

THE TEXAS BAR FLY

An easy to build, fun to fly rocket, that will surprise you on just how high it will fly! On ejection it will come apart. The bottom half will tumble down, and the top half will flutter down like a maple seed. Some say as a mono-copter. A C11-3 is the motor for this rocket. A D12-3 if you have a big field! Paint it bright so you don't lose it!

Parts List-

- 1 BT-50H 1.75 Inches In Length
- 1 BTH-50H 6 Inches In Length
- 3 Pieces Of Basswood 3/16 Inch Thick 5/8 Wide 4 1/4 Inches Long (Hobby Lobby Sells This) This is the support for the fins
- 1 3 Inch By 9 Inch By 1/8 Inch Thick Piece Of Basswood Sheeting
- 2 3/16 Inch Launch Lugs 1.75 Inches Long
- 1 BNC-50J (Available From Semroc You Can Use Any BNC-50 Cone You Want But Pointy Ones Can Be Dangerous!)

Things You Should Already Have-

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|--------------|----------------------------|
| Glue | Hobby Knife With New Blade |
| Pencil | Old D12 Casing |
| Masking Tape | Straight Edge |
| Common Sense | |
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Let's Get Started!

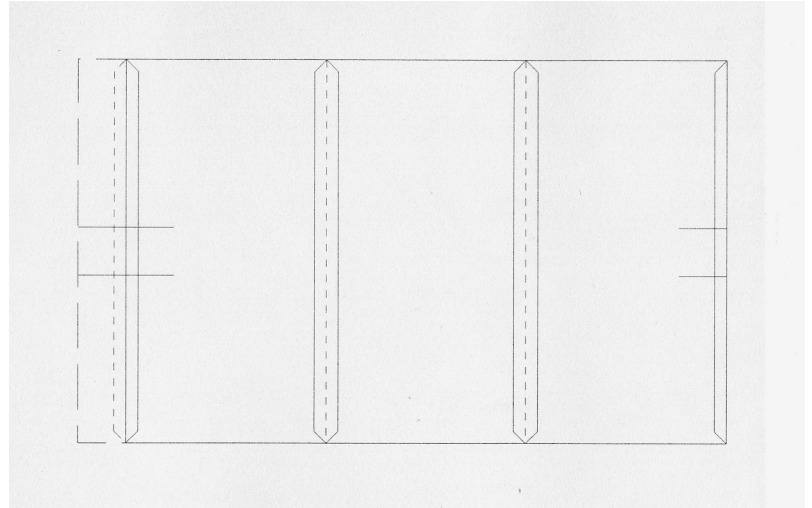
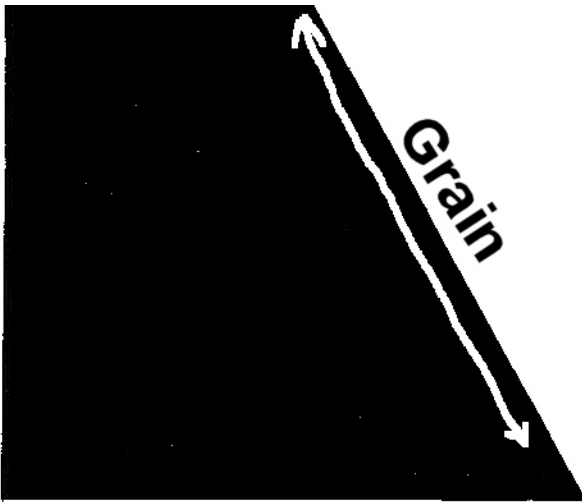
1. Cut the BT-50H into two pieces. One piece that will be the bottom of your Bar Fly one and 3/4 inches long. Cut the other piece six inches long. This will be the top. There are many ways to cut body tubes. I use masking tape to draw a line around the tube. Check the Internet for other methods. Put these aside for a little bit.
2. Cut three fins out of the 1/8 inch basswood sheet using the fin pattern. It is VERY IMPORTANT that the root edge is very straight. Round all other edges.
3. Here is the hard part. Take a scrap piece of BT-50H and wrap a piece of sandpaper around it. Sand one of the wide flat sides of the fin support until there is a concave side to fit better on the body tube.
4. Lightly sand the fin supports. Using the straight edge gently draw a line down the middle, the length of the fin support. Measure three inches from the bottom of the fin support. Spread just a tiny bead of glue from the bottom of the fin support to the three inch mark. Line the fin up with the mark down the middle. Do this for all three fins. Allow this to dry over night.
5. After the fins dry run a filet along both sides of all the fins. This will strengthen the fins greatly. Let dry over night.
6. Using the enclosed fin marking guide mark both tubes for three fins, although the bottom will only have two fins and the top one. Extending the line the complete length of the tubes will help you line everything up.
7. Take the bottom tube run a small line of glue the length of the line. Take one of the fin assemblies and glue it straight on the line. Be careful not to get any glue on the assembly above the body tube. Set aside to dry. Then glue the next assembly on the next line. See Picture 1 and 2 for the way it should look.
8. After everything is dry on the bottom tube take your old engine casing and put the tubes together. Using the last fin assembly line it up so that it is lined up with the bottom of the lower tube and place a mark on the upper tube fin alignment line. This is how high the fin support needs to be glued onto the top tube. Make sure you don't get any glue below the top tube on the fin support. Let this dry completely, then do filets on both sides of the fin support. See Picture 3 and 4.
9. After Everything is completely dry, it is time to attach the launch lugs. Glue the bottom lug first along the side of one of the fin supports. Let this dry and do filets on both sides. Put the two parts of the rocket together using the old engine casing, being careful to line up the fins like as if you were going to fly the rocket. Mark on the top tube so as to line up the other launch lug. Using a straight edge draw a line for the launch lug on the top tube. Glue it straight on the line and do filets on both sides.

10. After everything has dried, glue in the nose cone.

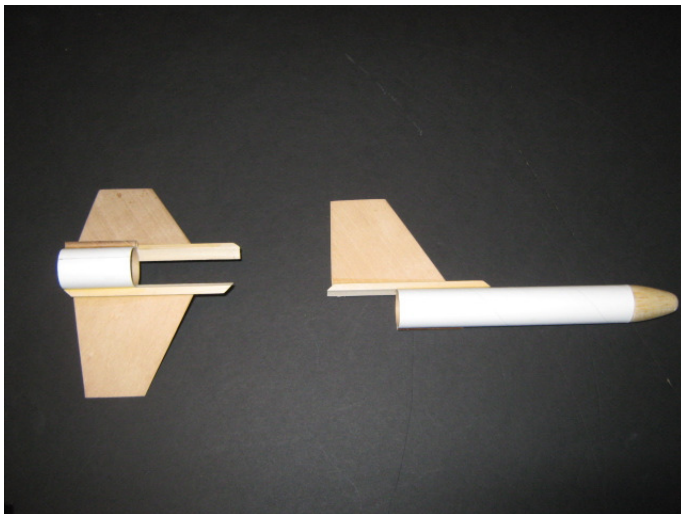
11. Take a good D12 assemble the rocket and conduct a swing test. My flights and swing test show The Texas Bar Fly to be a little over stable.

12. Paint it bright colors and have fun.

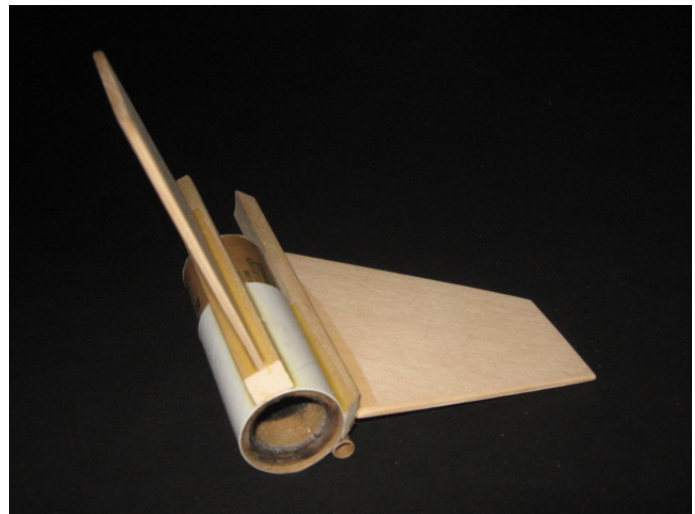
Fin And Body Tube Marking templates



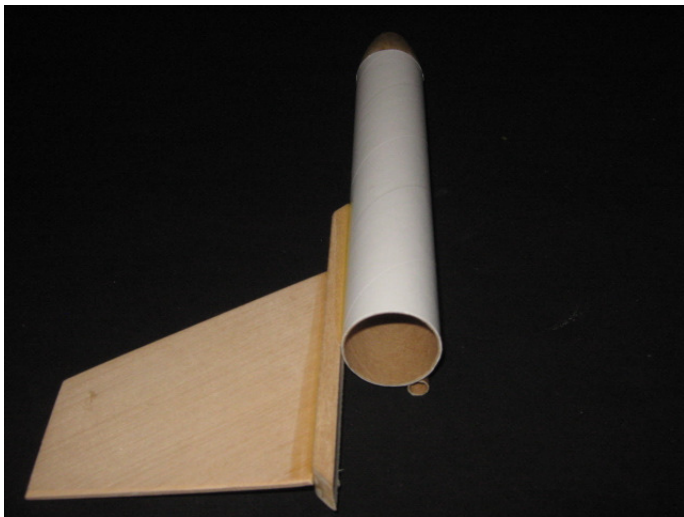
Flying Your Texas Bar Fly– Your Texas Bar Fly is very easy to fly IF you take a little time to set it up. The first thing to do is wrap some masking tape around the engine of your choice at the nozzle end. No other tape is needed. Make sure the end of the engine is flush with the end of the bottom tube. You want the rocket to come apart easily when the ejection charge is fired but you don't want the engine to shoot through the rocket since there is no engine block. If the fins drag a little on the upper tube GENTLY sand but not too much.



Picture 1



Picture 2



Picture 3



Picture 4

That's all there is to it. The enclosed pictures are from my second Texas Bar Fly since I lost my first one testing it. It really does flutter down and the bottom part is like the first stage on a multi-stage rocket so it tumbles. Like all my rocket plans you are totally responsible for their use and I am not. Use your best rocket building tool, common sense when you fly any rocket. -Andrew

