

## Profile B-25 Micro R/C Model Building Notes

These notes are to help assemble a model built from the templates included in this package. As drawn, the templates are intended for printing directly on 1/32" balsa sheet or on tissue paper. The templates produce a model with a 16 inch wing span suitable for use with the motors, radio control receiver, and battery from a Spin Master Aero Ace airplane. The intent is to provide an alternative model to the ones offered from Spin Master.

Durability of a model built from these templates will depend on the chosen structural material. Balsa is an excellent choice, but is more prone to breakage than thin foam sheets. By printing the graphics on tissue paper and then applying them to your chosen structural material you can use any printer. If you want to print the graphics directly on 1/32 inch balsa sheet you will need a printer with a straight through paper path. A process for printing directly on balsa or on tissue is provided at <http://www.parmodels.com> under the Techniques and References section.

If balsa is used as the structural material, the fuselage, engine nacelles, and rudders are made from two laminations. This is true for direct graphics printing on the balsa or for a balsa model using printed tissue for the graphics. Use of thin foam sheet is also possible. Application of printed tissue graphics will greatly enhance the stiffness of the parts. Printed tissue can be applied to the balsa or foam using a spray adhesive.

If tissue will be used to apply the graphics it is recommended that the tissue be applied to the structural material before cutting out the parts. This makes the process easier. For balsa parts the laminated components are assembled after the parts have been cut from the source material. For parts that are printed directly on balsa sheet, they should also be cut from the sheets before assembly. The laminated components are assembled after the parts are cut from the sheets. Do not cut the wing slots in the fuselage and engine nacelles until the parts have been laminated. The same is true for the stabilizer slot at the rear of the fuselage.

The wing has been set up with a small amount of camber. This is done more for structural stiffness than aerodynamics. The B-25 has a gull wing style dihedral. The wing is assembled by first gluing the center section pieces together. There is a very slight concave curve at the center of each middle panel. This allows the camber and dihedral joint to be properly made. With one center panel laying flat on your building surface the other should be elevated ½ inch at the end. There is a slight convex curve at the ends of the wing panels that form the outer dihedral joint. The outer wing panels bend down slightly from the dihedral joint. You should find that when you form the curve in the wing and hold the edges at the dihedral joint together the angels will be as called out.

Once the wing is assembled it can be slide into the slot in the fuselage. Make sure it is square when looking down on the model and from the front. Slide the engine nacelles on the wing from the tips to the outer dihedral joint. The engine nacelles are glued in place aligned over the dihedral joints. Make sure the nacelles are parallel to the fuselage.

The stabilizer is installed by sliding it into the slot at the rear of the fuselage. Once centered and aligned to be square with the fuselage it can be glued in place. The rudders are glued to the ends of the stabilizer. A white area on the inside face of each rudder is provided as a location reference.

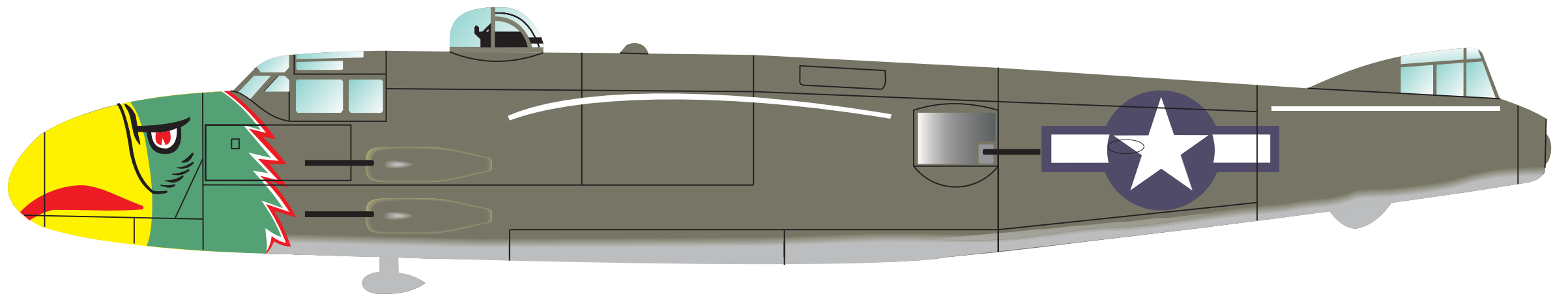
Mounting the motors to the nacelles does not require the full plastic housing that comes with the Aero Ace models. The plastic housings can be sliced like a sausage so you have bands about 3/16" wide. The resulting bands can then be placed on the motors. This makes for a lighter and cleaner motor installation. Mount the motors to the inside of each nacelle with the prop shaft centered on the front edge of the nacelle.

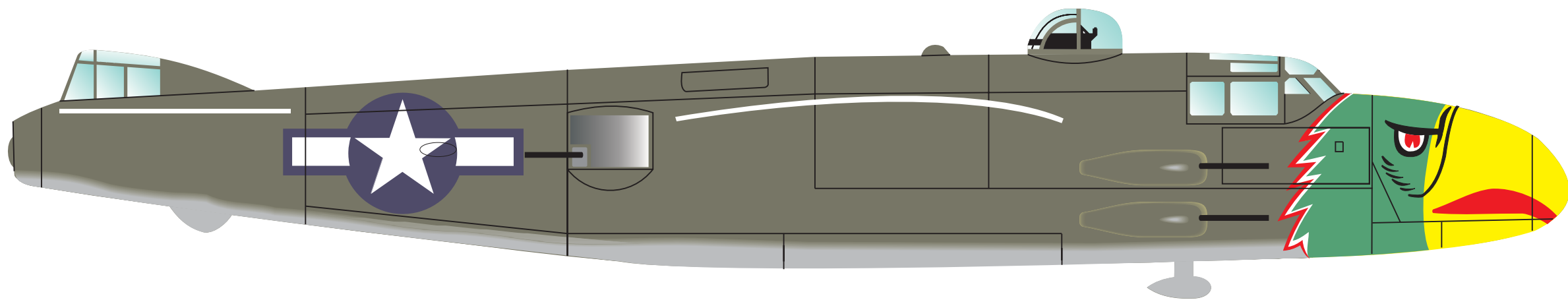
In addition to lightening the motor mounting housings, it is also recommended that the plastic base that is attached to the receiver be removed. This saves considerable weight. The plastic receiver base is held in place with two small screws. Just remove the screws to remove the base. Before removing the base you should mark the orientation of the charging plug. Place a mark on the side of the charging plug that faces the On-Off switch. That will give you a reference for proper connector alignment when charging the battery.

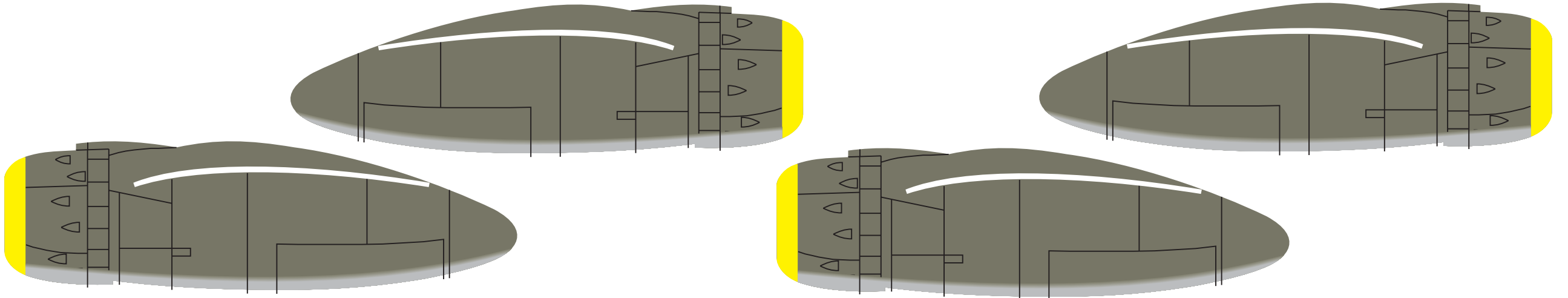
Mount the battery and receiver on opposite sides of the fuselage. They should be placed so the Center of Gravity (CG) will be 1 to 1.25" back from the leading edge of the wing at the fuselage joint. Adjustments to the trim can be made by moving the battery forward or back as needed. To accommodate the wires that have to pass through the fuselage, cut a vertical slot about halfway from the bottom of the fuselage to the wing. Place the slot where you want the receiver located. Open the slot by moving the section forward and rearward of the slot in opposite directions as viewed from the bottom. Slide the wires into the slot until they rest at the bottom. Now allow the slot to close. Once you have the battery and receiver mounted the slot can be glued closed. Foam based servo tape is good for mounting the receiver and battery. Their location can be easily adjusted if needed.

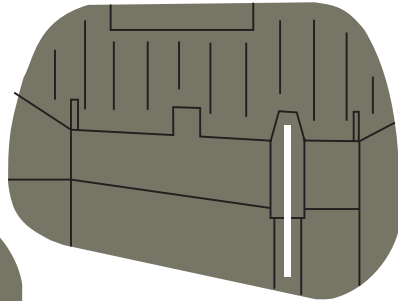
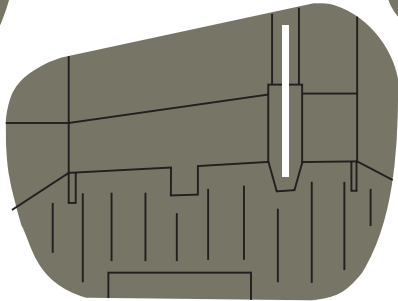
I do hope you will receive as much enjoyment as I have from a model built for this set of templates.

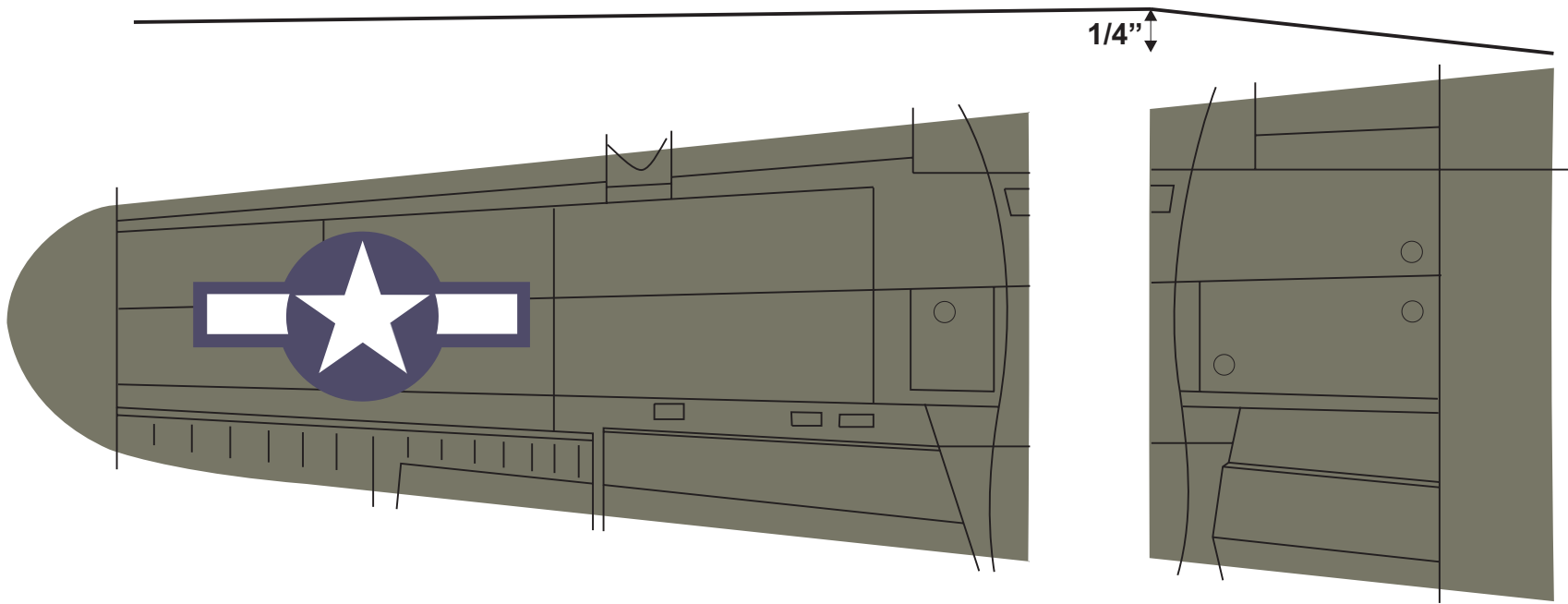
Paul Bradley











1/4"

