved on school letterhead or purchase order.

Hobby shops write for information

* International customers please write for details on shipping charges

ORDER FORM

NAME _____ DATE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

QUANTITY	KIT #	PRICE	TOTAL

** SHIPPING & HANDLING	
SUBTOTAL ...	
SALES TAX 4% (MINN. RES.)	
TOTAL ORDER ..	



NOVA RESEARCH ASSOCIATES

P.O. BOX 305
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55043

** SEE ORDERING INFORMATION