




MICRO ROCKET

KIT NO. MRK VIII (MICRO)
FLIGHT SYSTEMS, INC.

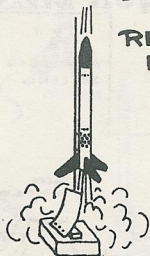
FLY WITH FSI

A REAL FLYING MODEL
UP TO 3000' ALTITUDE
WITH FSI ENGINES

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- .. EASY ASSEMBLY
 - .. PARACHUTE RECOVERY
 - .. FLY OVER AND OVER
 - .. UP TO 3000' ALTITUDE
 - .. ALL PARTS SANDED
 - .. FULL ASSEMBLY DIRECTIONS
 - .. BUILT BY ROCKET ENGINEERS
 - .. PLYWOOD FINs, NO WEAK Balsa

RECOMMENDED FSI ENGINES

A6-3
B6-4
C6-5
E5-6



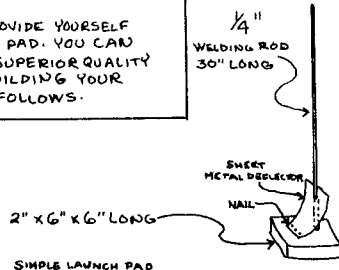
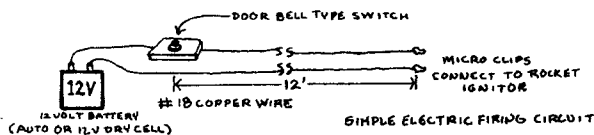
ADDITIONAL INSTRUCTIONS FOR ASSEMBLY

USE THE FOLLOWING ORDER FOR ASSEMBLY

- ① **THRUST RING** — PLACE A HEAVY BAND OF ELMER'S GLUE ABOUT 2" INSIDE OF BODY TUBE. INSERT THRUST RING BY USING A FSI A, B, C, OR D ROCKET ENGINE. PUSH THRUST RING FORWARD UNTIL A, B, C, OR D ENGINE PROJECTS $\frac{3}{4}$ " OUTSIDE BODY TUBE, FOR FSI "E" ENGINE PUSH FORWARD UNTIL $\frac{1}{8}$ " OF ENGINE PROJECTS OUTSIDE BODY TUBE. THE THRUST RING FORCES THE GLUE FORWARD AND PROVIDES FOR A STRONG BOND OF THRUST RING TO BODY TUBE. NOW EXTRACT ENGINE AND LET GLUE DRY.
- ② **SHOCK CORD MOUNT** — SPREAD HEAVY LAYER OF ELMER'S GLUE ALL OVER THE SIDE OPPOSITE THE SHOCK CORD KNOT AFTER TAKING UP SLACK IN CORD. CURVE SHOCK CORD MOUNT AND INSERT INTO NOSE CONE END OF BODY TUBE AND FIRMLY PRESS IN PLACE, USING FINGER, UNTIL GLUE HOLDS FIRMLY. ASSEMBLY DETAIL SHEET SHOWS PROPER POSITION IN BODY TUBE.
- ③ **FINS** — ALL 3 FINS IN YOUR KIT ARE MARKED WITH RED EDGE. THIS REEDGE IS TO BE PLACED NEXT TO THE BODY TUBE. BEFORE GLUING INTO PROPER POSITION YOU MAY WANT TO SAND AND ROUND OFF ALL FIN EDGES, EXCEPT DO NOT SAND RED EDGE. AFTER SANDING EDGES, PLACE A SMALL AMOUNT OF ELMER'S GLUE ALONG THE REEDGE AND IMMEDIATELY PRESS AGAINST BODY TUBE. HOLD SECURELY UNTIL GLUE SETS STRONG ENOUGH TO SUPPORT FIN. BE SURE FIN IS PARALLEL TO BODY TUBE AND RADIAL THROUGH CENTER OF BODY TUBE. REPEAT FOR THE OTHER TWO REMAINING FINS. YOUR BODY TUBE IS MARKED WITH 3 BLACK MARKS. PLACE FINS ALONG THESE LINES FOR PROPER SPACING OF 120° AND PARALLEL ALIGNMENT. AFTER TACK COAT OF GLUE DRIES HARD PLACE TWO MORE LINES OF GLUE ALONG FIN AND BODY TUBE TO BUILD UP A STRONG FILLET.
- ④ **FLAMEPROOF WADDING** — BE SURE THAT FLAMEPROOF WADDING IS USED EACH TIME ROCKET IS FIRED. PUSH WADDING ALL THE WAY DOWN TO THRUST RING AND PACK IN FIRMLY WITH A $\frac{5}{8}$ " DOWEL OR SIMILAR TOOL. USE ENOUGH WADDING TO MAKE APPROXIMATELY A $\frac{5}{8}$ " LONG PLUG. SEE ASSEMBLY DETAIL SHEET.
- ⑤ **PARACHUTE** — THE PARACHUTE IS MARKED IN INCHES. CUT WITH SCISSORS ALONG THE INCH LINES THAT GIVE YOU THE SIZE PARACHUTE YOU DESIRE (FOR MICRO ROCKET — 12"). LAY PARACHUTE ON FLAT SURFACE AND ATTACH SHROUD LINES TO PARACHUTE USING STRIPPABLE TABS (SEE DETAIL C), CAUTION: LET NON-PORTION OF TAB PROJECT BEYOND PARACHUTE AS GLUE ON TAB WILL STICK PARACHUTE TOGETHER AND INTERFERE WITH ITS OPENING. TRY NOT TO TOUCH THE GLUE SIDE OF TAB WITH FINGERS.
- ⑥ **SHOCK CORD & PARACHUTE** — AFTER INSERTING WADDING INTO BODY TUBE, COIL SHOCK CORD AROUND YOUR FINGER AND STUFF INTO BODY TUBE. NEXT FOLD PARACHUTE AS SHOWN ON ASSEMBLY DRAWING, GATHER TOGETHER LIGHTLY, THE PARACHUTE, THEN WRAP SHROUD LINES GENTLY AROUND FOLDED PARACHUTE AS SHOWN IN DETAIL C. DIAMETER OF FOLDED PARACHUTE SHOULD BE SLIGHTLY SMALLER THAN INSIDE DIAMETER OF BODY TUBE. ALL DETAILS ARE SHOWN ON ASSEMBLY DETAIL SHEET. BE SURE NOSE CONE IS A GENTLE FIT INTO BODY TUBE. LIGHT SANDING MAY BE NEEDED.
- ⑦ **ROCKET ENGINE** — WRAP A SMALL AMOUNT OF $\frac{1}{2}$ " WIDE MASKING TAPE AROUND THE ROCKET ENGINE AT THE POSITION SHOWN ON DETAIL A. USE ENOUGH TAPE TO SECURE A SNUG FIT INTO THE BODY TUBE AS TO REQUIRE A FIRM PUSH ON ENGINE TO PLACE IN CONTACT WITH THRUST RING. IF ENGINE DOES NOT FIT SNUGLY, IT WILL BE EJECTED INSTEAD OF PARACHUTE AND YOUR ROCKET WILL FREE FALL.

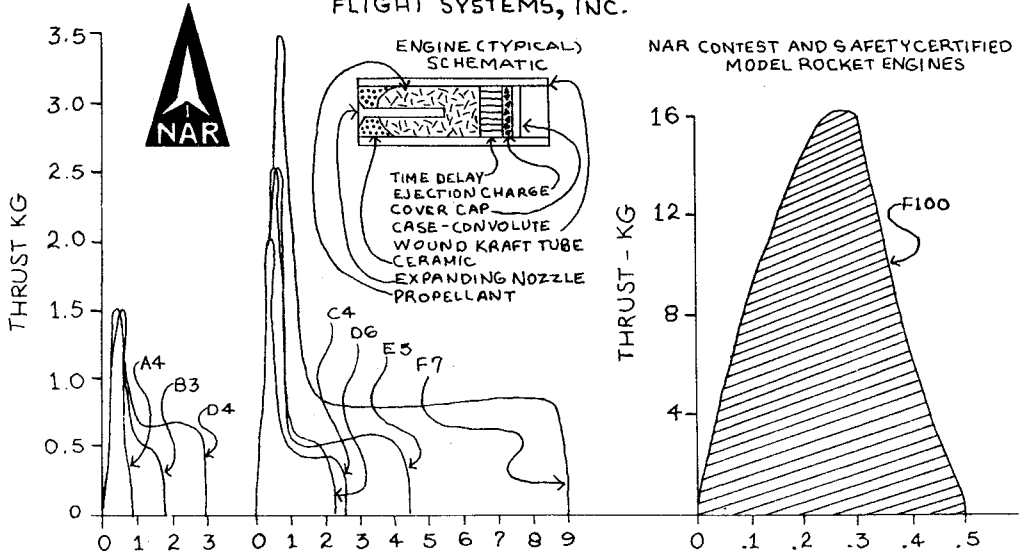
MODEL ROCKET FIRING & LAUNCHING EQUIPMENT

TO FLY YOUR FSI MODEL ROCKET PROPERLY YOU WILL NEED TO PROVIDE YOURSELF WITH A 12 VOLT FIRING CIRCUIT AND A SIMPLE ROCKET LAUNCH PAD. YOU CAN EASILY BUILD YOUR OWN OR PURCHASE FROM YOUR DEALER FSI SUPERIOR QUALITY LAUNCHERS AND ELECTRIC IGNITION PANEL. DETAILS FOR BUILDING YOUR OWN LAUNCHER AND ELECTRIC IGNITION CIRCUIT ARE AS FOLLOWS.



TYPICAL THRUST/TIME CURVES for MODEL ROCKET ENGINES

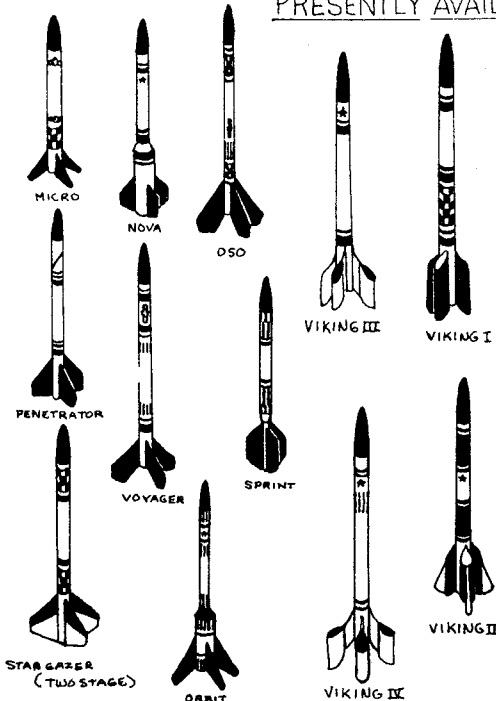
FLIGHT SYSTEMS, INC.



ALL OF THE ABOVE ROCKET ENGINES ARE AVAILABLE AT MOST OF THE BETTER HOBBY SHOPS THROUGHOUT THE UNITED STATES. IF YOUR FAVORITE HOBBY STORE DOES NOT STOCK THE F.S.I. LINE, HAVE HIM WRITE US FOR OUR LATEST CATALOG AND PRICES. IF YOU DESIRE YOUR OWN CATALOG, SEND 25¢ TO FLIGHT SYSTEMS, INC.

YOU HAVE JUST PURCHASED ONE OF FSI'S SUPERIOR QUALITY MODEL ROCKETS. OTHER FINE FSI KITS ARE ALSO AVAILABLE. THE FSI ROCKET FLEET IS CONSTANTLY BEING ADDED TO. SEE ALL OF THESE MODELS AT YOUR HOBBY DEALER.

PRESENTLY AVAILABLE FSI MODEL ROCKET KITS



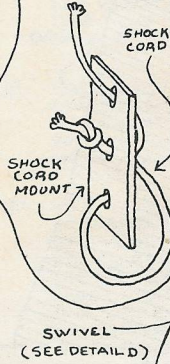
RECOMMENDED FSI ENGINES

- MICRO: A4-4, B3-4, C4-4, D4-6
- PENETRATOR: A4-4, B3-4, C4-4, D4-6, D6-6, E5-6
- STAR 1st stage: B3-0, C4-0, D6-0, E5-0
- GAZER 2nd stage: B3-6, C4-6, D6-8, D4-8, E5-6
- NOVA: B3-4, C4-4, D4-4, D6-6, E5-6, F7-6
- VOYAGER: D6-6, F7-6, F100-B
- ORBIT: B3-4, C4-4, D4-6, D6-6, E5-6, F7-6
- OSO: D6-6, F7-6, F100-B
- SPRINT: C4-4, D4-6, D6-6
- VIKING I: A4-4, B3-4, C4-4, D4-6, D6-6, E5-6
- VIKING II: A4-4, B3-4, C4-4, D4-6, D6-6, E5-6
- VIKING III: A4-4, B3-4, C4-4, D4-6, D6-6, E5-6
- VIKING IV: F7-6, F100-B

A COMPLETE LINE OF QUALITY FIRING CIRCUITS, LAUNCH GEAR, MODEL ROCKET ACCESSORIES AND INSTRUMENTS ARE ALSO AVAILABLE FROM FSI. SEE YOUR DEALER FOR DETAILS.

ASSEMBLY DETAILS FOR MICRO ROCKET

DETAIL B



NOSE CONE

SCREW EYE

SHOCK CORD MOUNT (SEE DETAIL B)

PARACHUTE SHROUD LINES

FOLDED PARACHUTE (SEE DETAIL C)

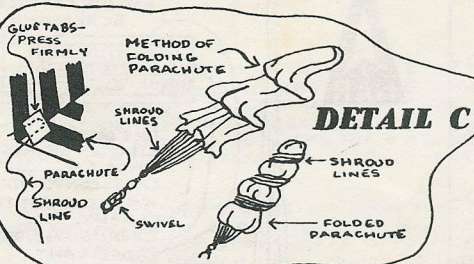
LAUNCH LUG
GLUE IN PLACE (PARALLEL TO BODY TUBE & BETWEEN ANY TWO FINS.)

FLAMEPROOF WADDING

THRUST RING (SEE DETAIL A)

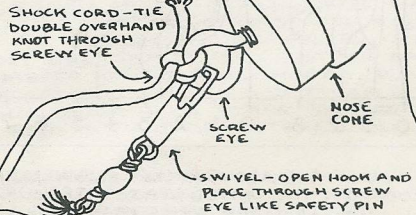
MASKING TAPE

ROCKET ENGINE



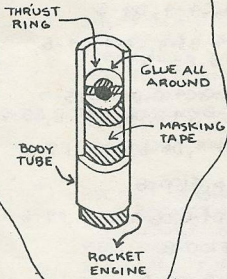
DETAIL C

DETAIL D

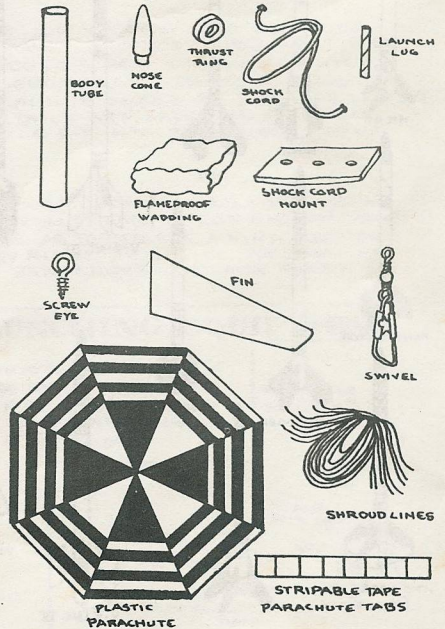


PARACHUTE SHROUD LINES - THREAD EIGHT LINES THROUGH SCREW EYE AND TIE IN DOUBLE KNOTS

DETAIL A



PARTS LIST





MRK-8

Inc.

RAYTOWN, MISSOURI 64133



MODEL ROCKETRY

PROFESSIONALISM IN ROCKETRY

SPACEMODELING - A Hobby for ages 10 to adult

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MODEL ROCKETRY

PROFESSIONALISM IN ROCKETRY

MRK-8



FSI MRK-8 MICRO

Fin Patterns

Root Edge:	32 mm (1.25 inches)
Tip Edge:	12 mm (0.5 inches)
Leading Edge Semi-Span:	54 mm (2.125 inches)
Trailing Edge Semi-Span:	44 mm (1.75 inches)
Trailing Edge Sweep:	16 mm (0.625 inches)

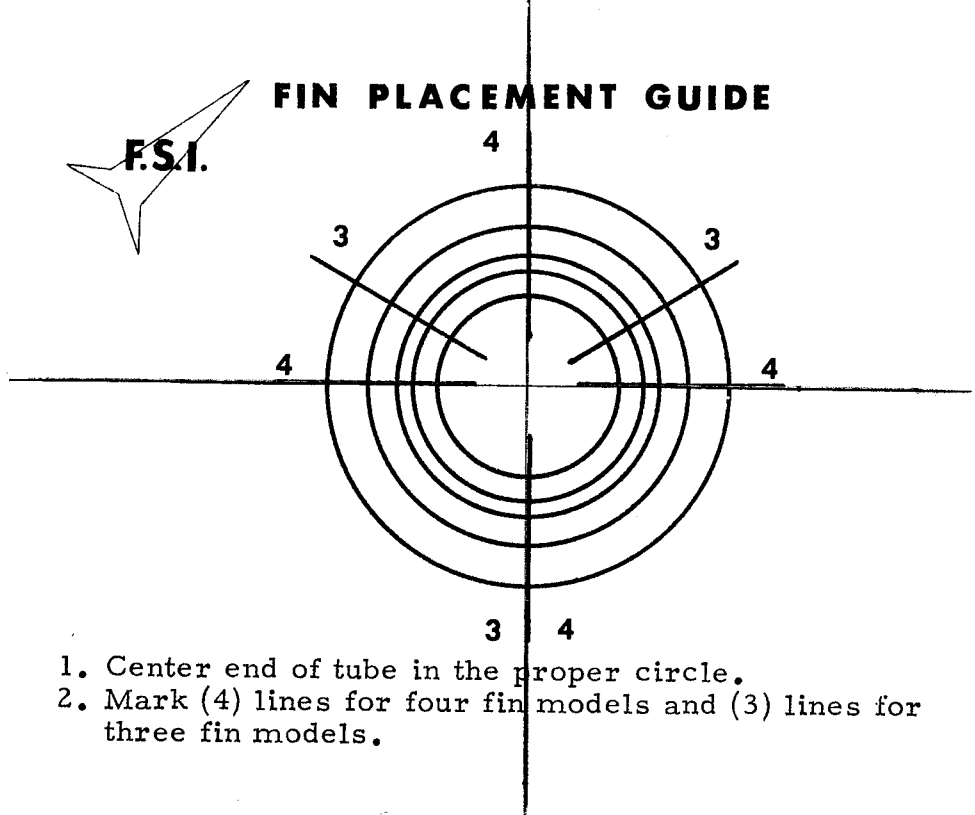
Fins are made from 1/16", 3-ply birch. Make 3.



| < 1 inch > |



FIN PLACEMENT GUIDE

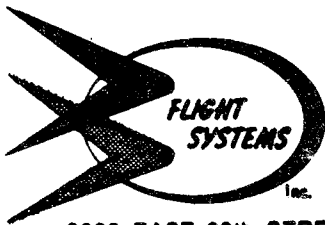
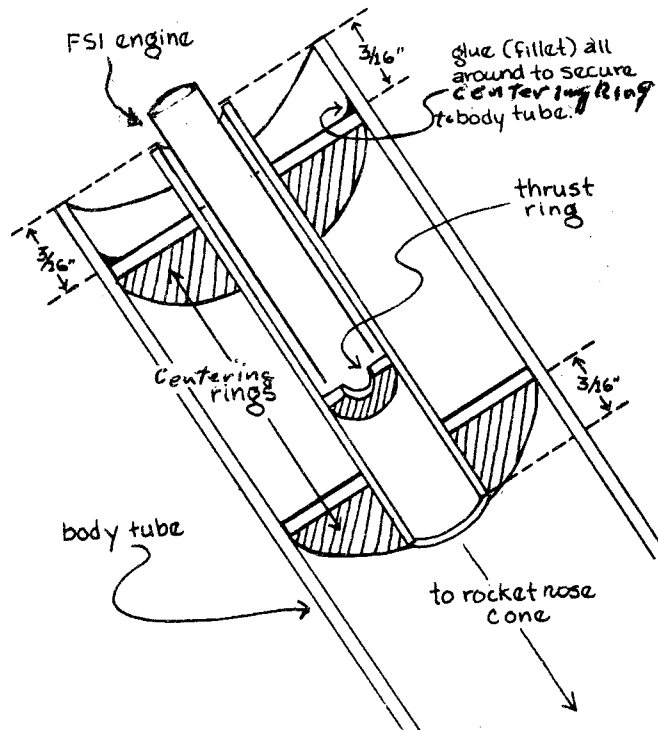


1. Center end of tube in the proper circle.
2. Mark (4) lines for four fin models and (3) lines for three fin models.

SUPPLIMENTARY INSTRUCTIONS:

In addition to the engines listed on the front of the package this rocket can be flown with Flight Systems, Inc. NEW 18mm A, B, and C engines. In order to prepare the rocket for use with these engines you must assemble and install an 18mm engine holder as follows:

1. Glue the two centering rings onto the 3" X 3/4" engine holder tube. The rings should be spaced 3/16" from the ends of the tube as shown below.
2. Install the small thrust ring inside the engine holder tube. This is done by placing a small ring of white glue inside the engine holder tube about half way down. Insert the thrust ring in one end of the tube. Using an 18mm engine casing push the thrust ring into position until the engine protrudes out of the engine holder tube 3/8". Remove the engine casing and allow the assembled engine holder to dry.
3. Install engine holder assembly into rear of rocket so that it is flush with the back of the rocket. Be sure that the thrust ring is forward when installing. To install, first put a small ring of white glue an inch or two up inside the rocket body tube. Next push the engine holder tube assembly into the rocket until it is flush. Work a small amount of white glue into the space at the back of the rocket between the rocket body tube and the engine holder tube so that the glue covers the area between and around the centering ring just inside the rocket body.

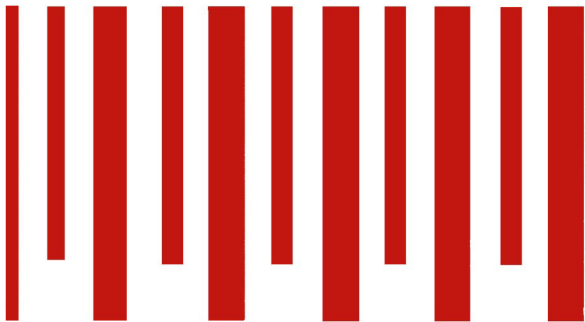


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RAYTOWN, MISSOURI 64133

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MICRO

RAYTOWN, MISSOURI 64133

FSI MRK-8 Micro Parts List

Qty	Description	Part #	Comments
1	Body Tube	HRT-808	0.903" x 8.0"
1	Nose Cone	HNC-81	Hardwood, 2.8" long (avg)
3	Fins	FS-8	1/16", 3-ply birch (1 set of 3)
1	Motor Block	TR-1	
1	Shock Cord	S-1	18" long, round elastic
1	Shock Cord Mount	SA-6	
1	Screw Eye	ES-21	1/8"
1	Launch Lug	LL-23	1/8" x 3"
1	Parachute Kit	R-12	8 sided Select-a-chute, includes plastic chute, 8 each shroud lines and tape discs, and a fishing swivel
1	FSI Chrome Label	CL-4	Aluminized, stick on FSI label

Overall Rocket Length: Approximately 11.5". See picture below for rough illustrations of kit parts.