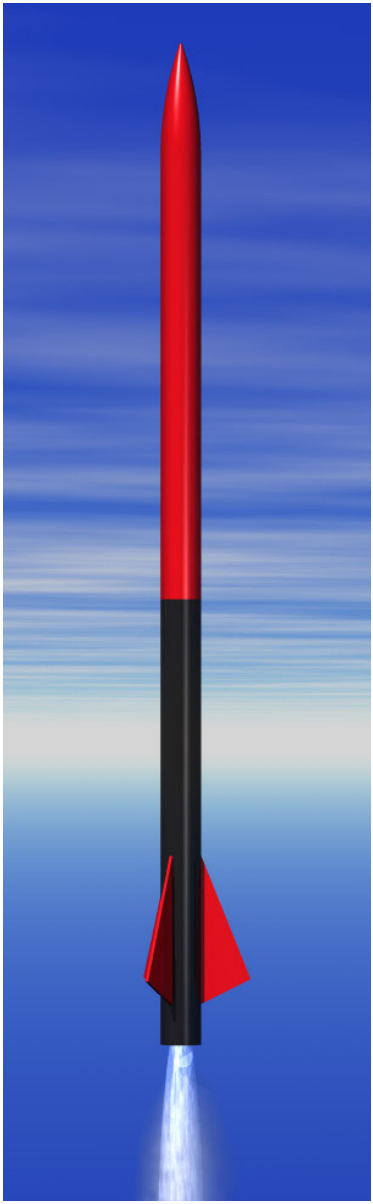

K-133

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SCREECH™

Specifications:

Length: 40.5”
Diameter 1.5”
Weight: 8oz
Recovery: 18” Nylon Chute
Motor Mount: 29mm or 38mm
Fins: 3 - 1/8” Plywood
CG: 29” from nose tip

Parts List

1. (1) Custom balsa nose cone
2. (2) Body tube sections
3. (1) Coupler
4. (1) Shock cord anchor
5. (1) 1/4” Eyebolt, nuts and washer
6. (3) laser-cut fins
7. (1) Kevlar® shock cord section
8. (1) Nylon shock cord section
9. (1) 6”x6” flameproof chute protector
10. (1) 18” Nylon chute
11. (2) ¼” launch lugs
12. (1) 29mm motor tube
13. (2) Centering rings

Required to complete: 5 minute epoxy, 120/220 sandpaper, masking tape, finishing filler/paint.

madcow rocketry
put some fun in your rocket!

Please make sure you read all directions and understand how to assemble your model before you start construction. It is also a good idea to test fit each part before assembly – some manufacturing tolerances may require light sanding before final assembly.

Laser cut parts will exhibit varying amounts of charring on the edges depending on the density of the plywood. The charred edges do not interfere with bonding and do not need to be cleaned before assembly. In most cases the charring will be cleaned up during sanding for finishing and painting.

Step 1 – Fin Assembly

Start by wraping one end of a body tube with the fin alignment template. Make a mark for each of the 3 fins and the launch lug location. Using a door jam or small section of angle stock, extend the fin marks from the middle of the tube to the aft end of the tube. Extend the launch lug mark the entire length of the tube. Additionally, mark each of the fin lines 2" from the aft end of the tube. This will mark the aft end of each of the fins.

Apply some epoxy to the root of one of the fins and carefully align the fin on one of the fin marks. Make sure the aft end of the fin is lined up with the mark you made 2" from the aft end of the tube. After the epoxy sets, repeat for the other two fins. Next, apply epoxy fillets to both sides of each fin. Carefully smooth the epoxy fillets with your finger before the epoxy sets. Allow each fillet to set before rotating the airframe for the next fillet.

IMPORTANT: The fin can should be reenforced appropriately with fiberglass if you plan to exceed 0.85 Mach.

Step 2 – Shock Cord Attachment

The shock cord in this kit consists of a shorter section of Kevlar and a longer section of nylon cording. The two sections should be tied together using a single overhand, ring bend or double fisherman's knot. The Kevlar section will be attached to the plywood anchor and the nylon section will be attached to the nose cone.

Start by inserting the 1/4" eyebolt into the C shaped plywood anchor using the nuts and washer. IMPORTANT: make sure you apply some epoxy to the eyebolt threads so the nut does not come loose later. Secure the kevlar section of the shock cord to the eyebolt. You can apply some epoxy to the knot so it does not come loose later.

Test fit the C shaped anchor inside the body tube and make sure the eyebolt doesn't interfere. When you are satisified with the fit, apply some epoxy inside the forward section of the body tube (the one with the fins attached in the previous section). Slide the C shaped anchor into the body tube. Push the C shaped anchor farther into the body tube using the small coupler section until the coupler has 2" still exposed. Make sure the C shaped anchor stays seated against the base of the coupler and that no epoxy drips down into the motor section of the body tube (this will interfere with the motor later).

After the epoxy has set, apply some epoxy to the coupler and attach the forward section of the body tube. IMPORTANT: make sure the shock cord comes out the forward section of the body tube and doesn't get pinched inside the body tube.

Step 3 - Nose Cone Assembly

Tie some knots in the end of the nylon section of the shock cord and stuff the shock cord into the hole in the base of the nose cone. Fill the hole with some epoxy to secure the shock cord.

Step 4 – Launch Lug Attachment

Mark the CG point along the launch lug line you made in the previous step. Make sure you measure the CG point from the tip of the nose cone and NOT the end of the body tube. Apply a small amount of epoxy on the launch lug line about ¾" long on the CG mark. Press one of the launch lugs into the epoxy and ensure that it is aligned with the launch lug line previously drawn on the body tube. You can site down the tube and look through the launch lug to make sure it is straight. Similarly epoxy the second launch lug about 2" from the aft end of the body tube (aligned with the aft end of the fins). Site down both launch lugs and make sure they are both aligned. If you have a ¼" launch rod, you can use this to ensure that both lugs are aligned properly.

Step 5 – Optional 29mm MMT

Skip this step if you would like to keep the 38mm motor mount. Otherwise, epoxy the 2 centering rings onto the 29mm motor tube 1/2" from each end. Apply some epoxy inside the body tube and slide the motor mount half way in. Apply some more epoxy inside the body tube and continue sliding the motor mount assembly until it is flush with the aft end of the body tube.

Step 6 – Flying Your Model

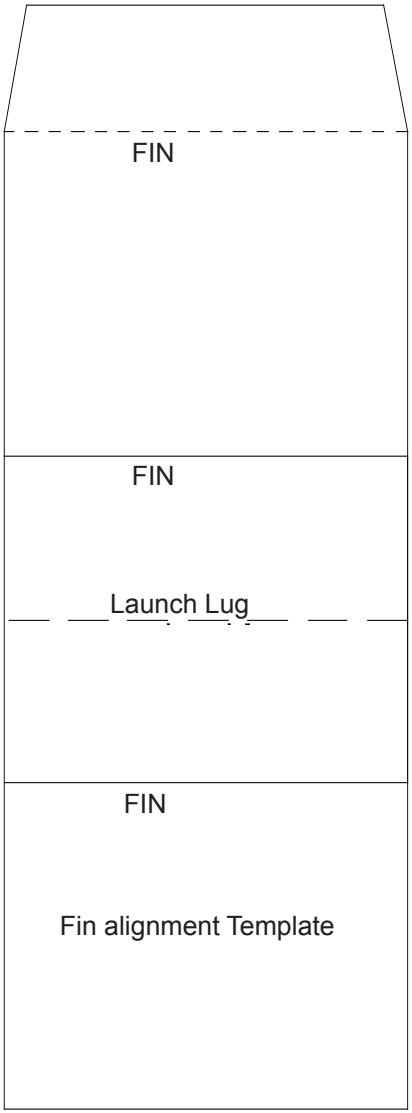
Attach the parachute to the shock cord just below the nose cone. You can also attach the chute protector about half way down the chock cord. When packing your chute, wrap the chute protector around the chute with the opening in the chute protector facing forward. Always make sure your chute is well protected as the hot ejection motor gasses will melt the nylon chute.

The motor retention for your model relies on a friction fit. If the friction fit is too loose then the motor will eject instead of the parachute making for a dangerous ballistic reentry. You can wrap masking tape around the motor to adjust the friction fit. The motor should be tight enough that it is difficult to remove, but not require enough force that the model is destroyed.

IMPORTANT: always remember to check your balance point and ensure your CG is ahead of the specified CG point.

At this point your model is ready to fly. Always follow the NAR safety code and remember that rockets are not toys and can be dangerous if not prepared and used properly. If you are a beginner, it is a good idea to fly with a club or other group of experienced rocketeers until you have gained some experience.

Now go have some fun!



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