

CENTAURUS

This three-finned kit is a hail back to those future ideas from yesteryear. Centaurus is our company's flagship. A non-flying orange and white scale-up of this model graces our tent when we travel to rocket launches.

A few of the features are pre-cut aviation plywood fins and canards and a custom turned wood transition. Comes complete with 'Centaurus' sticker, vinyl numbers, pin striping and enough material to fashion checkerboard pattern.

SKILL: Level 3

LENGTH: 39.5"

DIAMETER: 2.5"-4"

WEIGHT: 30 ounces

MMT: 29mm

RECOVERY: 30" rip-stop nylon
parachute

RECOMMENDED MOTORS: F40-4,
F62-4, F80-4, G40-7, G80-7

All kits require assembly. White glue, epoxy,
finishing supplies, launch system, recovery
wadding and rocket motors for launching are

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-All our model rocket kits are **RECOMMENDED** for age 12 and up with adult supervision.

-Our rocket kits contain small components that could easily be swallowed by young children. Keep all components out of reach of all children under 10 years of age.



FAT CAT
ROCKETS, INC.

www.fatcatrockets.com

CENTAURUS

PARTS LIST:

- *MAIN BODY TUBE (2-1/2" DIA. x 30")
- *LOWER BODY TUBE (4" DIA. x 7-1/2")
- * (3) OUTER TUBE PODS (1" DIA. x 8-3/8")
- * MOTOR MOUNT TUBE (1-1/4" DIA. x 17")
- * PLYWOOD FINS AND CANARDS ^{2/14}
- * (2) INNER CENTERING RINGS
- * (2) OUTER CENTERING RINGS
- * PLASTIC NOSE CONE
- * WOODEN TRANSITION
- * LAUNCH LUGS
- * SHOCK CORD MOUNT (16" LONG)
- * 3/4" SHOCK CORD (50" LONG)
- * 36" PARACUTE
- * POD CAPS
- * NOSE WEIGHT (7 OUNCES)
- * STICKER DECALS AND PINS/STRIPPE

ITEMS YOU WILL NEED TO ASSEMBLE THIS KIT:

- * PENCIL OR PEN
- * HOBBY KNIFE
- * YELLOW GLUE
- * 5 MINUTE EPOXY
- * SANDING PRIMER
- * PAINT (your choice)
- * RULER
- * SAND PAPER (180 and 320 grit)

RECOMMENDED MOTORS:

- F50-4; F62-4; F80-4; G40-7; G80-7; H70-10

EXAMINE ALL PLANS BEFORE ASSEMBLING THIS MODEL.

USE OF FLAME RESISTANT WADDING IS RECOMMENDED WHEN FLYING THIS MODEL ROCKET.

If you have any question, contact us at: 352-385-1994 or info@fatcatrockets.com

STEP 1

A. Using the fin guide, mark the main body tube for fin and canard placement. Starting at one end, draw six lines 22" down the body tube. Mark the same tube with a seventh line for the launch lug. This line is 10" long.
 B. Mark the main body tube for the fin tabs. With a hobby knife, cut out the fin slots. Be sure the fin tabs fit. (See Figure 1).
NOTE: DO NOT GLUE THE FINS IN YET!!!
 C. Using the fin guide, mark the fin lines on the lower body tube. Cut out the slots as indicated (See Figure 2).
 D. mark and cut out the slots on the outer tube pods. (See Figure 3).

Then glue the short braces into the bottom of each pod.

STEP 6

A. Test fit the pod struts into the pods. Mark and cut the main body tube for tab slots (See Figure 7). Then, glue the struts in place.

STEP 7

A. Epoxy the disk plates onto the bottom of each pod. Then, epoxy the half disks onto the top of each pod on both sides of the struts (See Figure 8).

STEP 8

A. Mount the canards onto their lines as shown in Figure 9. Filllet all joints. Prime and sand as desired.

STEP 9

FINISHING YOUR CENTAURUS.

(The following instructions are to finish your model like our first proto-type).
 A. Paint the model glossy white. When dry paint the nose, canard area, pods, and transition red or orange.
 B. Make up the Checker Board and Side Numbers as shown on the Sticker Pattern page. (Paint these the same color as the nose, canards, etc.)

STEP 10

A. Apply the silver pin stripe as shown on the color page. Then, apply the Checker-board as shown on the sticker diagram.
 B. Apply the side numbers as indicated. Then, apply the Centaurus sticker and the rest of the pin stripe as shown on the Paint Page.

STEP 11

A. Attach one end of the shock cord to the cord mount and the other to the nose cone. Then, attach the parachute to the shock cord near the nose cone.

STEP 2

A. Assemble motor mount as shown in Figure 4.

B. Assemble shock cord mount as shown in Figure 5. Then, install finished motor mount into the body tube (flush with tube end).
 C. Epoxy weight into tip of nose cone.

STEP 3

A. Install the large rings into the outer body tube.

One ring is flush with the bottom of the tube, and the other is 1/2" from the front end. (Make sure the holes for the launch lugs are in line with each other). Attach the launch lugs onto their line (See Figure 6).

STEP 4

A. Test fit the outer body tube and the fins onto the main body tube. If everything fits, then remove the fins and glue the outer tube into place. When dry, glue the fins into place.
 B. Slide the transition onto the main tube and glue into place (Be sure to line up lugs).

STEP 5

A. Glue the fins into place.
 B. When dry, glue the outer tube pods onto the fins. **NOTE:** Refer to the Cutaway Page for help.
 D. Glue the long pod braces into the top of each pod.

Fin Guide

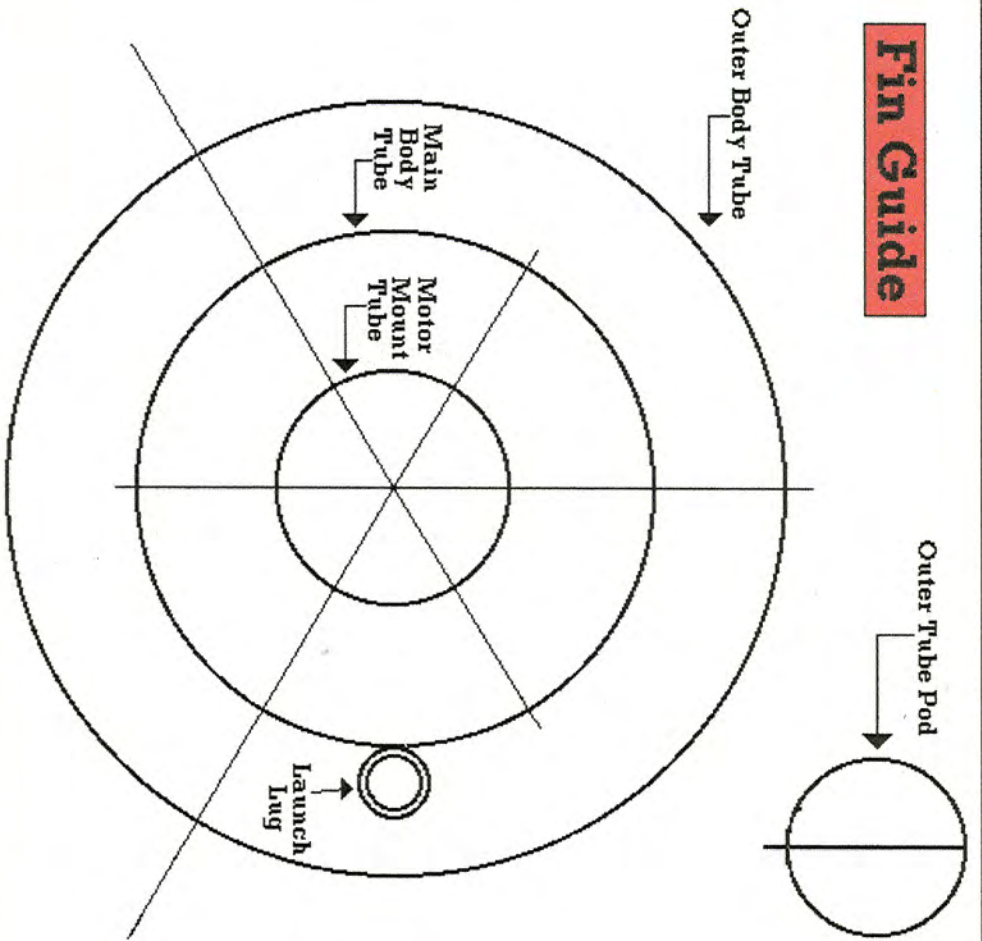
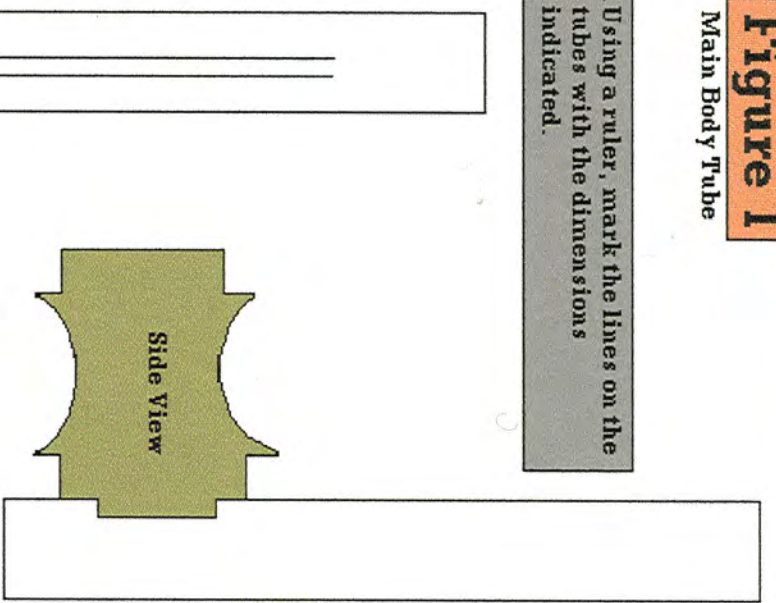
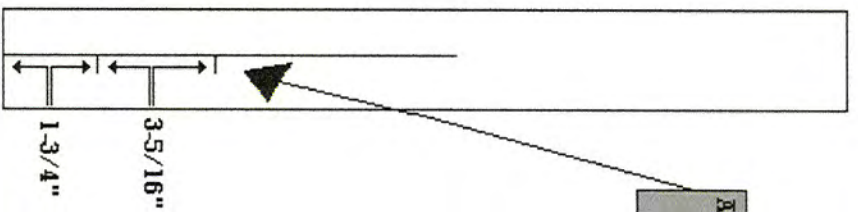


Figure 1

Main Body Tube

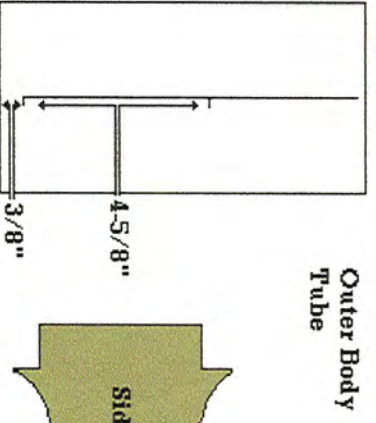
A. Using a ruler, mark the lines on the tubes with the dimensions indicated.



B. Measure over from the fin line $5/32"$ and draw a parallel line to the original fin line. Draw this line to connect the marks mentioned in the previous step.

NOTE: Draw these lines up to the $22"$ position on the main body tube. This will help to avoid confusion in later steps.

Figure 2



Outer Body Tube

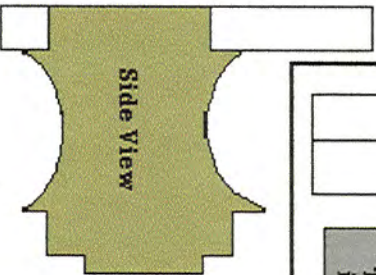
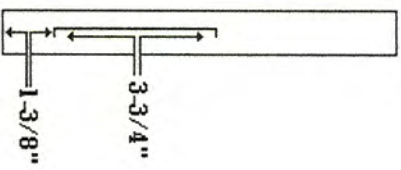
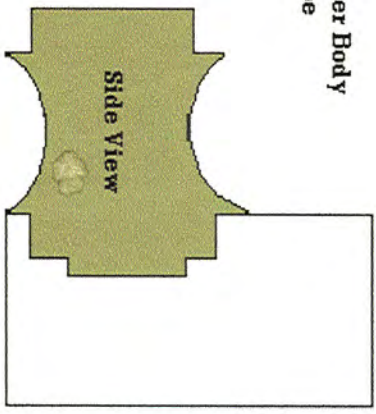


Figure 3

Outer Tube Pods

Figure 4

- A. Mount the centering ring with the two holes 1/4" from one end of the motor tube.
- B. Mount the other centering ring onto the other end of the motor tube. Place the ring flush with end of the tube.
- C. Fillet all joints.

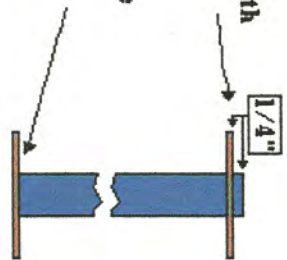


Figure 5

- A. Loop the shock cord mount cable through one hole in the centering ring and back through the other hole.
- B. Slide one of the copper clips onto the end of the loop and crimp. Be sure that the cable is secure in the clip.
- C. Install the second copper clip onto the other end of the cable. Then form a loop, and slide the end of the cable back through the clip. Crimp the clip as done in Step B.

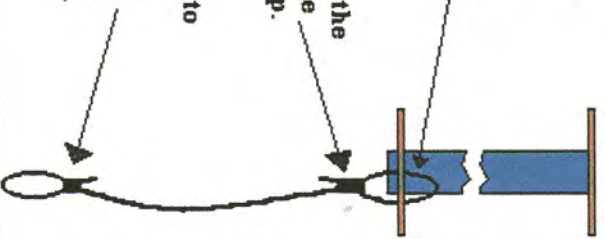


Figure 7

- A. Mark and cut main body tube for strut tabs. **NOTE:** Be sure the tab slots are in line with the fins.

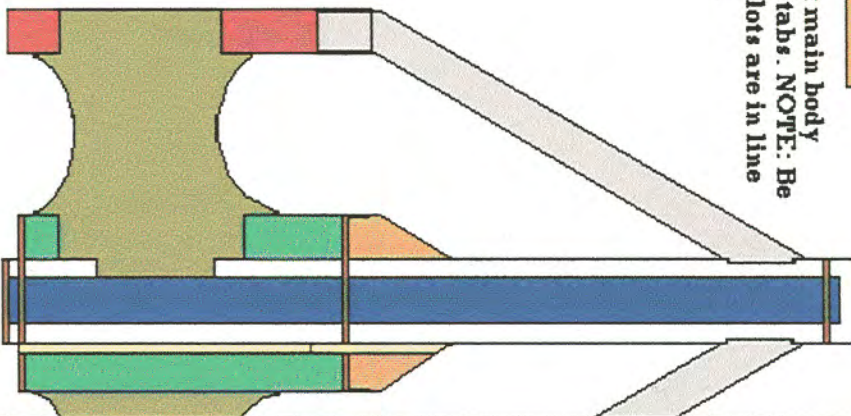


Figure 9

- A. Attach the six canards to the main body tube.

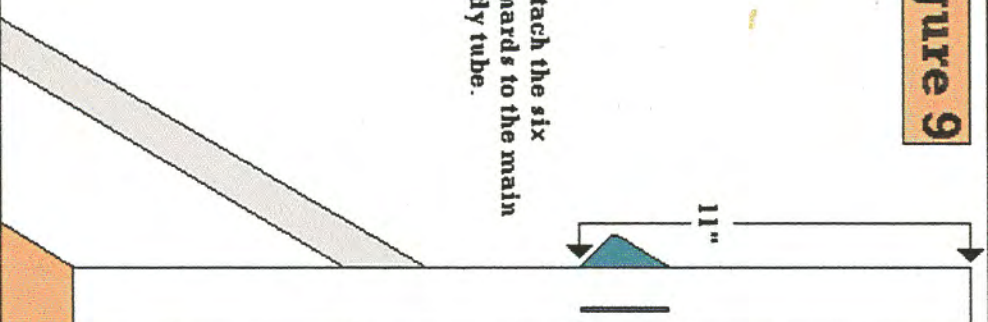
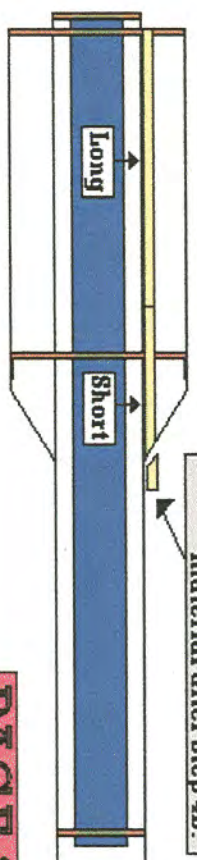


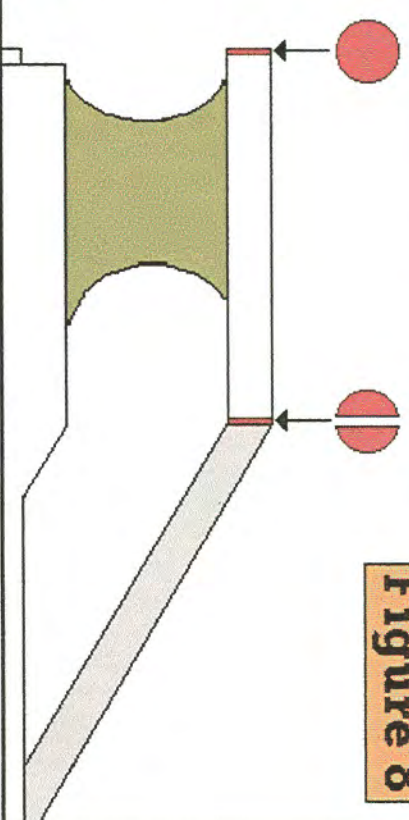
Figure 6

- A. Attach the long lug 5/8" from the rear of the main body tube. Attach the short lug to the front of the long lug.



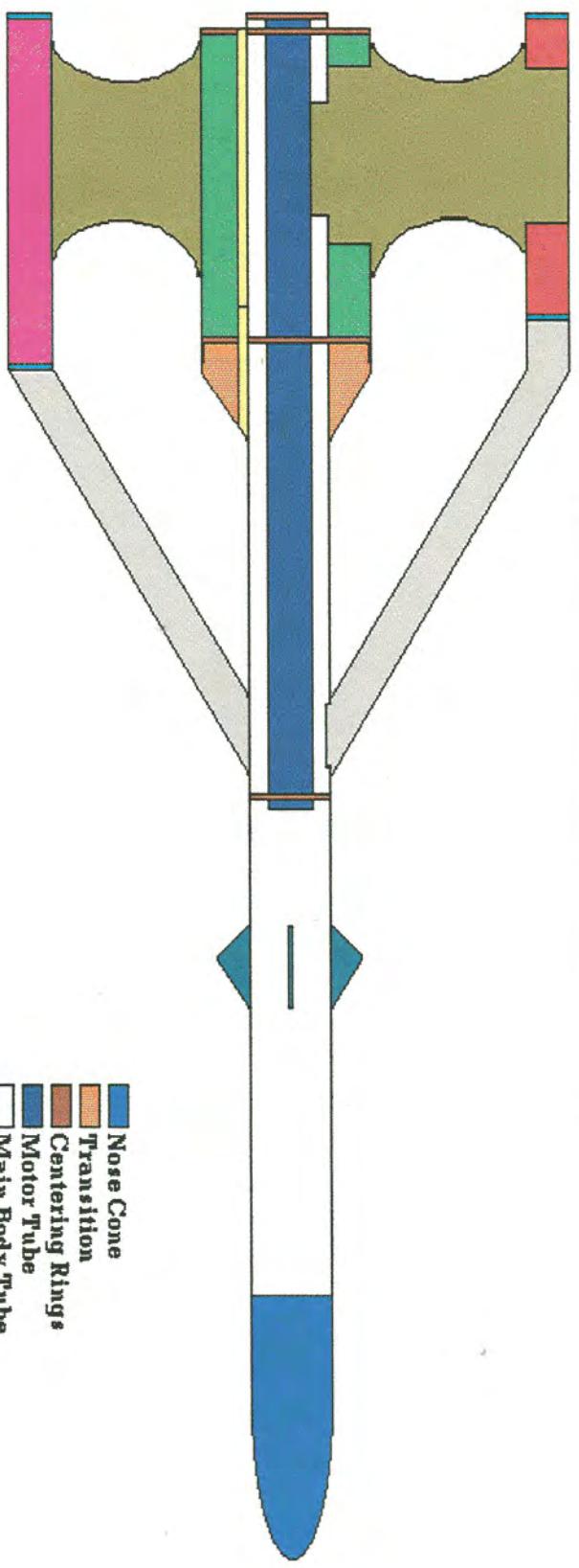
NOTE: Trim off the excess lug material after Step 4b.

Figure 8



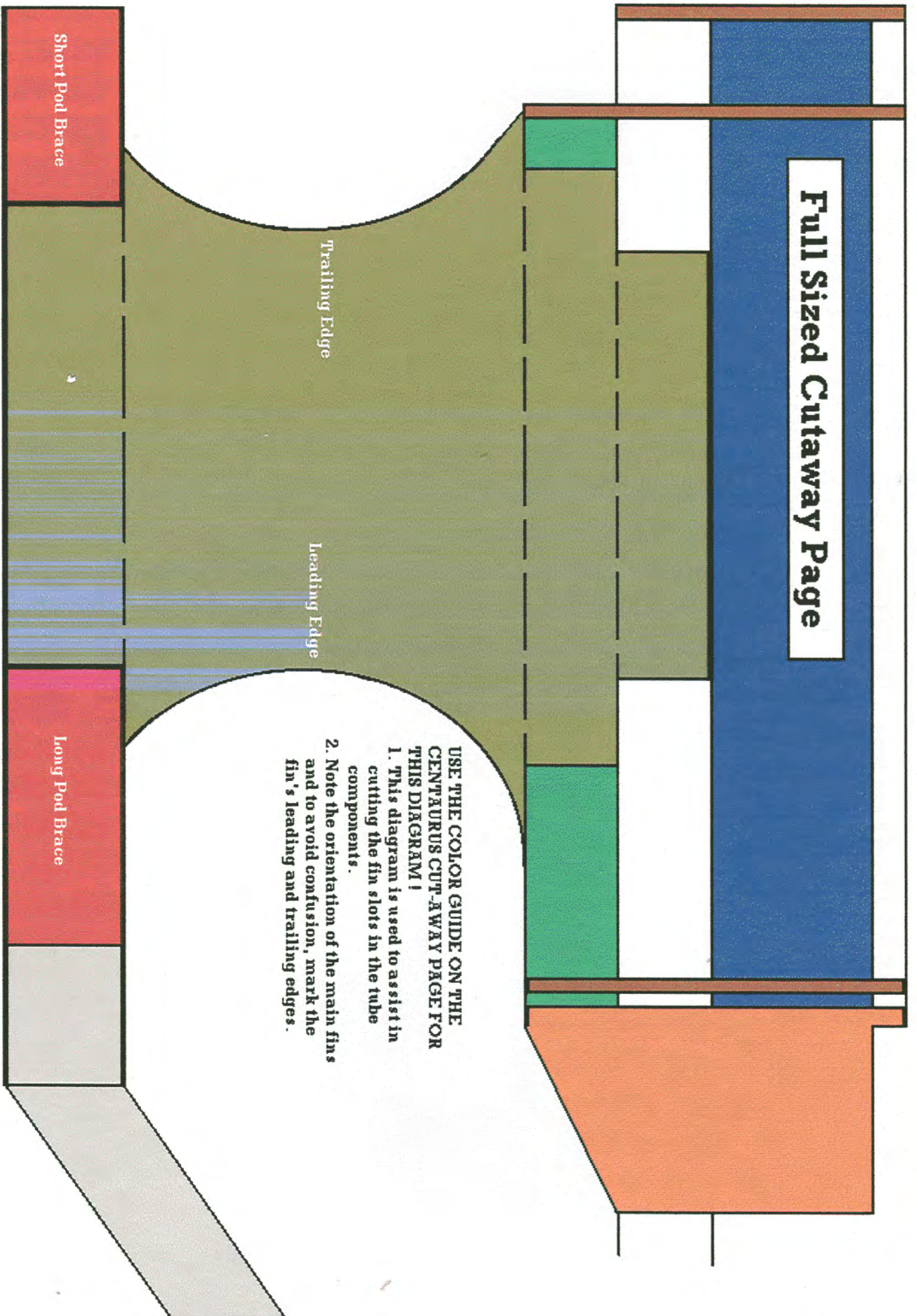
Centaurus Cut-away

Use this partial cut-away diagram to assist in constructing your Centaurus.



- Nose Cone
- Transition
- Centering Rings
- Motor Tube
- Main Body Tube
- Lower Body Tube
- Outer Tube Pods
- Main Fins
- Canards
- Pod Struts
- Pod Caps
- Pod Braces
- (Long And Short)
- Launch Lugs

Full Sized Cutaway Page



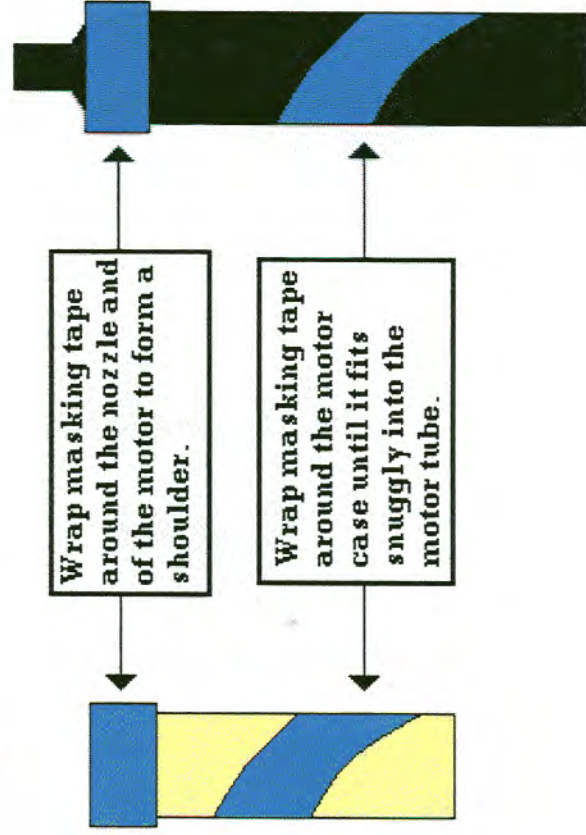
USE THE COLOR GUIDE ON THE CENTAURUS CUTAWAY PAGE FOR THIS DIAGRAM !

1. This diagram is used to assist in cutting the fin slots in the tube components.
2. Note the orientation of the main fins and to avoid confusion, mark the fin's leading and trailing edges.

ATTENTION

Be sure to follow NAR and TRA safety rules and codes when flying this model.

This model kit is designed for friction fit motor retention. Fat Cat Rockets leaves it up to the model builder to use whichever retention system they desire. Refer to the diagram for friction fitting info.



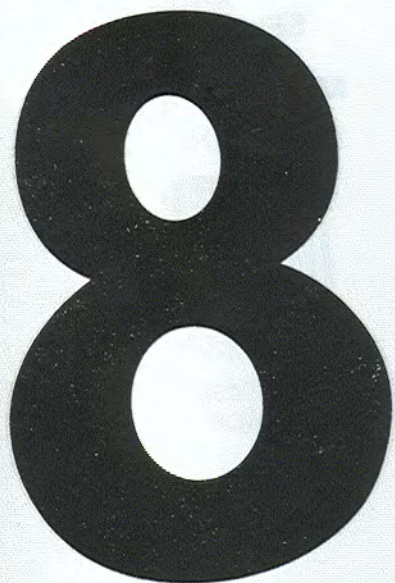
This model (if built to instructions standard) is properly weighted for flight.

Use at least a six foot rod for flying this model.

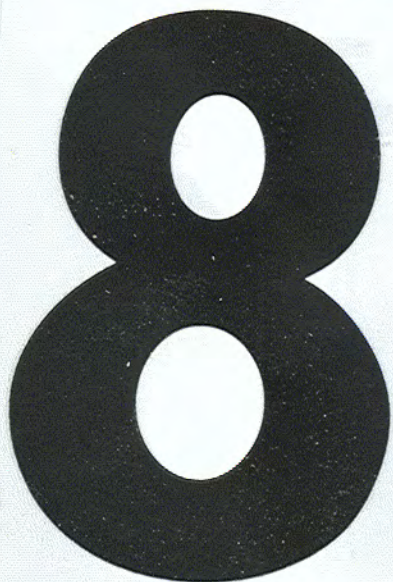
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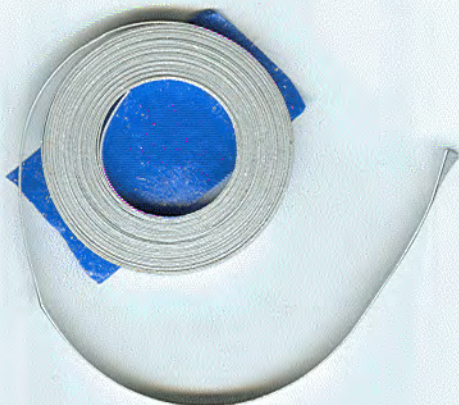
3" SELF STICK



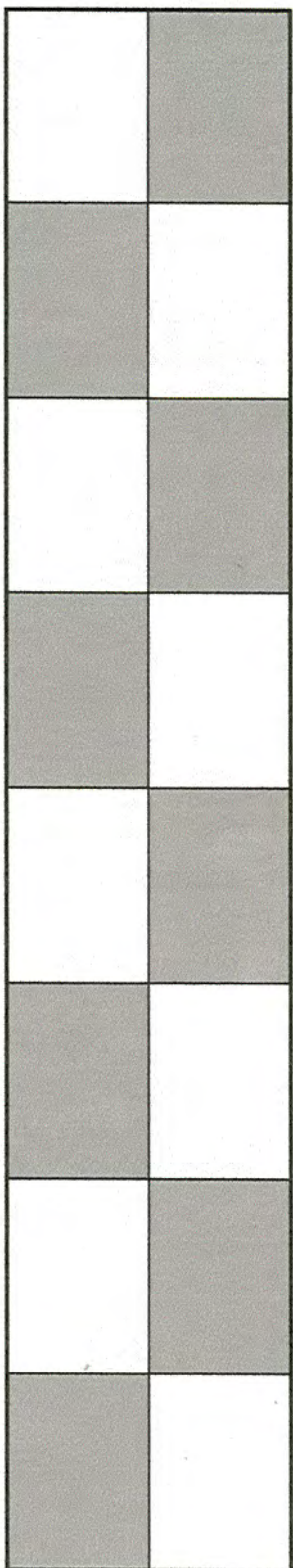
3" SELF STICK



3" SELF STICK



Sticker Pattern (Checker Board)

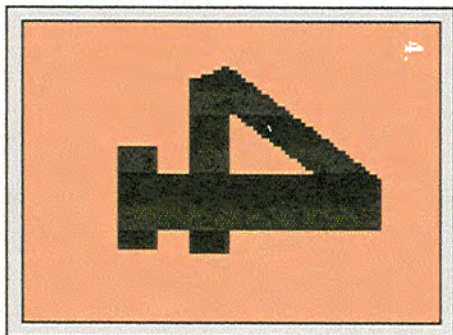
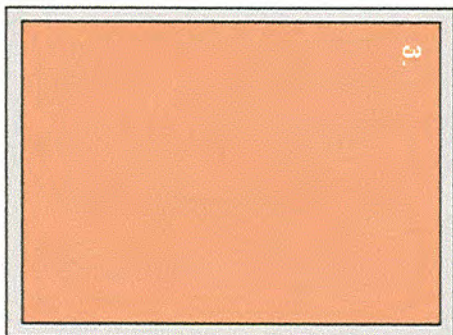
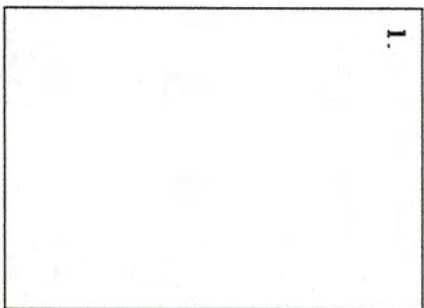


Cut eight 1-1/32" long pieces from the white sticker strip. If you desire a different colored check pattern, simply lay out the pieces on a sheet of cardboard. (Note: Tack the pieces in place with double stick tape.) Paint as desired, but remember, use several light coats of paint. When dry...apply. Krylon or Testors will work fine.

Note: Lay out this pattern as shown. Apply the piece of pin stripe indicated on the Centaurus paint page first. Then, apply the check pattern. Then, the rest of the pin stripe at the color seams.

Sticker Pattern (Side Numbers)

1. Locate the three large pieces of white sticker material.
2. Lay the stickers out and paint them the same color as the stickers for the checker board pattern.
3. When dry, apply the stickers to the painted model (use the finish page for assistance). Apply the provided pin stripe material to form a frame around the stickers as shown.
4. Apply the provided vinyl numbers to the sticker as shown.



X 3 FINJ



