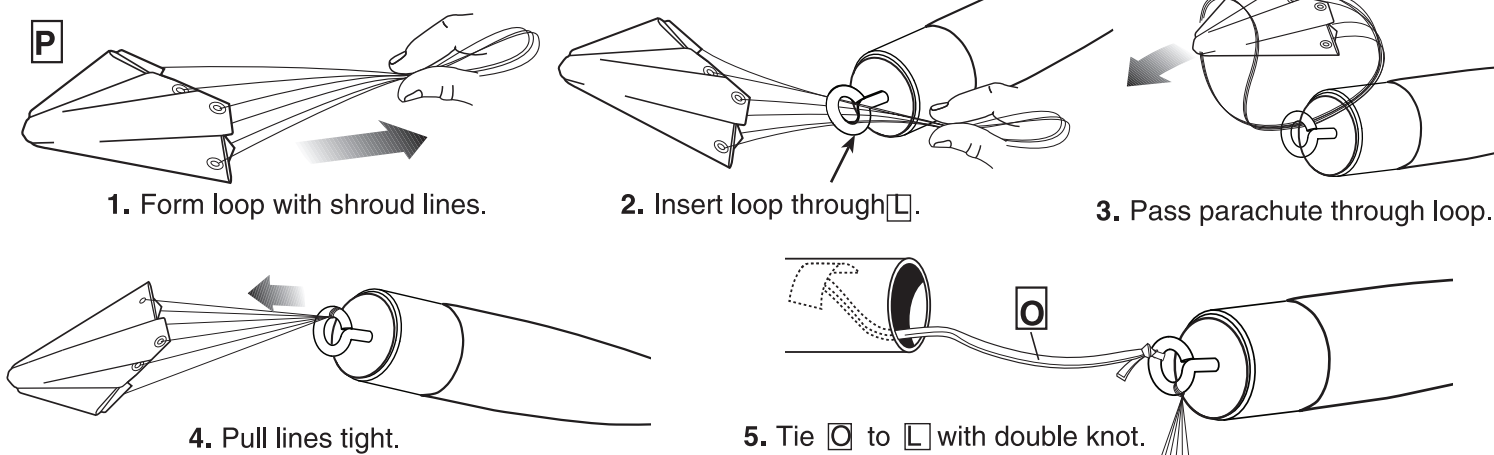


13. Apply water slide decals where shown.
 - a. Cut the decal to be applied from the decal sheet, trimming close to the decal edge.
 - b. Hold the decal in warm water until decal begins to curl.
 - c. Remove the entire decal, position in place and slide the decal backing material from under the decal and onto the model as close to final position as possible.
 - d. Gently blot out excess water with a clean paper towel.
 - e. Allow decals to set overnight before applying protective clear coat.
14. When decals are dry, spray entire rocket (body and nose cone separately) with a light coat of Testors Gloss Lacquer (#1961). This will provide added protection and shine to your Photon Probe™ rocket!

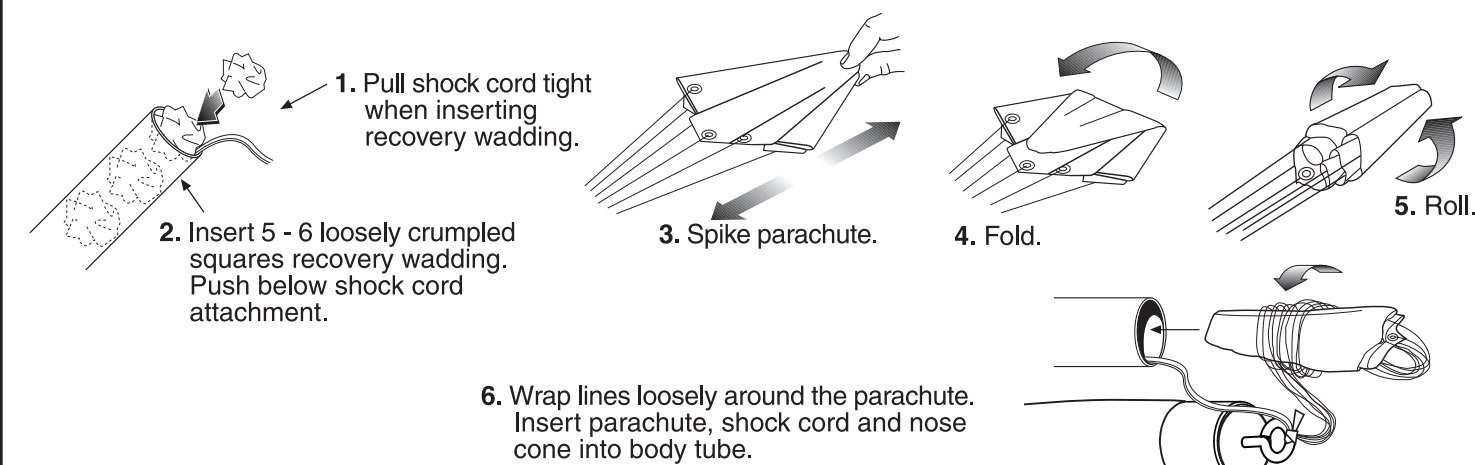
RECOVERY SYSTEM ATTACHMENT



PREPARE FLIGHT RECOVERY

NOTE: Only Estes Recovery Wadding (302274) recommended.

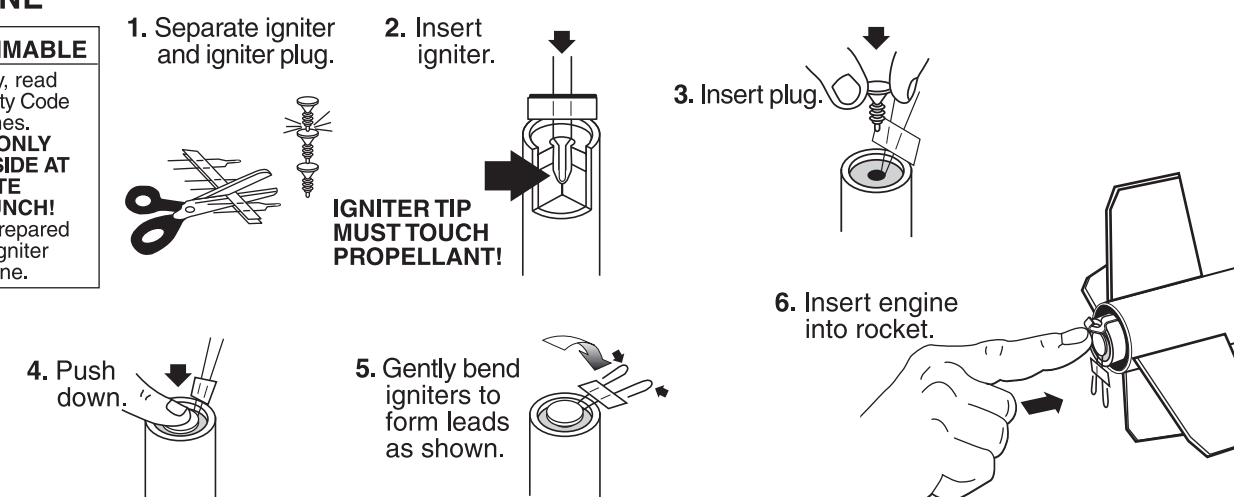
NOTE: Recovery wadding and parachute must slide easily into body tube. If too tight, redo.



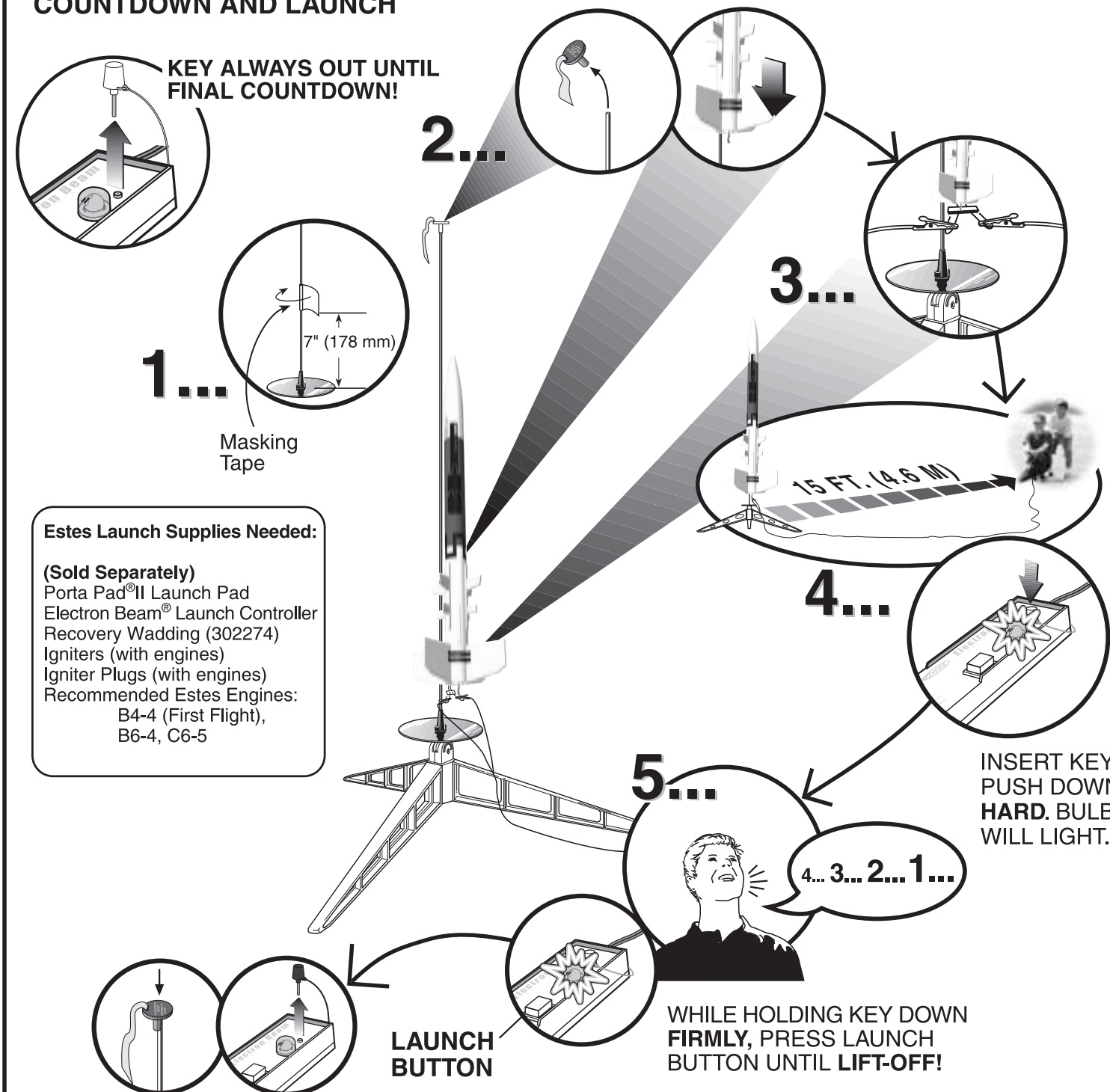
PREPARE ENGINE

⚠ WARNING: FLAMMABLE

To avoid serious injury, read instructions & NAR Safety Code included with engines.
PREPARE ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!
 If you do not use your prepared engine, remove the igniter before storing engine.



COUNTDOWN AND LAUNCH



Estes Launch Supplies Needed:

(Sold Separately)
 Porta Pad® II Launch Pad
 Electron Beam® Launch Controller
 Recovery Wadding (302274)
 Igniters (with engines)
 Igniter Plugs (with engines)
 Recommended Estes Engines:
 B4-4 (First Flight),
 B6-4, C6-5

PRECAUTIONS



PRE-LAUNCH CHECK

For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug. Repair any damage before launching the rocket.

FLYING YOUR ROCKET

Choose a large field (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

Always follow the enclosed National Association of Rocketry (NAR) SAFETY CODE.

MISFIRES

TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Disconnect the igniter clips and remove the engine. Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.

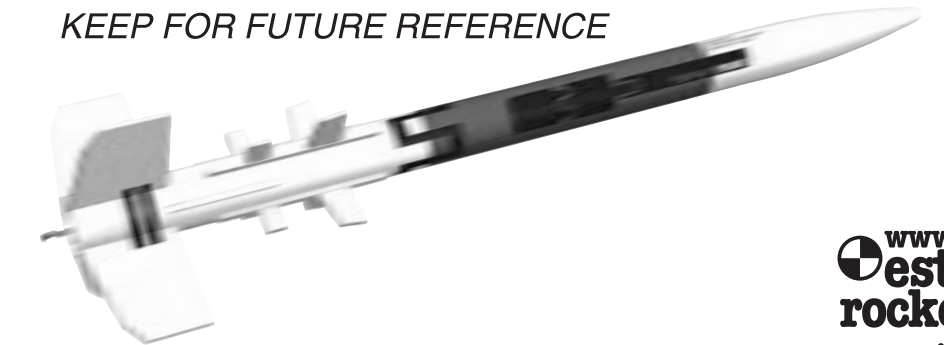


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 Penrose, CO 81240-0227
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Photon Probe™

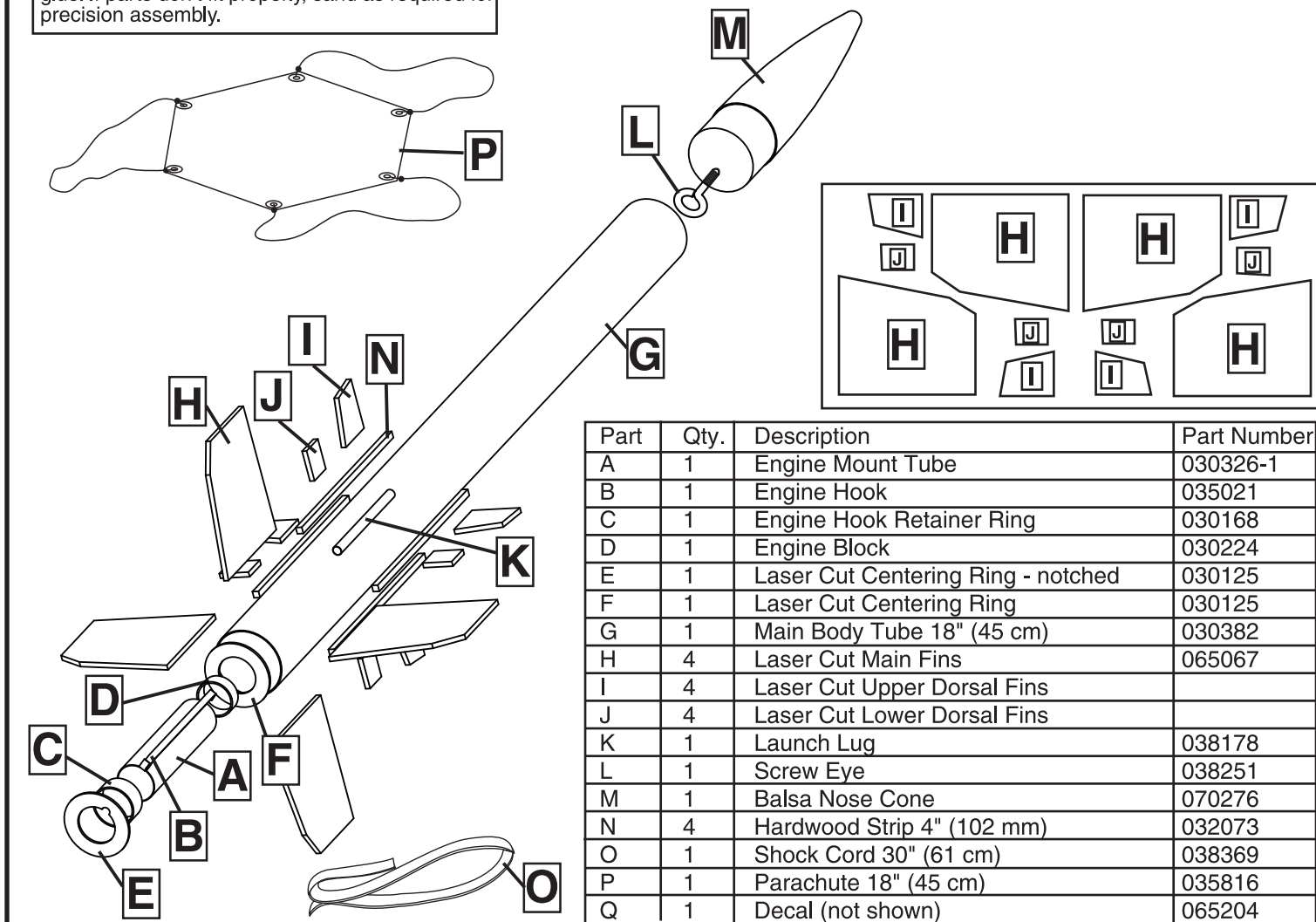
#3026

FLYING MODEL ROCKET KIT INSTRUCTIONS
 KEEP FOR FUTURE REFERENCE



ASSEMBLY TIP: Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

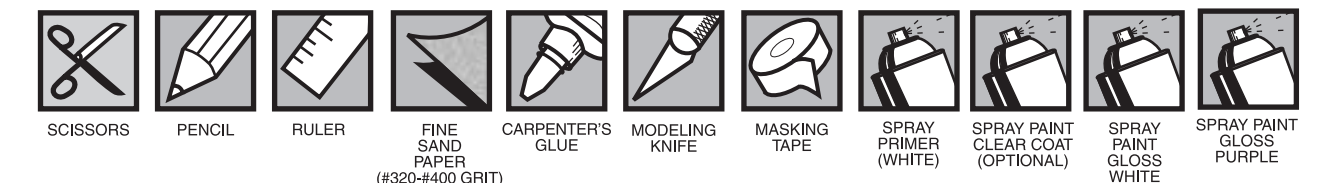
NOTE: Test fit all parts together before applying glue. If parts don't fit properly, sand as required for precision assembly.



Part	Qty.	Description	Part Number
A	1	Engine Mount Tube	030326-1
B	1	Engine Hook	035021
C	1	Engine Hook Retainer Ring	030168
D	1	Engine Block	030224
E	1	Laser Cut Centering Ring - notched	030125
F	1	Laser Cut Centering Ring	030125
G	1	Main Body Tube 18" (45 cm)	030382
H	4	Laser Cut Main Fins	065067
I	4	Laser Cut Upper Dorsal Fins	
J	4	Laser Cut Lower Dorsal Fins	
K	1	Launch Lug	038178
L	1	Screw Eye	038251
M	1	Balsa Nose Cone	070276
N	4	Hardwood Strip 4" (102 mm)	032073
O	1	Shock Cord 30" (61 cm)	038369
P	1	Parachute 18" (45 cm)	035816
Q	1	Decal (not shown)	065204

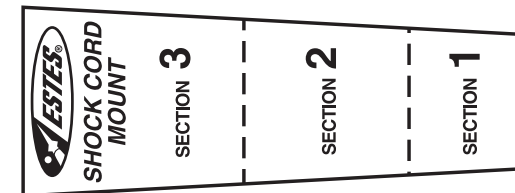
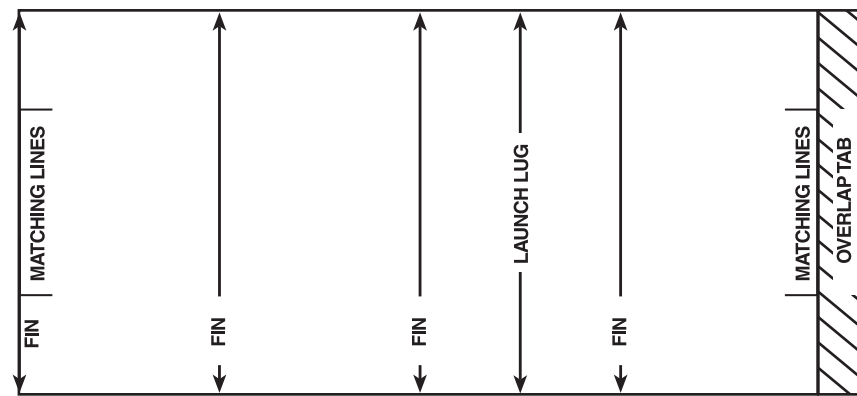
SUPPLIES

In addition to the parts included in the kit you will also need:



TUBE MARKING GUIDE AND SHOCK CORD MOUNT

(Make a copy if you want to keep instructions.)



FIN PREPARATION

- Sand both sides of balsa sheet with fine sandpaper (#320 or #400 grit).
- Cut **H**, **I**, **J** from sheet.
- Stack like fins together. Sand edges smooth. Do not sand root edge round.
- Sand leading edge round.

ENGINE MOUNT ASSEMBLY

- Remove **E** and **F**.
- Measure and mark **A**.
- Cut small slit at mark.
- Insert **B** in slit.
- Apply ring of glue forward of mark. Slide **C** to mark.
- Slide **F** to end of **B**.
- Slide **E** to **C** with notch centered over **B**.
- Apply glue fillets to both sides of **E** and **F**. Let dry.
- Apply ring of glue in end, insert **D** until it stops. Let dry.

TUBE MARKING

- Cut tube marking guide from instructions.
- Tape guide around **G**. Mark launch lug "LL" and fin lines "FL". Remove guide.
- Connect "FL" and "LL" on **G**. Use door frame as a straight edge.
- Measure and mark "LL" and each "FL" from end of **G**.

LOWER FIN ATTACHMENT

- Apply glue to root edge of **H**. Let dry 1 minute. Apply 2nd layer of glue.
- Position **H** over "FL" even with end of **G**. Let dry. Repeat for remaining **H**. Check alignment with Fin Alignment Guide.

HARDWOOD STRIP ATTACHMENT

- Sand sides of **N** smooth.
- Bevel each end of **N** 45 degrees. Sand smooth.
- Mark one beveled end on each **N**.
- Measure and mark each **N**. Note: Marked beveled end forward.
- Apply glue to bottom **N**. Position **N** centered over "FL" forward of mark. Repeat for remaining **N**.

UPPER FIN ATTACHMENT

- Apply glue to root edge of **J**. Let dry 1 minute. Apply 2nd layer of glue. Position over **N** forward of mark. Let dry.
- Repeat for remaining **J**. Let fins dry. Check alignment using guide.
- Apply glue to root edge of **I**. Let dry 1 minute. Apply 2nd layer of glue. Position over **N** forward of mark. Let dry. Repeat for remaining **I**.

LAUNCH LUG ATTACHMENT

- Sand **K** with fine sandpaper.
- Apply glue on "LL" forward of mark. Position **K** in place. Let dry.

ENGINE MOUNT INSTALLATION

- Apply ring of glue inside of **G**.
- Slide engine mount assembly even with end of **G**. Align **B** with "LL". Let dry.
- Use stick to apply ring of glue inside **G** on **E**.

Note: Fin removed from drawing for clarity.

NOSE CONE ASSEMBLY

- Test fit **M** in **G**. Sand as required for fit.
- Screw **L** centered into **M**.

HELPFUL HINT: IF NOSE CONE FIT IS...
 TOO LOOSE: ADD MASKING TAPE.
 TOO TIGHT: SAND FOR FIT.

SHOCK CORD INSTALLATION

- Cut shock cord mount from instructions.
- Apply glue to mount. Place **O** on Section 2. Fold forward.
- Apply glue and fold forward. Squeeze tight!
- Apply glue to shock cord mount and insert in **G**. Hold until glue sets. Let dry.

ROCKET FINISHING

NOTE: We have found Testors One Coat Lacquer, Testors Model Master spray paints (color of your choice) and Testors Gloss Lacquer (#1961) to be excellent for providing a long lasting and durable finish on your rocket. Always be sure to spray your models outside or in a well ventilated area.

Steps to a quality finish:

- Insert shock cord into body tube and hold in place with paper.
- Lightly sand body tube, fins and nose cone with fine sandpaper (320 or 400 grit).
- Apply glue fillets to fins and launch lug.
 - Allow glue to dry overnight.
- Use a stick inserted into the motor tube end of the rocket for painting.
- Hold the nose cone by the screw eye (J) with a clip or pliers for painting.
- Apply 1-2 light coats of white primer to rocket body and nose cone, lightly sanding with fine sandpaper (#320 or #400 grit) between coats.
 - Allow to dry between each coat.
- Spray paint main rocket and nose cone gloss white (paint separately).
 - Allow paint to dry overnight (24 hours is best). Remove tape.
- Measure 7 1/2" (191 mm) from bottom of rocket and mark with pencil.
- Apply masking tape and protective cover over the bottom of the rocket to protect the white paint.
- Measure 3 1/4" (82 mm) from top of rocket and mark with a pencil.
- Apply masking tape and protective cover over the top of the rocket to protect the white paint, leaving the middle exposed.
- Spay middle of rocket gloss purple.
 - Allow paint to dry overnight (24 hours is best). Remove masking tape.

CONTINUED NEXT PAGE