

AMRAAM 2

Assembly instructions

Please read and understand all instructions before continuing!

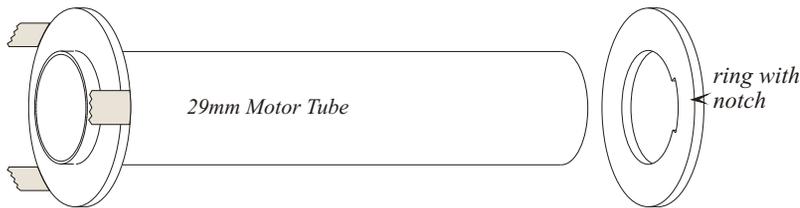
Stuff you will need:

- One set of each 5 and 15 minute epoxy
- One sheet of each fine and medium sand paper
- Ruler and pencil
- Masking tape
- Cellophane tape

Step 1

NOTE:

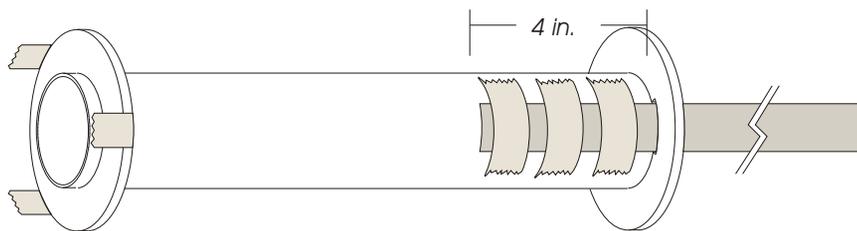
Be sure to scuff all parts to be bonded using medium sand paper.



A) Slide the standard centering ring over the motor tube until 1/4" of the motor tube is protruding beyond the ring. Make 3 or 4 tabs using cellophane tape as shown above to aid in removing this ring later. Do not use any glue at this time, this centering ring will be removed in a subsequent step.

B) Epoxy the notched (top) centering ring 1/2" from the other end of the motor mount tube.

Step 2



Slip one end of the piston strap (the 3/4" wide one) through the notch in the centering ring. Epoxy about 4" of this strap to the side of the motor tube. Hold the strap in place against the tube with masking tape until the epoxy cures. Stuff the free end of the strap into the motor tube to keep it out of the way for the next step.

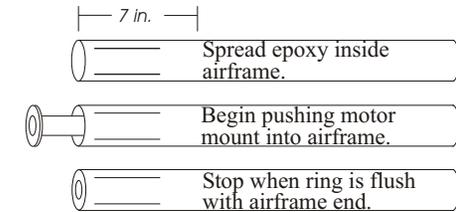
Step 3

A) Using a stick, apply a ring of epoxy inside the airframe 7" from the bottom end.

B) Push the motor mount assembly all the way into the airframe until the taped, bottom centering ring is flush with the end of the airframe. Make sure the motor mount tube is still protruding 1/4" from the bottom centering ring as shown. **Do not epoxy the bottom centering ring in place at this time!**

C) Hold the airframe upright until the epoxy cures.

If you prefer not to be rushed through this step or have little experience with this type of procedure, use a slow setting epoxy (15 min. epoxy is ok, bond will be stronger too!).

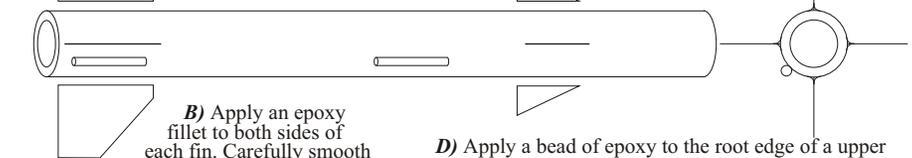


NOTE:

Be sure the strap is not in line with the fin slots otherwise the fins may not fit properly.

Step 4

A) Apply a bead of epoxy to the root edge of a fin. Push the fin through the slot in the airframe and against the motor mount tube. Make sure that the fin is perpendicular to the airframe. Use tape to hold the fin in position while the epoxy cures. Repeat this process for all lower fins.



B) Apply an epoxy fillet to both sides of each fin. Carefully smooth the epoxy with your finger before it begins to gel. Allow the epoxy to set-up before rotating the rocket to do the next set of fins. Once the epoxy has fully cured, you should sand the fillet smooth with fine sandpaper. Sanding will help the primer hold better to the epoxy.

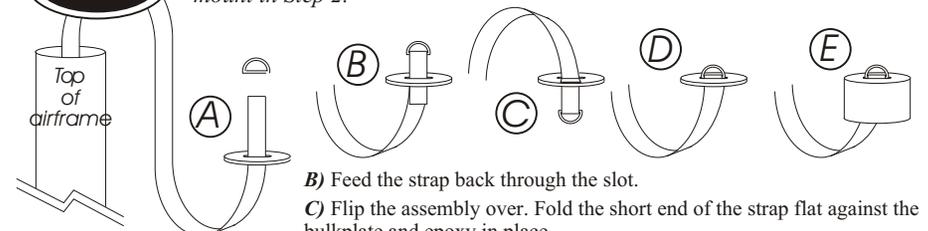
C) Gently pull the centering ring off the end of the rocket. Using a stick, apply an epoxy fillet to the fins at the motor mount tube and the inner airframe wall. **Now you can epoxy the centering ring in place.**

D) Apply a bead of epoxy to the root edge of an upper fin. Set the fin into the "dado" slot. Make sure that the fin is perpendicular to the airframe. Use tape to hold the fin in position while the epoxy cures. Repeat this process for all 4 upper fins. Apply an epoxy fillet to both sides of each fin as in step 4B

E) Epoxy one launch lug in place 1" from the bottom of the rocket and the other at about the balancing point of the rocket (without motor). Be sure the lugs are parallel to the airframe, in line with each other and not in line with a fin.

Step 5

The strap referred to in this step is the strap you installed on the motor mount in Step 2.



A) Pull the free end of the strap through the slot in the piston bulk plate. Slip the metal "D" ring over the strap.

B) Feed the strap back through the slot.

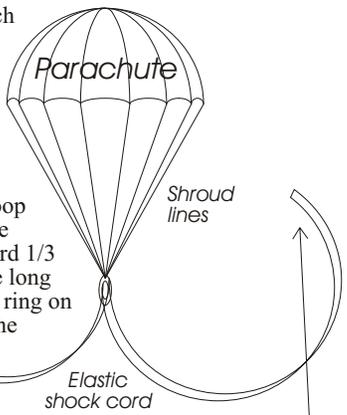
C) Flip the assembly over. Fold the short end of the strap flat against the bulkplate and epoxy in place.

D) When the epoxy has cured, pull the strap until the "D" ring is wedged at the slot. Apply epoxy to the strap at the "D" ring.

E) Epoxy the bulkplate inside the piston body 1/8" from the top. Apply an epoxy fillet to both sides of the bulkplate.

Step 6

Measure off the mid point of each parachute shroud line and mark it with a pen. Gather all the shroud lines making sure they are not twisted or tangled. Keep all the marks on the shroud lines together. Tie the lines together using a simple overhand knot leaving a small loop where all the marks meet. Tie the parachute to the elastic shock cord 1/3 of the way from one end. Tie the long end of the shock cord to the "D" ring on the piston. Tie the short end of the shock cord to the eyelet on the nosecone.



Tie the short end of the shock cord to the eyelet of the nosecone.

Pack the chute as directed in the parachute instructions.

Tie the long end of the shock cord to the "D" ring on the piston.

Step 7

Slide the piston into the rocket followed by the shock cord and parachute. Place the nosecone atop the rocket. It should fit just tight enough to allow you to lift the rocket by the nosecone without it slipping off. Wrap masking tape around the shoulder of the nosecone for a tighter fit if necessary.

NOTE:
When tying the shock cord to the parachute and the "D" ring, loop the shock cord through twice then tie a double overhand knot. Pull the knot tight and leave 2-3 inches of excess cord after the knot.

Now it's time to paint and detail your rocket!



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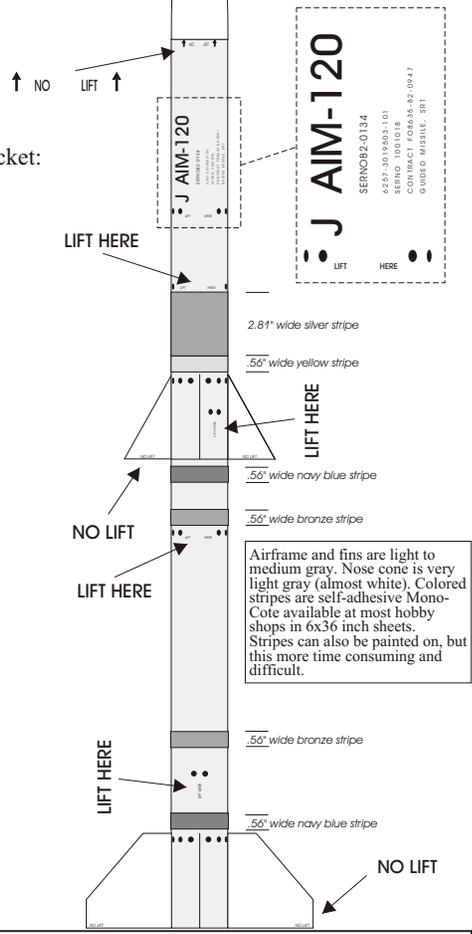
AMRAAM 2

High Power Rocket Kit

The AMRAAM 2 kit contains all the parts necessary* to build a flying high power rocket:

- 1) Pre-slotted main airframe
- 1) Nose cone
- 4) Main fins
- 4) Canard fins
- 1) Piston ejection kit including:
 - 1) Piston body
 - 1) Piston strap
 - 1) Slotted bulk plate
 - 1) Metal "D" ring
- 1) Parachute
- 1) 29mm motor mount tube
- 1) Standard centering ring
- 1) Notched centering ring
- 1) Elastic shock cord
- 1) 1/4" launch lugs
- 1) Decal sheet
- 1) Decal details sheet
- 1) Instruction sheet (this one!)

*Epoxy, paint, and motor not included.



Airframe and fins are light to medium gray. Nose cone is very light gray (almost white). Colored stripes are self-adhesive Mono-Cote available at most hobby shops in 6x36 inch sheets. Stripes can also be painted on, but this more time consuming and difficult.



The center of pressure (CP) of this rocket is 31 inches from nose tip. After finishing your rocket, permanently mark the center of pressure on the airframe. CP calculations were made using RockSim 4.0 program for subsonic flights. After loading the rocket with a motor, make sure that the center of gravity (balancing point) is at least 2.0" forward of the center of pressure mark. The center of gravity can be moved forward by adding weight to the nose cone. The average finished weight of this model is 24 ozs. It is impossible to test every rocket with every motor configuration therefore, if you are unsure about motor selection for any rocket consult the motor manufacturer.