STARFIRE

KIT NO. TR 100

SKILL LEVEL: IDEAL FOR BEGINNERS

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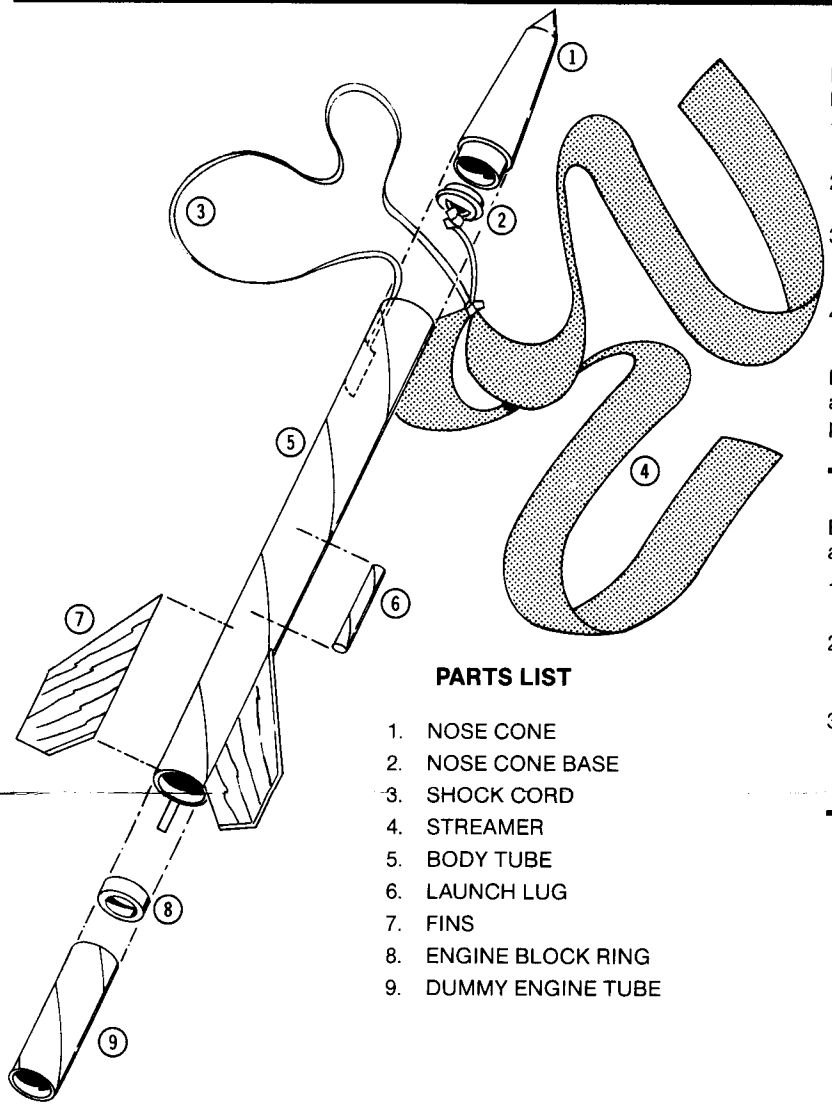


PARTS LIST

1. NOSE CONE
2. NOSE CONE BASE
3. SHOCK CORD
4. STREAMER
5. BODY TUBE
6. LAUNCH LUG
7. FINS
8. ENGINE BLOCK RING
9. DUMMY ENGINE TUBE

SAFETY INSTRUCTIONS

For the safe and reliable performance of your model rocket PLEASE NOTE:

1. That model rockets are not "toys" - that they are capable of causing personal injury to you and to others as well as property damage.
2. That you and you alone are responsible for the safe operation of your rocket.
3. That you must properly build and operate your model with a clear sense of that responsibility; that means taking no chances or risks which might endanger yourself or others.
4. That you read and observe the rules of the Model Rocketry Safety Code printed on the back of the cardboard insert included in your kit.

Remember, the thrill of rocketry lies in the safe construction of the rocket and in its careful operation. Make each launch a success and you will be proud of yourself and will really enjoy your hobby.

HELPFUL HINTS

Before building this kit gather the necessary tools and materials and read all instructions thoroughly. In addition, keep the following points in mind.

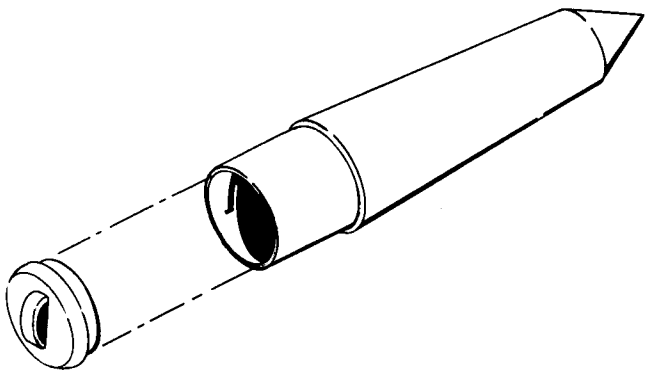
1. Read and understand each step and study the drawings before beginning any part in that step.
2. Always test fit the parts before assembling them. If they do not fit because they are too tight, sand them slightly. If they are too loose, build them up as described in the instructions.
3. Proper glue joints are vital for the safe operation of your model rocket. Use the recommended glues in the manner outlined by these instructions and by the glue manufacturer.

ITEMS REQUIRED FOR ASSEMBLY OF YOUR STARFIRE ROCKET

1. Cotton swab on stick (like Q-tip™)
2. Pencil
3. 400 grit sandpaper
4. Scissors
5. Ruler
6. Modelers Paint Brush
7. Modeling Knife
8. Sanding Sealer (optional)
9. White Glue or Aliphatic Resin Glue (such as Titebond™)
10. Instant Glue (Crazy Glue™) or Plastic Glue
11. Enamel Paint

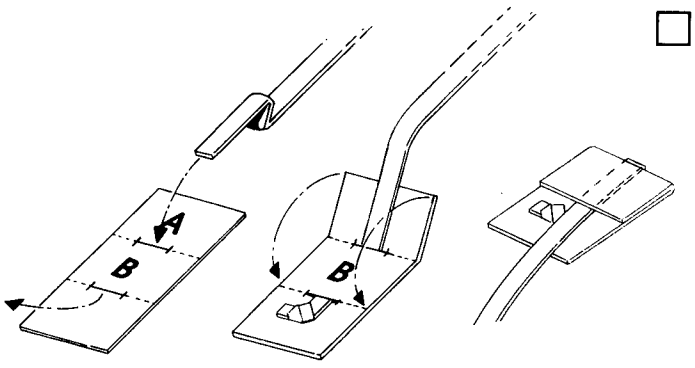
ASSEMBLY INSTRUCTIONS

Step 1 ☐



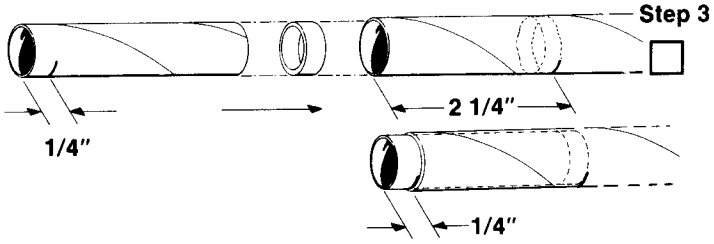
Using plastic cement or instant glue, glue the nose cone base to the nose cone. Wipe off excess glue and put aside to dry.

Step 2 ☐



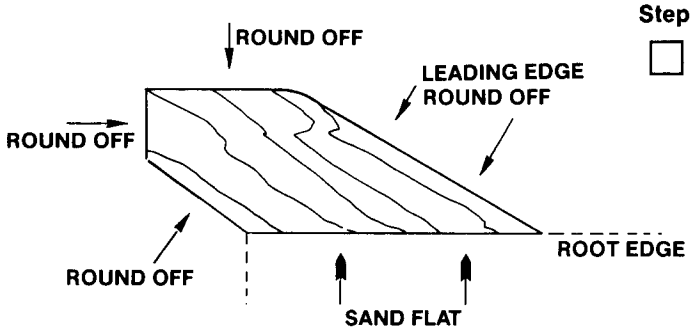
Cut out the shock cord holder on page 3 of the instructions. After it has been cut out, make two slits with your modelers knife on two dotted lines. Do not make slits any wider than is marked by the dotted lines. Feed the shock cord through the two slits as indicated in the drawing and put a small knot at the end of the shock cord. Apply white glue to Section B and fold A onto B along the dotted line. Allow to dry.

Step 3 ☐



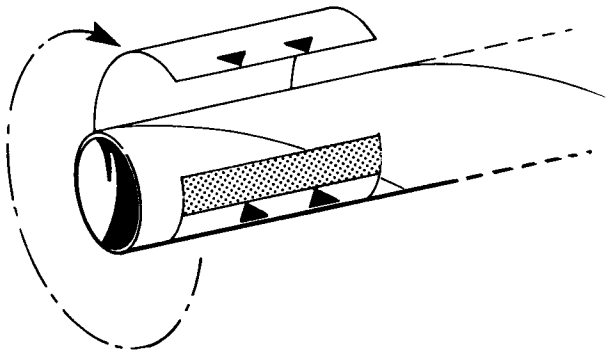
Locate the body tube and measure 2-1/4" from the end of the tube. Lightly mark this point with pencil. Locate the dummy engine tube. Now taking pencil and ruler mark the tube 1/4" from one end. Using a cotton swab apply a ring of white glue to the inside of body 2-1/4" from end as you have marked and as shown on the diagram. Hold one finger on the mark on the body tube so you can judge where to put the ring of glue. Now insert the engine block into the body tube and continue pushing the block into the tube using the dummy engine. The dummy engine should be inserted up to 1/4" mark you made on the dummy engine. DO NOT STOP WHILE INSERTING. REMOVE THE DUMMY ENGINE IMMEDIATELY. Be sure the engine block ring has made contact with the glue ring.

Step 4 ☐



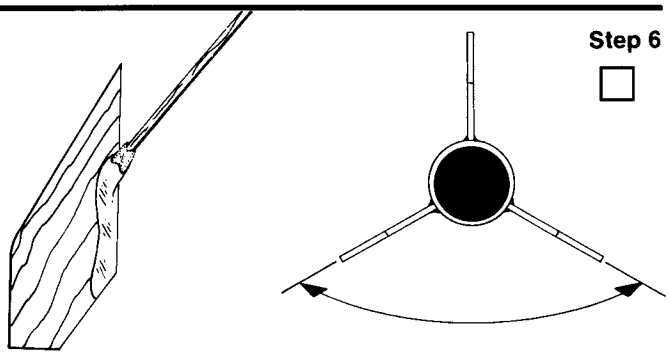
Locate the die-cut fin sheet. Gently sand top and bottom sides of the sheet, and remove the fins by cutting along the die-cut marks using your modeling knife. Sand all edges so that the fins are identical. Refer to the diagram to identify the root edge. Sand the root edge flat. All other edges including the leading edge are to be rounded evenly.

Step 5 ☐



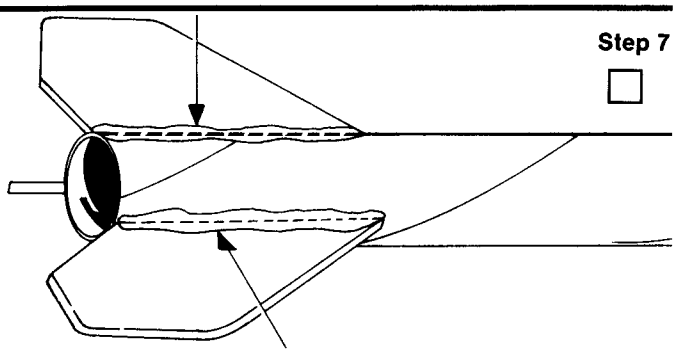
Cut out the paper tube marking guide on page 3. Roll ends of the guide in the direction of the large arrows around the outside of the body tube where you have just installed the engine block. Line up the alignment arrows and tape the ends as shown in the diagram. "TAPE ONLY THE GUIDE; DO NOT PUT TAPE ON THE BODY TUBE." Position bottom of the guide at 1/4" from the end of the tube and put a small mark on the body tube by each vertical arrow. You should have eight marks on the tube when done. Mark each line if it is for a fin or the launch lug. Slide the marking guide off the body tube and gently clamp the tube between two solid objects. Using a ruler join each pair of marks in a vertical direction as straight as possible. The launch lug line should extend for 3-1/2" from the end of the body tube.

Step 6 ☐



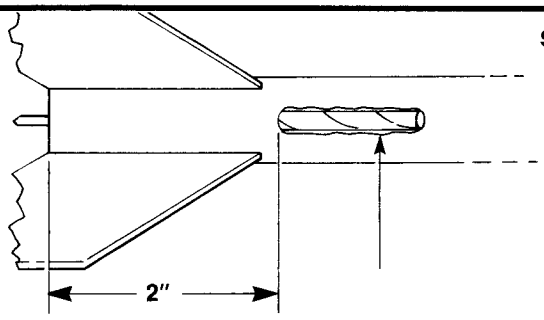
Using a cotton swab apply a small application of white glue to the root edge of each fin. When doing this, rub the glue thoroughly into the wood to assure a better bond. Apply a small bead of glue to one fin and let it dry for about two minutes, then attach the fin to one of the marked fin lines on the tube as per diagram. Be sure the fin extends vertically away from the body tube is straight along the pencil line. The bottom of the root edge should be even with the bottom of the tube. After each fin has dried, apply the next fin in the same manner. Erase any leftover pencil marks after the glue has dried.

Step 7 ☐



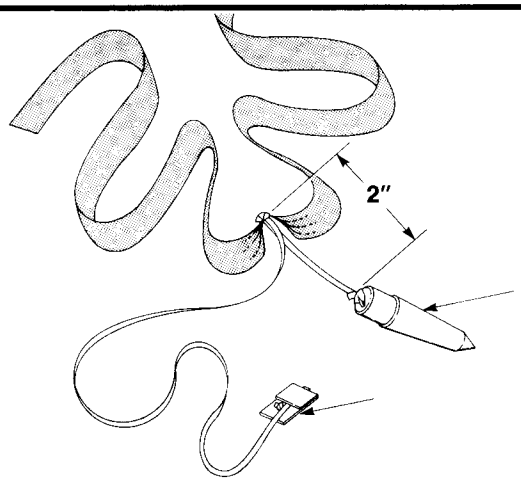
Apply a line of white glue to each side of the three fins for reinforcement.

Step 8 ☐



Now glue the launch lug onto the body tube. The rear of the lug should be 2" from end point of the body tube. See diagram. After the glue has dried, add an additional bead of glue to each side of the launch lug as a reinforcement bond.

Step 9 ☐



Tie the shock cord around the middle of the streamer with a double knot. Leave 2" free from the knot then tie the nose cone to the shock cord with a double knot. Put a drop of white glue on the nose cone knot.

Step 10

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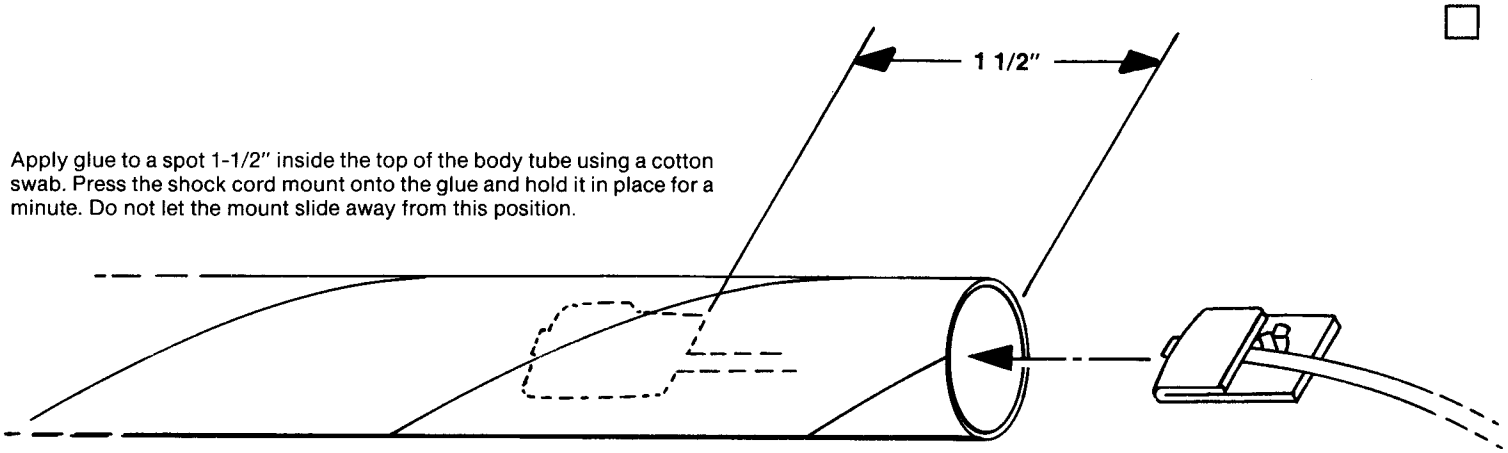

Apply glue to a spot 1-1/2" inside the top of the body tube using a cotton swab. Press the shock cord mount onto the glue and hold it in place for a minute. Do not let the mount slide away from this position.

Step 11

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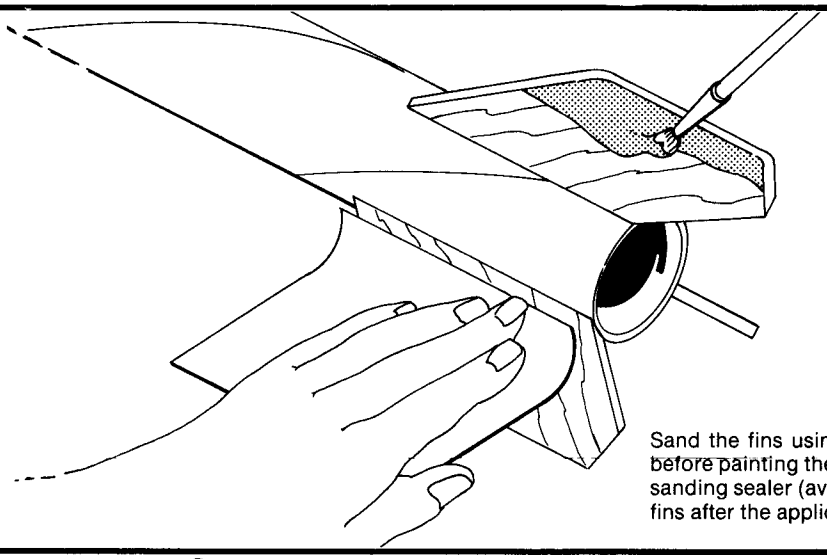

Sand the fins using the 400 grit sandpaper so that the fins are smooth before painting the rocket. As an option you can seal the balsa fins using sanding sealer (available at your hobby shop). If you use sealer, sand the fins after the application of sealer has dried to get the smoothest finish.

Step 12

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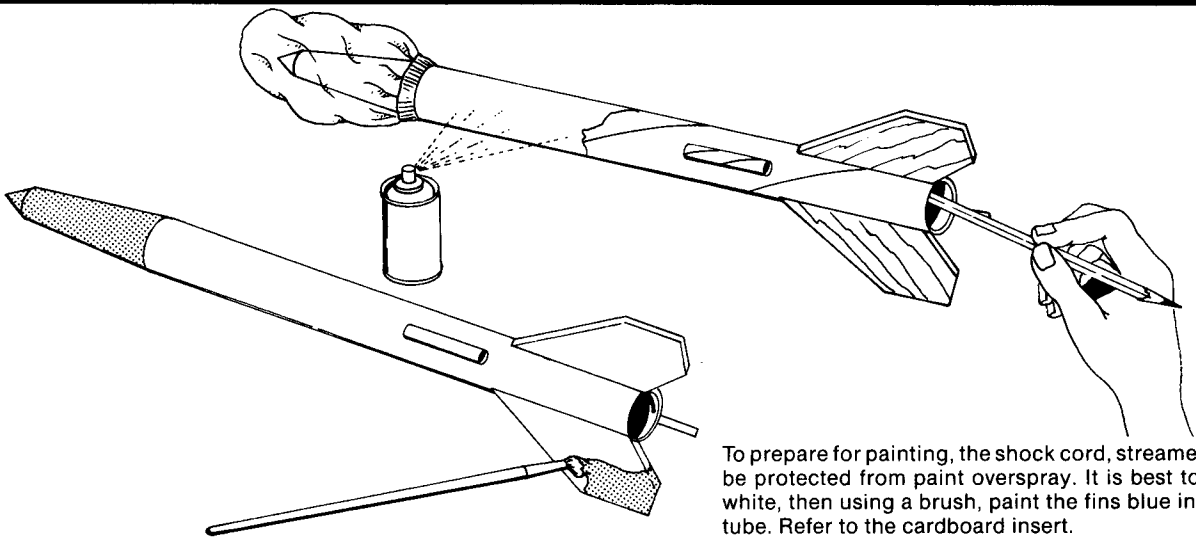
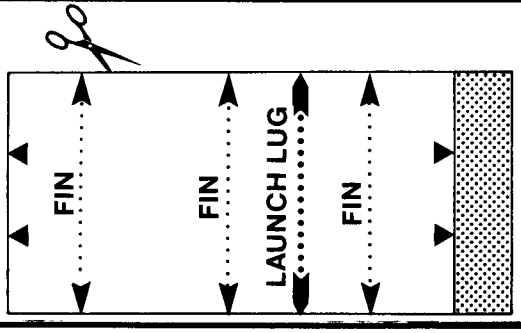
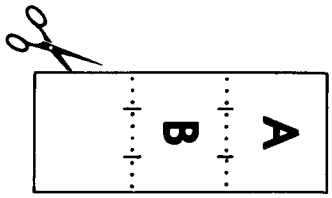


To prepare for painting, the shock cord, streamer and nose cone should be protected from paint overspray. It is best to paint the rocket body white, then using a brush, paint the fins blue including the lower body tube. Refer to the cardboard insert.





Step 13

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The special MRC self-adhesive decals included in this kit can be instantly applied to the body tube after the paint has dried. Take your time in applying the decals because the glue on them is very strong and decals cannot be removed once applied.

To apply decals, cut decals from the sheet. Remove white backing from the decal. Position the decal on the rocket lightly and carefully. Press the decal firmly onto the rocket, making sure the decal surface is evenly applied, with no bubbles or loose edges, by rubbing the surface with your fingernail. Remove the thick upper sheet without lifting the thin decal. Use the cardboard insert within polybag for decal location.

FOR SAFE LAUNCHES, YOU MUST FOLLOW THE ACCOMPANYING CHECKLIST EVERYTIME YOU USE YOUR MODEL ROCKET.

READ AND FOLLOW THE SAFETY WARNINGS ON THE CARDBOARD INSERT EACH TIME YOU USE YOUR MODEL ROCKET.

LAUNCH CHECKLIST

1. Disarm the launch system by removing the safety key.
2. Loosely pack 2 squares of flameproof wadding into the body tube from the forward end where the shock cord mount is located. The wadding should slide smoothly into the center of the tube for maximum effect.
3. Fold the streamer in half, then roll it up tightly. For maximum drag for safe recovery, you can fold the streamer in succeedingly smaller halves instead. The streamer should be rolled or folded to fit the body tube easily. A light application of talcum powder to the streamer can aid deployment. Be sure the wadding has been inserted before inserting the streamer. It is best not to pack the streamer until you are ready for a launch.
4. Install the nose cone over the streamer. The nose cone should fit snugly; not too tight or too loose. If the fit is too tight, you can sand the inside edge of the body tube or the nose cone shoulder lightly until you achieve a snug fit. If the nose cone is too loose you can add masking tape to its shoulder to get a snug fit, or you can build up the inside edge of the body tube with a light application of glue. Be sure the glue is dry before test fitting the nose cone.
5. Carefully select the engine for launch. For a first flight, use the A8-3 engine as recommended. Insert the igniter as per engine instructions.
6. Engine Installation:
   Wrap the rear of the engine with masking tape so it fits tightly in the body tube. It must be tight enough to insure proper recovery deployment, but not so tight as to prevent removal after it is used. The engine should be inserted into the body so that the rear of the engine projects 1/4" out from the body tube and the igniter leads should be positioned between two fins and away from the launch lug side of the rocket.
   "DOUBLE CHECK THAT THE LAUNCH SYSTEM HAS BEEN DISARMED AS PER STEP 1 ABOVE"
7. Fit the launch rod through the launch lug of the rocket. The nose of the rocket should be pointing upwards. Be sure the rocket slides freely on the launch rod. Attach the launch system clips to the igniter leads.
8. Clear the launch area and follow all range and safety procedures.
9. Arm the launch system
10. Countdown to launch!

IF A MISFIRE OCCURS, DISARM THE LAUNCH SYSTEM AND **WAIT ONE MINUTE** BEFORE APPROACHING THE ROCKET TO DETERMINE THE CAUSE OF MISFIRE. REMOVE THE SAFETY KEY FROM THE LAUNCH SYSTEM BEFORE YOU APPROACH THE LAUNCHER. **DO NOT** PUT YOUR HANDS AND FACE NEAR THE TOP OF THE ROCKET. . .

When you are ready to leave the launch site, we suggest you pick up and properly dispose of all debris such as used igniters, flameproof wadding or engine packages. A clean launch site is a safe launch site!

BLAST OFF

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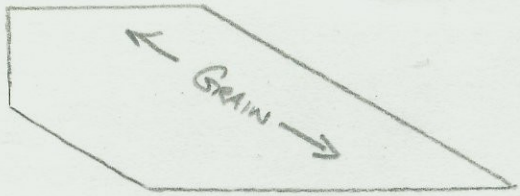
MRC Kit TR 100 Starfire

Refer to parts listed in instructions for part descriptions.

Part #3 - 18" X 1/8"
Part #4 - 28" X 1"
Part #5 - 9"
Part #6 - 1/8" X 1.25"

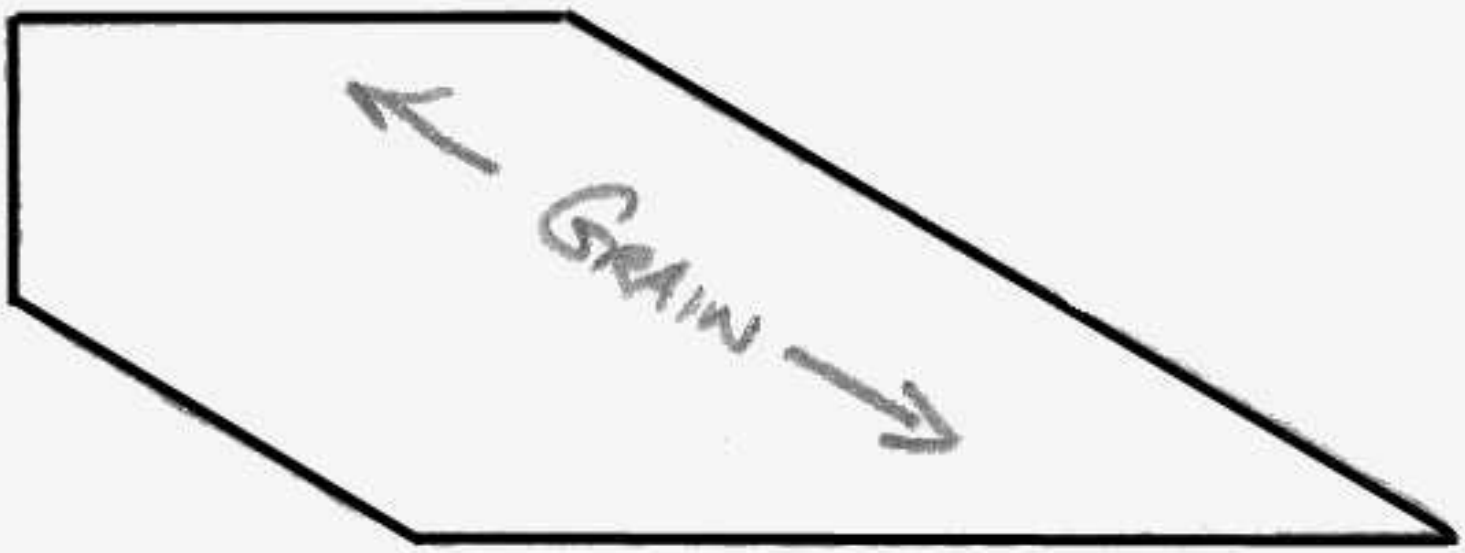
3 ea

1/16" Balsa



3 ea

1/16" Balsa

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