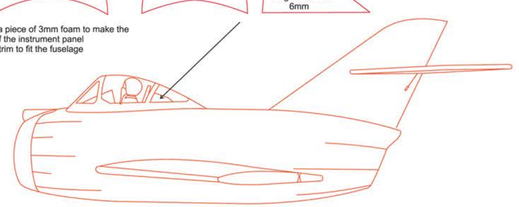
Saber / Mig

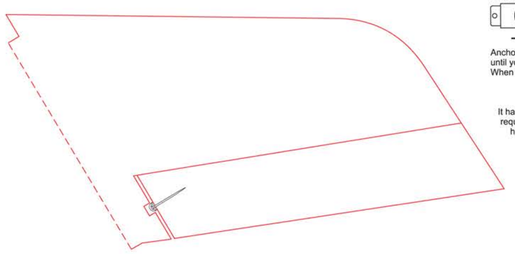
Mig instrument panel 3mm

Mig seat 6mm

Mig seat back 6mm

Curl a piece of 3mm foam to make the top of the instrument panel then trim to fit the fuselage





V-1

V-2

LE

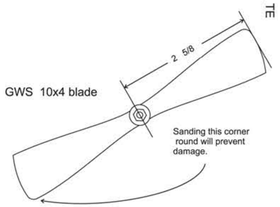
TE

Pre shaping the foam sheeting

Using at least a 3 inch paper tube tube and angle stock will allow you to curve the foam sheeting from the edge.
Note that foam sheeting has a "grain" and will bend smooth in one direction. Some experimentation will be needed.

After a curl has been established, roll the foam like you would a large sheet of paper and wrap a rubber band or two loosely around the sheeting for a day or two. When the sheeting is released it will be easier to assemble the fuselage.
Note: The pre-shapeing step is done before the fuselage skin is cut.

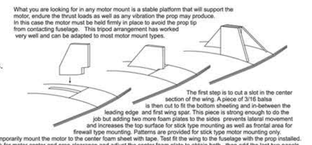
GWS 10x4 blade



Sanding this corner round will prevent damage.

Warning: This design is a drag Queen.
Because of it's unusual shape it has some strange tendencies. As you would expect power is everything. Any motor below 1300 KV will not fly the model with this prop; even indoors. I'm recommending a 2000 KV motor so it can be flown outside.
At low power and into the wind (breeze) the model will pitch nose up and stop. Without air flow over the elevator it becomes useless. On the good side, the model will float all the way to the ground slightly nose high. The CG is correct, extensive testing by adding molding clay to the nose gave the same results.
Pick a very calm day and some tall grass to fly over. This unusual design comes with some quirks, give it a chance and it will reward you with some fun flying days.

Thanks
SPARKY



What you are looking for in any motor mount is a stable platform that will support the motor, endure the thrust loads as well as any vibration the prop may produce. In this case the motor must be held firmly in place to avoid the prop tip from contacting fuselage. This tripod arrangement has worked very well and can be adapted to most motor mount types.

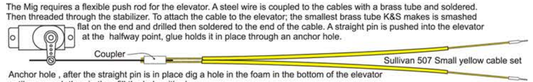
Note: a hard landing may allow the prop to contact the fuselage skin due to the skin flexing. You can either remember to stop the motor just before contact. Or better yet, bond a thin strip of report cover plastic to the inside of the fuselage around the prop ark.

MIG only

Saber stabilizer angle detail

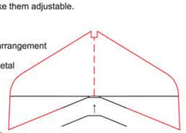
1 Use a hacksaw blade to cut a groove 1/3 the way through the 6mm sheet
2 Fold a sheet of sand paper and sand a "V" shape into the groove
3 Fill the groove with a small amount of glue.
4 Use a weight to hold down the center section of the stabilizer and lift and support the stab tip 3/4 inch above the work surface until the glue dries.
5. Use step 1 and 2 when cutting the grove for the elevator torque arm.
The torque arm installs from the bottom

The Mig requires a flexible push rod for the elevator. A steel wire is coupled to the cables with a brass tube and soldered. Then threaded through the stabilizer. To attach the cable to the elevator; the smallest brass tube K&S makes is smashed flat on the end and drilled then soldered to the end of the cable. A straight pin is pushed into the elevator at the halfway point, glue holds it in place through an anchor hole.



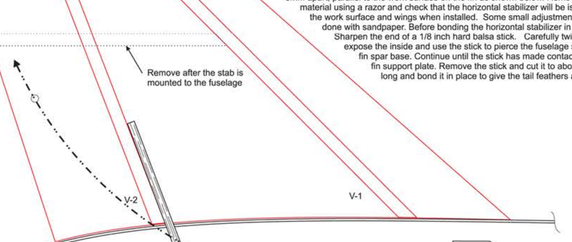
Anchor hole , after the straight pin is in place dig a hole in the foam in the bottom of the elevator until you reach the pin then fill the hole with glue.
When all is in place, if the elevators are not rigged evenly reheating the coupler will make them adjustable.

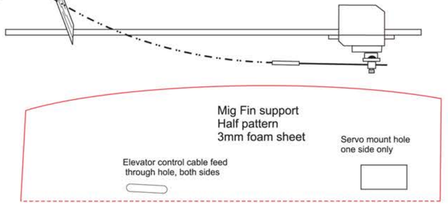
It has been suggested that making the hinge line straight would simplify the elevator arrangement requiring only one push rod to move the elevator. I believe it would work however the model will become more pitch sensitive. and it would also require a metal torque rod to couple the two surfaces.



Stabilizer angle setting

Assemble the Mig fin using the Saber fin illustration below. After the wing and fin support has been bonded to the fuselage, Bond the fin to the fuselage on the centerline. Support the model on blocks under the wing with a 6mm shim at the trailing edge. Draw two lines 6mm apart, parallel to the work surface on the fin as shown below. Remove the material using a razor and check that the horizontal stabilizer will be is parallel to the work surface and wings when installed. Some small adjustments can be done with sandpaper. Before bonding the horizontal stabilizer in place, Sharpen the end of a 1/8 inch hard balsa stick. Carefully twist the fin tip to expose the inside and use the stick to pierce the fuselage skin at the fin spar base. Continue until the stick has made contact with the fin support plate. Remove the stick and cut it to about 3 inches long and bond it in place to give the tail feathers a firm mount.





MIG wing saddle trim line

Saber wing saddle trim line

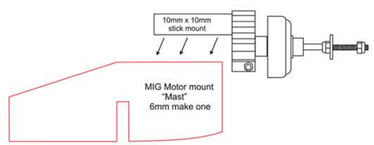
Wing saddle Pattern

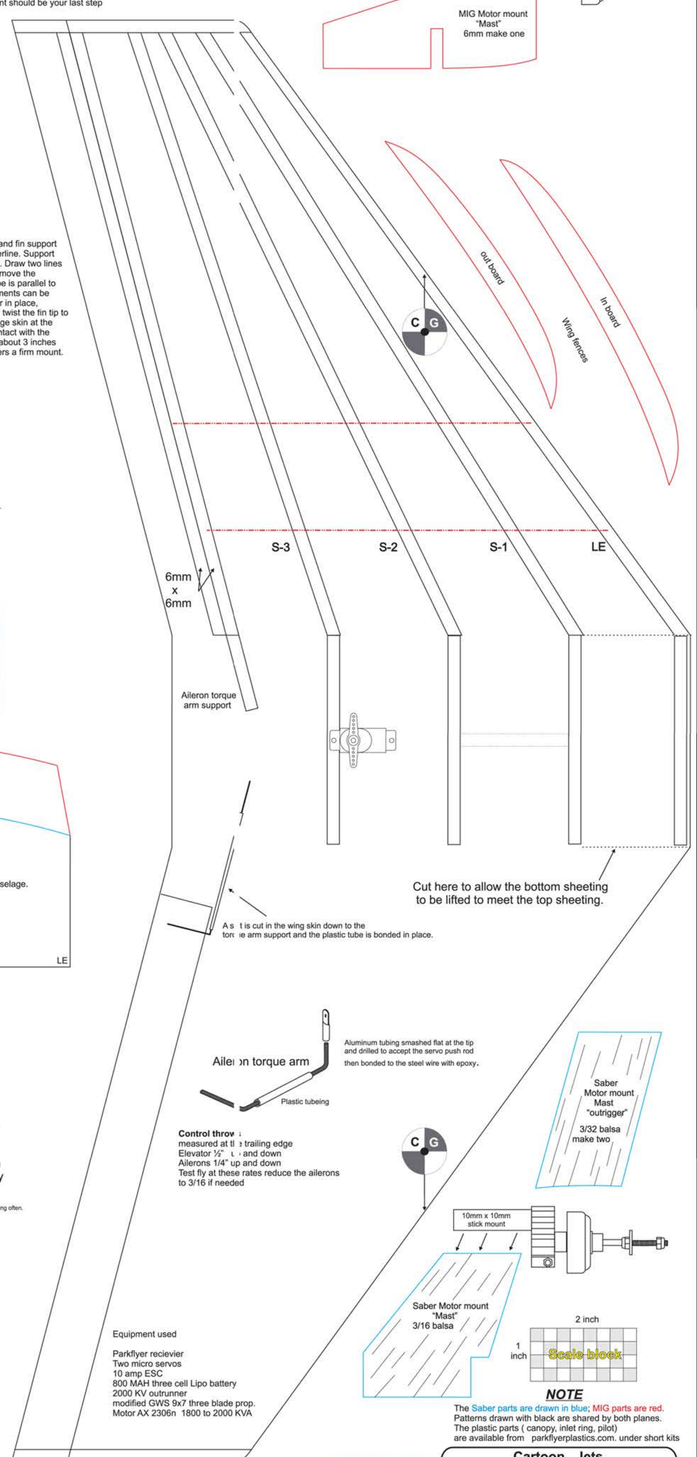
After the wing is ready to install, use this pattern to cut the fuselage tube to fit the wing.
Align the pattern at the center line seam and the leading and trailing edge marks on the fuselage.
lightly mark the fuselage then flip the pattern and repeat for the other side.
Save the removed material to bond back when the wing installation is complete.

TE — Center line seam — LE

Battery compartment

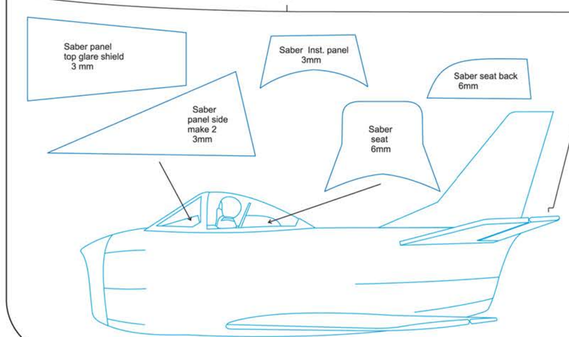
I'm leaving this up to the builder. I cut the belly open and used 3mm foam to build a battery b x on the bottom. The box extended into the model about half way into the wing just aft of the w g leading edge. This was deep enough to hide the three cell battery. In both models the motor mount was effected but the box actually made the mount stronger. If you are thinking that a v lcro patch will hold it on top of the wing and installation can be through the inlet. Consider a way o prevent the battery from coming loose and breaking the prop. Yep, that is experience talking.
Keep in mind that both models build tail heavy, any changes you make should be toward mo ng equipment forward so the battery can be moved rearward.
In any case the battery placement should be your last step

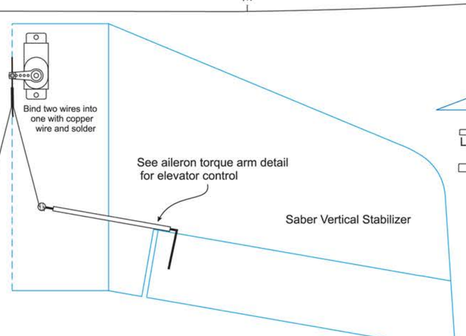


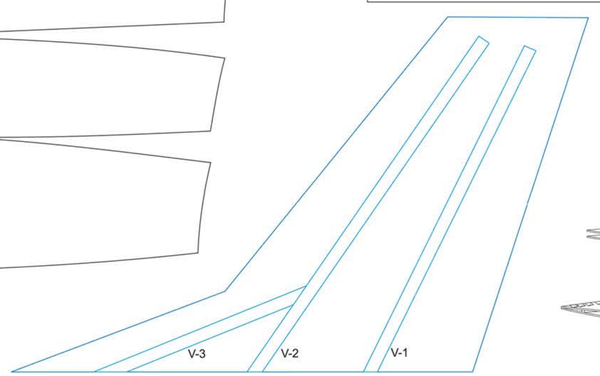


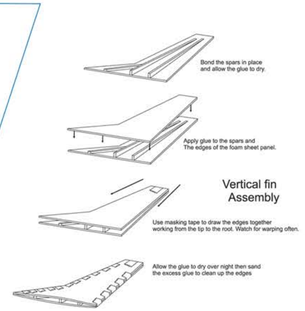
Aluminum tubing smashed flat at the tip and drilled to accept the servo push rod then bonded to the steel wire with epoxy.

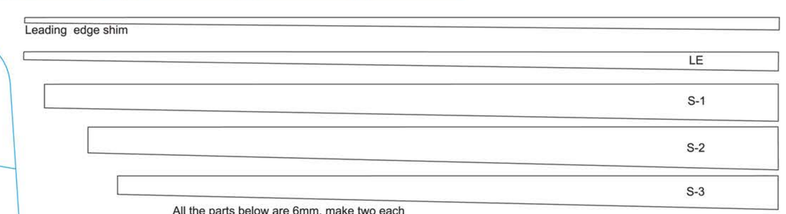
Control throw s
measured at tl trailing edge
Elevator ½" u and down
Ailerons 1/4" up and down
Test fly at these rates reduce the ailerons to 3/16 if needed







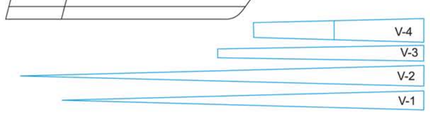




All the parts below are 6mm, make two each

Equipment used

Parkflyer reciever
Two micro servos
10 amp ESC
800 MAH three cell Lipo battery
2000 KV outrunner
modified GWS 9x7 three blade prop.
Motor AX 2306n 1800 to 2000 KVA



NOTE

The Saber parts are drawn in blue; MIG parts are red.
Patterns drawn with black are shared by both planes.
The plastic parts (canopy, inlet ring, pilot) are available from parkflyerplastics.com. under short kits

Cartoon Jets

Designed and drawn by Keith Sparks

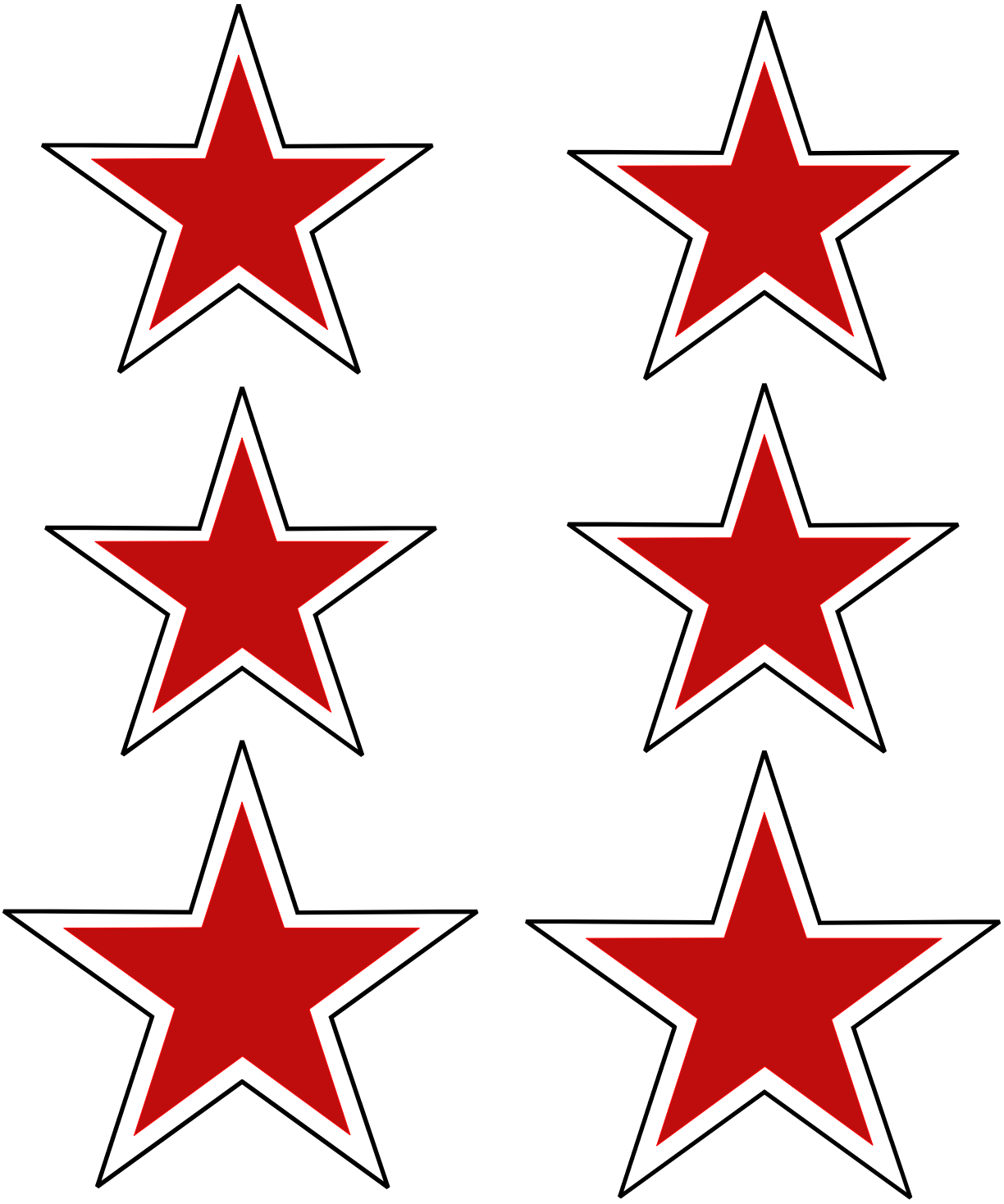
Model type: **Electric powered Ducted Prop, RC**

Specs.: **Span..... 27 in. length..... 24 in. weight ...7.5 oz (no battery) wing area... 168 sq in.**

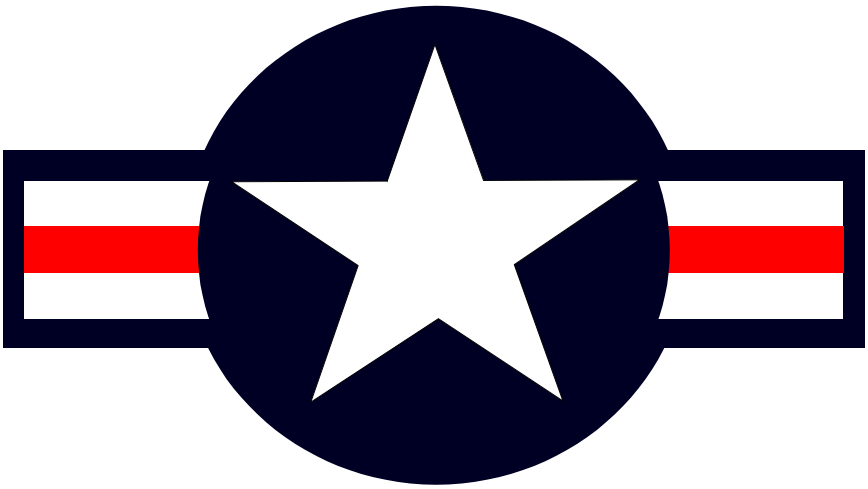
Construction type: **Sheet foam / Real Fun Scale**

Saber / Mig

217 217



CT-218



USAF