

Remove 1/4" of backing from this edge. This edge applies to body tube first

Orange band for reference. Cut skin along this line

This section contains multiple views of the fuselage and wing/rudder assembly points. It includes labels for various components and safety warnings:

- Wing Root: Trim Away** (multiple instances)
- Rudder Root: Trim Away** (multiple instances)
- Fin Root: Trim Away** (multiple instances)
- TURBINE PLANE** (multiple instances)
- WARNING** labels for "MICHROWAVE RADIATION", "CONTROL CONN.", "INSPECTION ACCESS", "CAUTION - DOOR", "AUX REACTOR CONNECTOR", and "CAUTION" near fuel tanks.
- CAUTION** labels for "MICHROWAVE RADIATION" near antenna areas.
- BEER LIGHT-4001 FOR MOUNT - NIGHTS** label.
- CONTROL CONN.** label with "PERSONNEL ONLY" and "AUTHORIZED" markings.
- INSPECTION ACCESS** labels.
- CAUTION** labels near fuel tanks.
- CAUTION** labels near "MICHROWAVE RADIATION" warnings.

This section contains assembly pieces for the rudder and antenna covers. It includes labels for various components and safety warnings:

- Right Rudder Tip Aft Antenna covering (yellow marker to outside)**
- Left Rudder Tip Aft Antenna covering (yellow marker to outside)**
- Launch Lug Covering**
- Left Rudder Inside Skin**
- Right Rudder Inside Skin**
- USAF** and **Twilight INTERCEPTOR** logos.
- GRD. SAFETY LOCK** labels.
- WARNING** and **ARMED** labels.
- CAUTION** labels.

Sheet 1

**Twilight Interceptor**  
Rev 3-14-17  
**Accur8**  
**SPACEMODELS**  
[www.accur8.com](http://www.accur8.com)

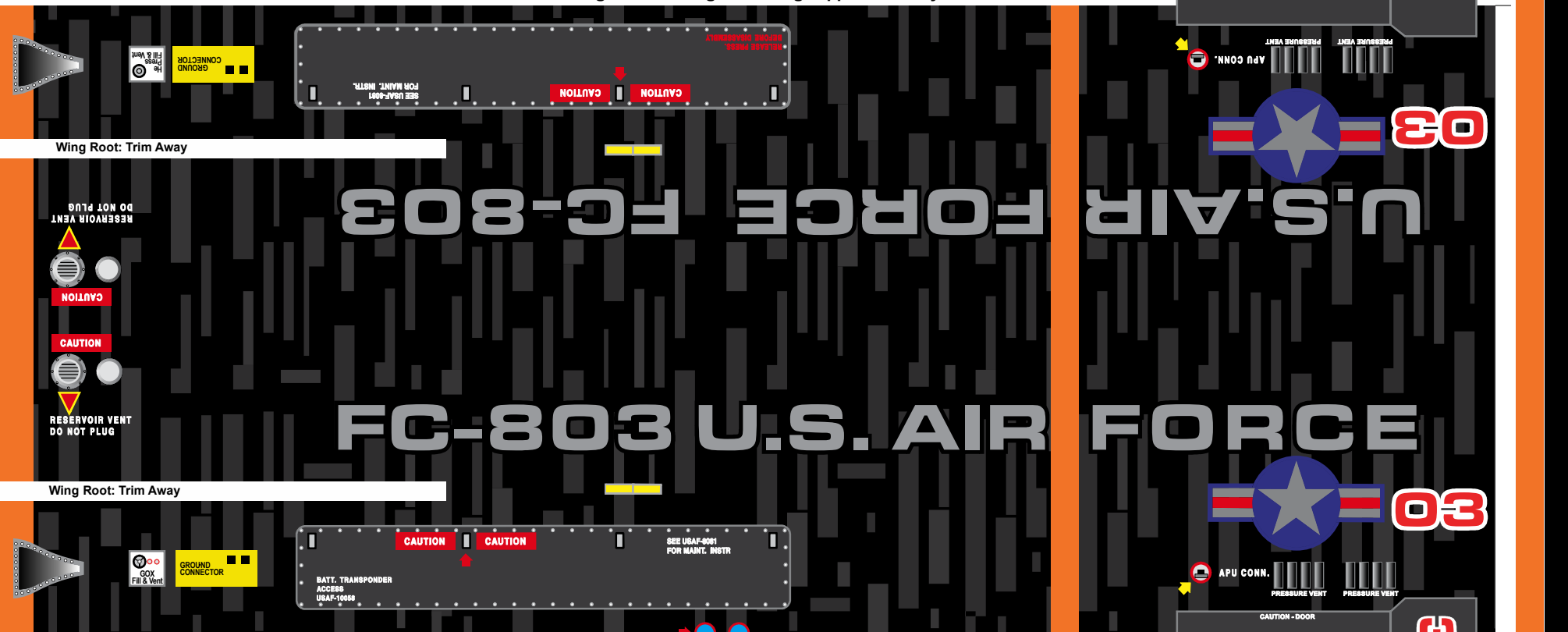
This section contains assembly pieces for the nosecone and fin skins. It includes labels for various components and safety warnings:

- Aft Nosecone Skin - This edge against forward nosecone skin**
- Questions? Contact [johnpursley@accur8.com](mailto:johnpursley@accur8.com)**
- Trim just outside of window "frames" and apply each one separately.**
- Right Lower Fin Skin**
- WARNING** labels.
- CAUTION** labels.

Apply light clear spray coat, such as Blair 500 Digi-Finish to sheet before using

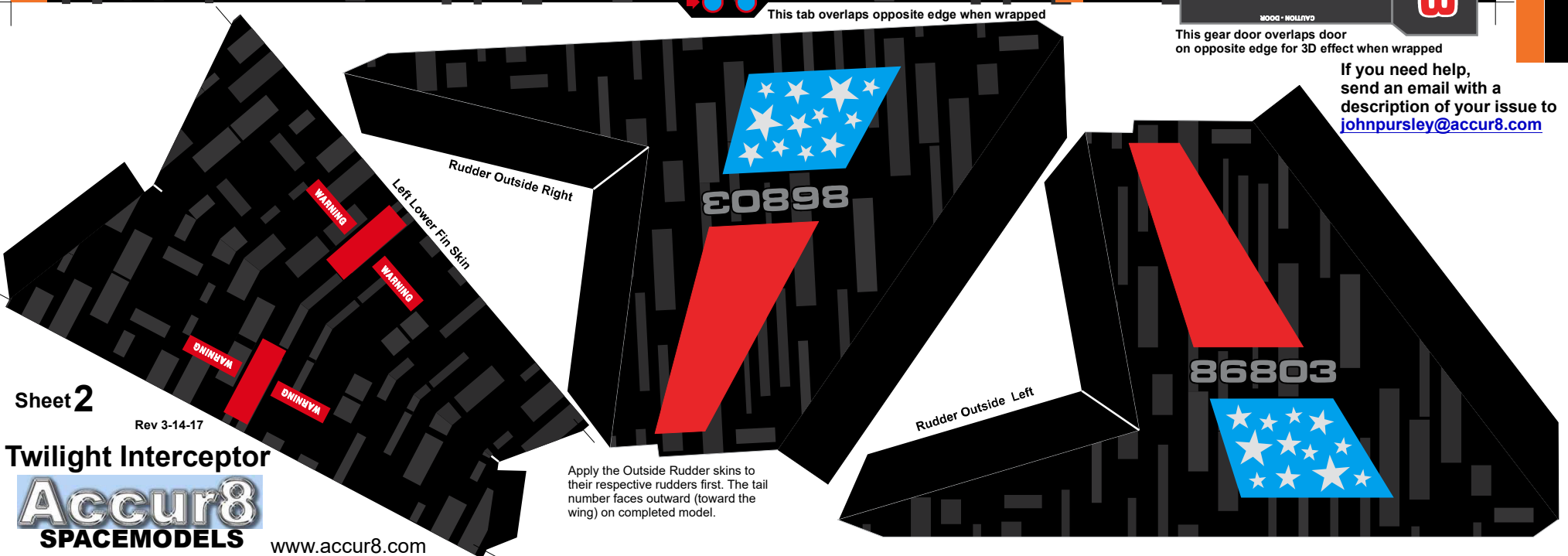
Apply light clear (non-wet) spray coat to sheet before using

Remove 1/4" of backing from this edge. This edge applies to body tube first

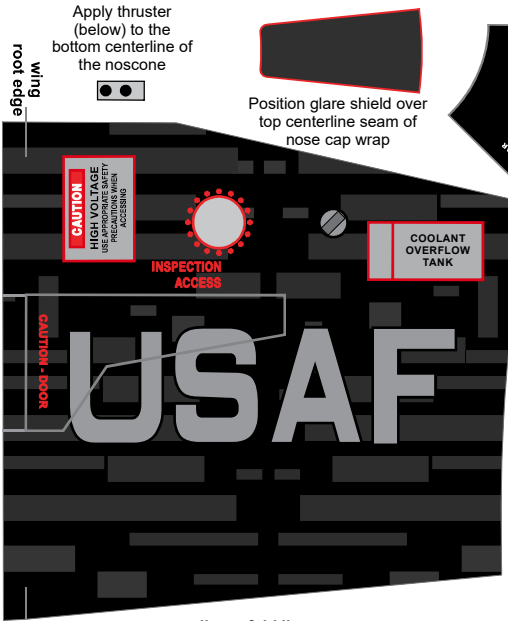


This gear door overlaps door on opposite edge for 3D effect when wrapped

If you need help, send an email with a description of your issue to [johnpursley@accur8.com](mailto:johnpursley@accur8.com)



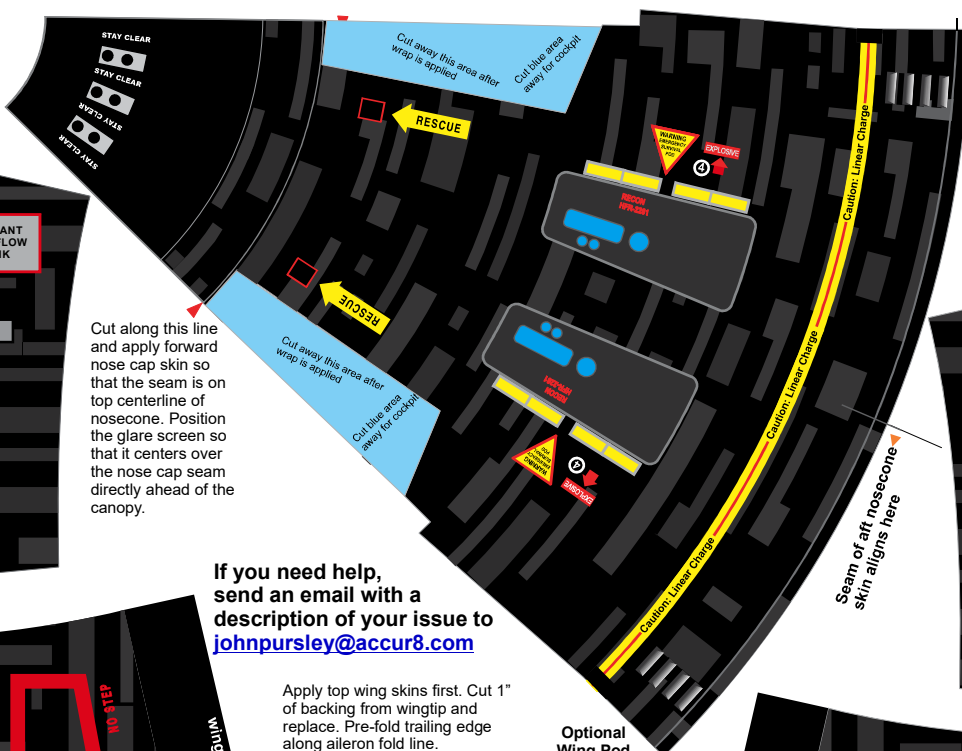
Apply the Outside Rudder skins to their respective rudders first. The tail number faces outward (toward the wing) on completed model.



Apply thruster (below) to the bottom centerline of the noscone

Position glare shield over top centerline seam of nose cap wrap

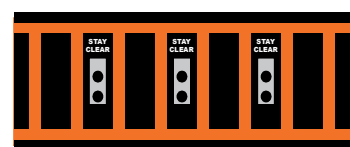
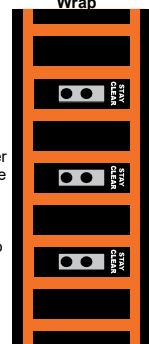
Cut along this line and apply forward nose cap skin so that the seam is on top centerline of nosecone. Position the glare screen so that it centers over the nose cap seam directly ahead of the canopy.



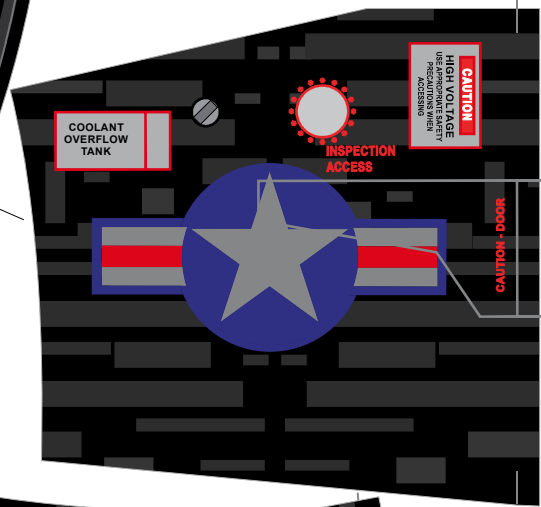
If you need help, send an email with a description of your issue to [johnpursley@accur8.com](mailto:johnpursley@accur8.com)

Apply top wing skins first. Cut 1" of backing from wingtip and replace. Pre-fold trailing edge along aileron fold line. Position skin on wing top so that aileron fold centers on trailing edge and wing root edge marks align on wing root edge. Holding skin tightly in place, lift the skin from the wing tip and remove backing. Carefully lower the skin with exposed adhesive onto wing and burnish into place with your fingertips, working from the center of the wing skin outward. Remove the remaining backing and burnish rest of skin. Fold the leading edge tab over and under the leading edge and burnish into place. DO NOT fold trailing edge under until after bottom wing skin is in place.

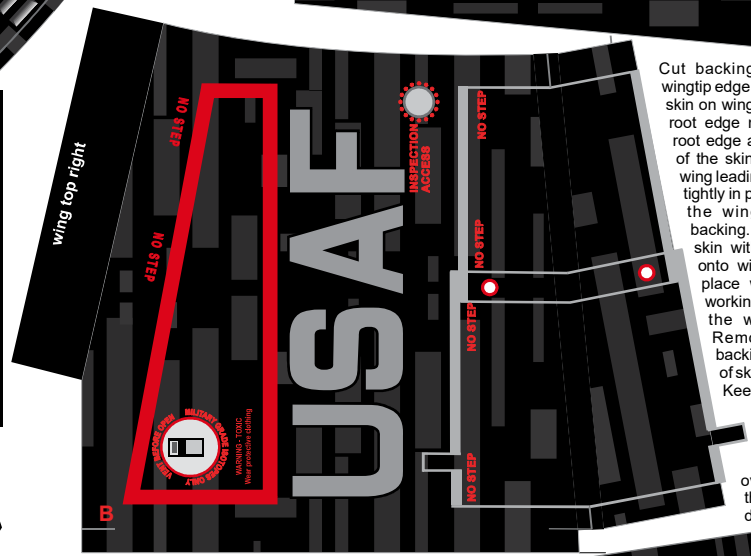
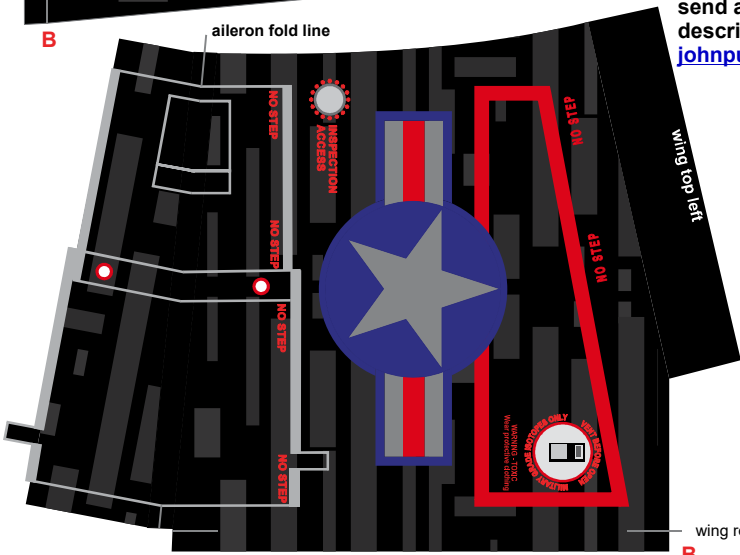
Optional Wing Pod Wrap



Optional Wing Pod Wrap

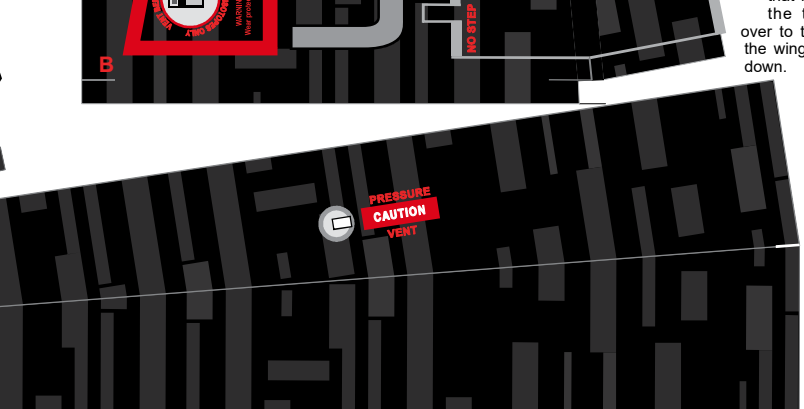
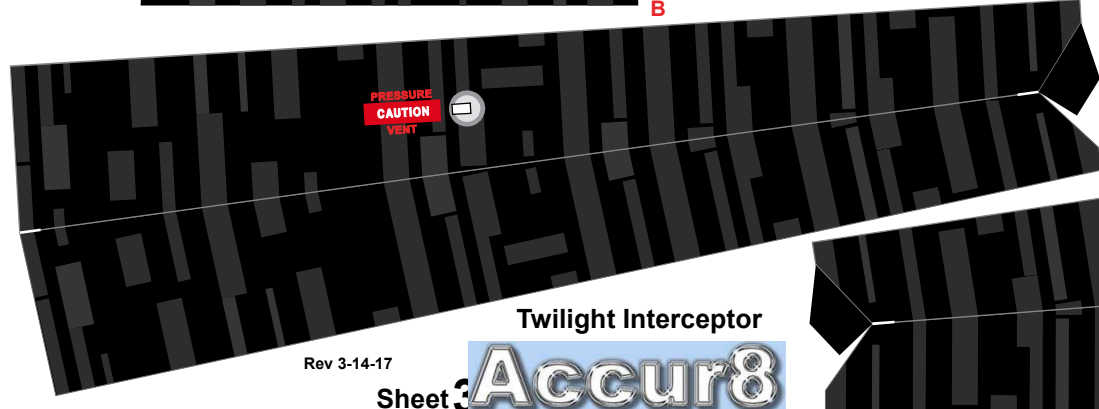


Seam of air nosecone skin aligns here



Cut backing about 1" in from wingtip edge and replace. Position skin on wing bottom so that wing root edge marks align on wing root edge and the leading edge of the skin is about 1/16" from wing leading edge. Holding skin tightly in place, lift the skin from the wing tip and remove backing. Carefully lower the skin with exposed adhesive onto wing and burnish into place with your fingertips, working from the center of the wing skin outward. Remove the remaining backing and burnish rest of skin.

Keeping it tight against trailing edge, fold exposed aileron that is attached to the topside skin over to the bottom of the wing and burnish down.



Twilight Interceptor

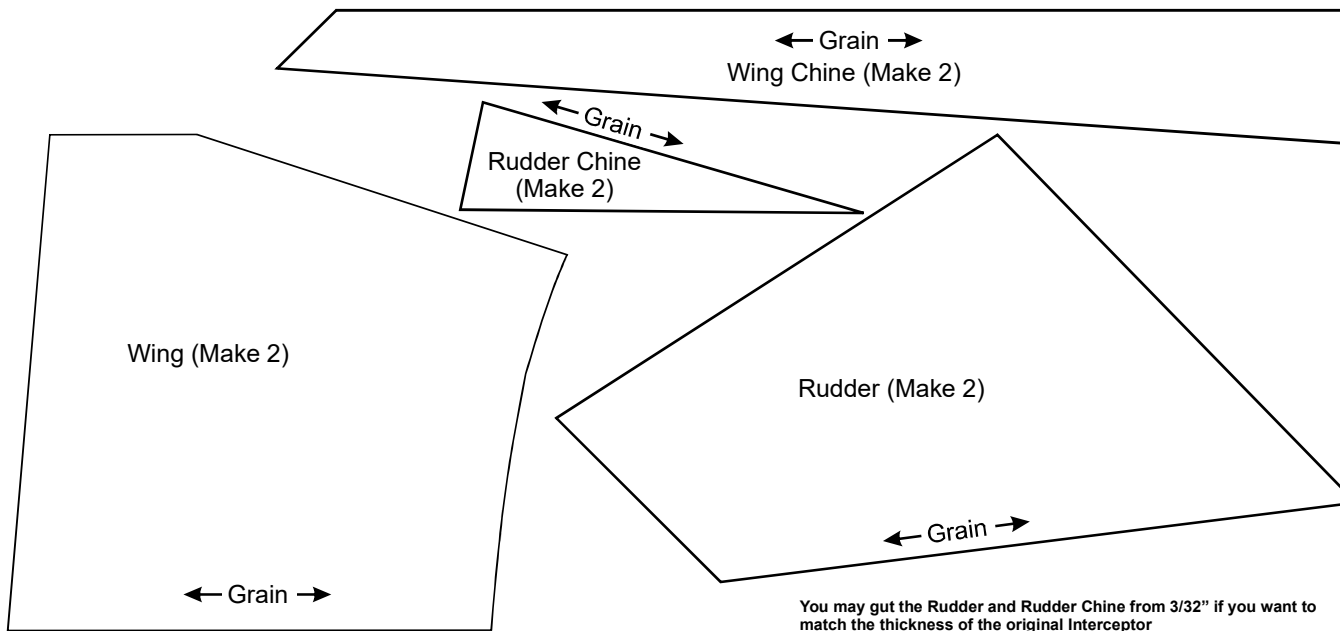
Accur8  
SPACEMODELS

Rev 3-14-17

Sheet 3

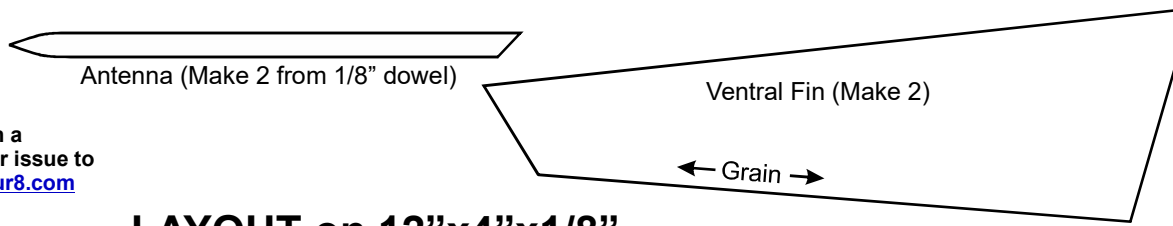
www.accur8.com

Apply light clear spray coat, such as Blair 500 Digi-Finish to sheet before using



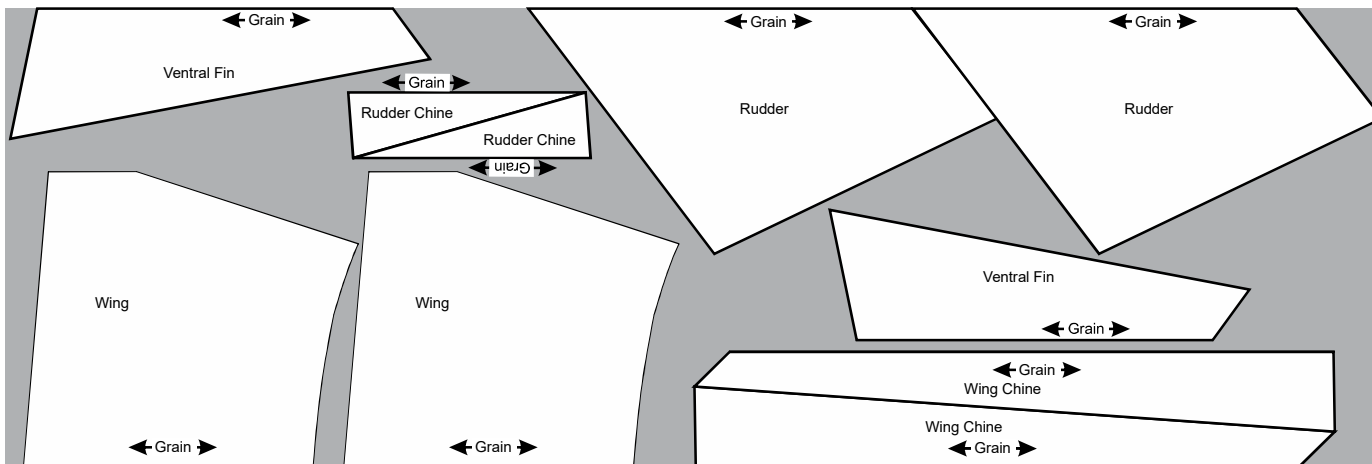
## Full Sized Patterns

You may gut the Rudder and Rudder Chine from 3/32" if you want to match the thickness of the original Interceptor



If you need help,  
send an email with a  
description of your issue to  
[johnpursley@accur8.com](mailto:johnpursley@accur8.com)

## LAYOUT on 12"x4"x1/8"



## To Build The Interceptor Without a Kit:

If you don't have an Estes #1250 Interceptor kit, it is relatively easy to "scratch" build one using currently available Estes parts.

- 1 BT-55 Body Tube 18" long
- 2 BT-5 Body Tubes 1.5" long
- 1 "Interceptor" Nose Cone from #3173 Sci Fi Nose Cone Assortment
- 2 Long "Ogive" nose cones from #3160 BT-5 Nose Cone Pack (you may need 2 packs)
- 2 Short "Parabolic" nose cones from #3160 BT-5 Nose Cone Pack (you may need 2 packs)
- 1 #3158 Engine Mount Kit
- 2 1/8" diameter hardwood dowels 2.75" long
- 1 1/8" Thick 4"x12" hard balsa or basswood (preferred)
- 1 1/8" Launch Lug (two 1" long)
- 1 18" Parachute Kit and Shock Cord

Lay out the patterns on you wood stock as shown and cut out all pieces.

Use the Antenna pattern to make two antennas from 1/8" dowel. These will glue to the rudder tips, pointy end forward.

Glue one long BT-5 nosecone to one end of each 1.5" BT-5 and one short BT-5 nosecone to the other end. Use thick CA or CA for plastic. These will glue to the wing tips.

Assemble one #3158 engine mount using the centering rings for BT-55. Cut 1/8" long slit 1/4" from fore end of BT-20 to accept engine hook. Install engine hook and retain in place by sliding retainer ring over the hook and engine tube and glue about 1.5" from fore end of BT-20. Glue the engine block into forward end of BT-20 engine tube against engine hook tang. Glue one BT-55 centering ring to the fore end of the BT-20. Glue the other BT-55 centering 1" from the aft end of the BT-20. Cut a notch in ring to allow clearance for engine hook before gluing ring in place. Engine mount will glue into the aft end of the main body tube of the Interceptor as a last step. It protrudes about 1". Use scrap balsa or bass to make the "cooling fins" for the protruding engine mount.

Follow the instructions on the individual skin sheets to prepare and cover the various wings, fins, rudders, body tube and nose cone. The skins have cutouts for positioning the fins, wings and rudders. After all parts are covered, glue them together. Install the engine mount and recovery system. Install the two launch lugs on the bottom centerline of the model positioning one about 1/2" from the rear of the main body and the other about 7" from the rear. Make sure they align for passage of the launch rod.

Glue the antennas to the rudder tips and the wing "pods" to the wing tips. The long nosecone of the pod glues to the wing. Use CA glue for plastic or thick CA glue to glue the pods in place.

For reference, you might want to obtain a copy of the Estes Interceptor instructions from Estes by following this link:

<http://www.estesrockets.com/customer-service/instructions/>  
then pick the 1250 Interceptor from the list.

## Interceptor #1250 Skin Kit

(General Instructions. Read all instructions printed on skins for details on applying that specific kit.)

### Preparations before "Skinning"

There may be slight changes to the actual skin marking, shapes or application, however, any significant application changes are noted on the skin sheets themselves.

Make sure you have a clean and uncluttered workspace.

Be especially careful if you have a White Chameleon Skin kit...any dirt or stains you get on it while handling will be difficult to remove.

1. For cutting the skin accurately, I recommend the use of a brand new #11 type knife blade. A single edged razor blade also comes in handy for making certain kinds of cuts and trims. Also, to aid with cutting absolutely straight edges, use a good metal straight edge at least 12" long.
2. Prepare the wood Interceptor kit parts. Remove all laser cut wood parts and sand all faces and edges flat and straight. Assemble the wings and the rudders on a flat surface. Sand the leading and trailing edges to your preference. Sand the root edges square. Pre-glue the root edges of the wings, rudders, and subfins with the adhesive you will use to glue them to the body. Do this BEFORE you seal the wood surfaces in the next step.
3. Surfaces to which the skin will be applied need to have the proper finish for the skin adhesive to stick. The idea is to simply seal the wood at this point so that the skin has a good surface to stick to. You don't have to make all the wood grain disappear. Use your favorite sand-and-seal technique if you wish. I have discovered that one heavy coat of Rustoleum Painters Touch 2X UltraCover Gloss Clear that is allowed to dry 1 hour and then sanded with #150-220 grit sandpaper followed by one more medium coat is a fast and easy way to get a good surface to which the adhesive of the skin will stick. Be sure the final surface has no irregularities or foreign material on the surface or it will show as "bumps" when the skin is applied. As a final step, I apply one light coat of gloss paint that matches the color of the skin that I am applying...black for "Twilight" or "Midnight" skins and white for the light-colored skins. This will hide any gaps you may have after the surfaces are skinned.

### The Skinning Process

Apply a very light coat of clear spray to the surfaces of each of the skin sheets at the very start of the skinning process. This will protect the skins during handling and make any dirt, stains or excess glue easier to remove as you build the model. Don't overdo it!

#### The Body Tube Skin

1. Start with the body tube. Its skin is provided in two parts. Sheet 1 has the afterbody skin and Sheet 2 has the forebody skin.
2. Cut out the afterbody skin. Use a metal straight edge to make sure all your cuts are perfectly straight. At one end of the skin is a red, orange or yellow stripe, depending on the skin kit. This stripe will be flush with the rear end of the body tube. There are hairline marks at each corner of the skin to serve as cutting guides.
3. Peel back the skin along the long edge of the skin which is marked "Remove 1/4" of backing..." and cut away about 1/4" to 3/8" of the backing. Make sure the surface you are working on and your hands/fingers are completely clean before peeling back the skin. After cutting away the backing, flip the skin over (printed side down) and carefully align and replace the backing you just cut away. Be sure you have the shiny slick side of the backing against the adhesive of the skin.
4. Tightly pre-wrap the skin (don't remove the backing yet!) around the body tube. The narrow colored stripe goes flush against the end of the tube. Adjust the wrapping of the skin until the ends of the skin along the edge opposite the end of the tube perfectly match up.
5. Release just enough of the long edge of the skin which has the 1/4" section of the backing cut so that you can carefully remove this 1/4" strip of backing. Be sure the skin doesn't slip or move. Don't let the skin stick at any point until you have this 1/4" backing removed. Once the backing is completely removed, press the exposed skin adhesive starting in the middle of the long edge. Carefully adhere this entire edge to the body tube.
6. Release the wrap. It will be bonded to the body tube along the 1/4" area. "Swing" the "unstuck" portion of the wrap away from the body until you can begin removing the remainder of the backing along the edge that is bonded to the body tube. You can now carefully bond the rest of the skin to the body tube by carefully running your fingers back and forth along the length of the skin to adhere it to the body tube. Work all the way around the body tube, avoiding wrinkles or air pockets, until the skin is applied around the tube.
7. If you have done everything correctly, the seam along of the bottom of the tube will have a tiny overlap and the ends of the wrap will perfectly match and align. It's not hard to do. Making sure everything is aligned before you start removing the backing is the key. Take your time.
8. The overlapping seam of the wrap is on the bottom of the model and few people will notice. However, you can remove the overlap by very carefully using the exposed edge of the overlap as a cutting guide and very lightly cut through the skin that goes under the overlap. Once cut, lift up one corner of the overlying skin and peel the thin strip of skin from under the edge of the overlying skin. You can "burnish" the overlying skin down on the body tube so that you have a flush butt-joint along the seam line.
9. Cut out the forebody skin on Sheet 2. You will notice that it appears to have two nose gear door details...this is intentional. The edge of the skin that is applied first has the gear door without any marking details. Using the guide marks at each end of the skin, cut the skin out, working around the nose gear doors. When you have applied the wrap to the body tube you will overlap the image of the doors created a slight "raised" effect.
10. Apply the skin to the exposed forward end of the body using the same technique you

used for the first body wrap. Be sure the centerline seam of the first body wrap lines up with the centerline seam of the first wrap. The landing gear door goes to the front of the body. The yellow strip butts against the forward edge of the aft wrap.

11. Once the body tube skin wraps have been applied the adhesive on the skin will actually cure and tremendously increase in strength over about a 12-24 hour period.
12. You will notice that there are six areas of the skin that are labeled to be trimmed away. We'll take care of these areas now. Using a sharp pointed knife just lightly cut through the outer perimeter of the areas marked "...: Trim Away". Do not apply too much pressure when cutting because you only want to cut through the skin and not the body tube. Peel away the skin material from the "Trim Away" areas. If the glassine layer of the body tube also peels away then that is okay.
13. If you have used a white or yellow glue to pre-glue the root edges of the wings/rudder/fins, use the same glue to apply a very thin layer of glue to the exposed body tube in the areas you have just cut away.
14. Set the body tube aside.

### The Nosecone

Covering the nosecone is perhaps the trickiest part of the whole skinning process. This is because almost every Interceptor blow-molded nosecone is slightly different. Some have obviously deformed a bit after molding and some have slightly different diameters than others. Also, there is not a sharp transition from the conic section to the cylindrical section of the nosecone. Though the skin is printed on vinyl, it is not the kind of vinyl that will stretch or heat-shrink. But you CAN get the skin to conform to the curve that transitions from the cone to the cylinder if you are careful.

1. Remove the molding seam along the top and bottom of the plastic nosecone by scraping, sanding, or whatever method you are comfortable with.
  2. Paint the nosecone with a good even coat of paint that matches the skin kit base color.
  3. Cut the pie-shaped nosecone skin from Sheet 3 and the rectangular aft nosecone skin (it's the one with the "Interceptor" logo) from Sheet 1. Cut away 1/4" of the backing on both skin pieces on indicated longitudinal edge and replace it as you did in the steps for the body tube skin. You will be applying the pie-shaped section first.
  4. Tightly pre-fit the skin for the conic section first. The longitudinal seam will run down the center of the top of the cockpit canopy. There is a red line centered on the "Linear Charge" marking on the skin. This must align exactly in the center of the molded-in groove on the nosecone that is near where the nosecone transitions from a cone shape to a cylindrical shape. Make sure the ends of this line up when the skin is completely wrapped around the nosecone. **Take your time to get it right.**
  5. Still holding the skin tightly against the nosecone, carefully lift the longitudinal edge of the skin with the cut section of backing and carefully remove the backing. Use your fingers to seal down the exposed adhesive of the skin against the nosecone. Due to the complex shape of the canopy, you won't get an "even" seal completely along this edge just yet. You do want to get good adhesion from at least the back edge of the wrap to about the mid-point of the canopy. You also want to get it to adhere firmly in the small area just ahead of the canopy.
  6. Release the skin and swing it out enough to begin peeling the backing away as you stick the skin down to the cone. Be sure to "stick" the skin in the "valley" where the cockpit joins the nosecone...you don't want a gap under the skin. Work all the way around the cone, again making sure you adhere the skin completely in the "valley" on the other side of the cockpit. You will likely discover that the edges of the skin overlaps slightly along the top seam. Carefully trim the overlapping seam. If you have a bit of a gap when you are done, that's okay. Finally, you will notice that the skin may not want to stick down in the slight area along the top centerline where the ends of the "Linear Charge" line meet. Simply use the point of your knife to cut through the skin along the red "Linear Charge" line about 3/8" to each side of the top centerline seam. This will allow the skin to lie down and adhere to this area...and the cut line will not be noticeable.
- NOTE: Due to the compound curve where the conical section of the nosecone joins the cylindrical section DO NOT attempt to stick the skin along this rear edge just yet. If you do, you will end up with somewhat unsightly wrinkles.

7. Trim away the blue area of the cockpit skin as indicated on the skin.
  8. There are a couple of ways to eliminate or minimize the appearance of skin wrinkles along the transition area of the nosecone.
- Method 1: Using your knife, cut out a very narrow pie-shaped wedge in each of these "buckles" that is no more than about 1/64" wide and 1/4" long. Yes, it's a small and tedious thing to do but the time and precision will be worth it. As you cut this wedge from each area, carefully "stick" it down. It is better to remove a bit too much wedge than to have an overlap or wrinkle since the underlying painted surface of the nosecone will "hide" the exposed area.

Method 2: If you have a clothes iron (or better yet, a "sealing iron" made for applying model aircraft coverings such as Monokote) you can very gently apply heat to the areas to "shrink" them down to a nearly wrinkle-free fit. The skin material is NOT made to be heat-shrinkable but it WILL shrink slightly. The process is a bit of an art. If you are not confident that you can heat shrink the wrinkles out don't do it.

Method 3: Use this method AFTER you have applied the aft nosecone skin. There is a very light line just forward of the aft edge of the conical wrap. You can cut along this line and peel it away to expose the underlying color of the nosecone. In most cases this will eliminate the area in which the tiny wrinkles will occur. From a distance of one or two feet no one will notice the gap in the skin.

9. Tightly pre-fit the skin for the cylindrical part of the nosecone. The longitudinal seam for this section is to be located on the bottom of the nosecone 180-degrees from the previously applied skin for the conical part of the nosecone. You want the forward edge of the cylindrical wrap to have as little gap (or no gap) where it butts against the forward wrap. Once you are happy with the positioning of this wrap, as you did with previous wrap sections, slightly release the edge of the wrap with the 1/4" cut backing section and

remove this backing, stick the exposed skin adhesive to the nosecone and then adhere the rest of the skin carefully removing the backing as you go. Like the forward nosecone wrap, you will likely discover several "buckled" areas along the forward edge of the cylindrical wrap where it meets the forward wrap. Use one of the three methods suggested in Step 8 to take care of the transition area.

10. Apply one or two coats of clear to the nosecone to seal all edges of the skin and set aside to dry.

### The Rudders, Wings and Lower Fins

The process for covering the wings, rudders and lower fins are all similar.

1. Cut out the skins for the wings and wing chine. Apply top wing skins first. Cut away about 1/2" of skin backing along root edge. Then align skin root edge lines "B" with the root edge of the wing and the tab fold lines on the leading and trailing edges of the skin with the corresponding edge of the wing. "Stick" the exposed adhesive along the skin root edge to wing surface then lift skin, remove remaining backing, and adhere skin on rest of wing. Fold the leading and trailing edge tabs to underside of wing and adhere in place.
2. Position and apply bottom skins aligning the root edge line and centering the skin fore and aft. Trim excess skin from root edges.
3. Cut out the left and right wing chine skins and prefold along the centerline. Prefit the chine skin so that the rear edge butts along the chine-edge of the top and bottom wing skins. Trim as needed. Note that the "Pressure Vent" graphic is on the top of each chine. When satisfied with the prefit, remove the backing position the fold exactly over the chine leading edge. Adhere the top skin surface (with the Pressure Vent graphic) first and wrap the tab at the forward end of chine to the underside of the chine. Tightly wrap the bottom chine skin around the chine leading edge and adhere in place. Trim away excess skin along the root edge and sand the root edges to even up the skins as well as remove any paint or sealer from the pre-glued edge.
3. Cut out the two rudder skins from Sheet 1 and the two skins from Sheet 2. The skins from Sheet 2 will be applied to the rudders first. Cut away about 1/2" of backing from the skin rudder tips. Position the edge of the blue printed area of the tip of the rudder so that it is even with the tip of the rudder. Position skin fore and aft so that the leading and trailing edge tabs align properly. Make sure the red edge along the root overhangs the root edge evenly. Then "stick" the rudder skin down on the tip and lift the rest of the skin, remove the backing, and carefully adhere the skin to the rudder carefully working from the rudder tip to the rudder root. Tightly wrap the leading and trailing edge tabs around the rudders and adhere to the opposite side. Sand the rudder root edges as you did for the wings.
4. Apply the inside rudder skins by positioning them as you did the outside rudder skins in step 3. Test position and fit the skins before removing the backing. You may need to trim these skins along the leading and trailing edges slightly so that they are about 1/16" smaller than the overall outline of the rudder. When satisfied with sizing and positioning, adhere in place.
5. Cut out the two subfin skins. The entire fin is covered with one skin piece. Prefold the subfin skins along the centerline. Peel away the backing and carefully position the skin along the subfin lower outside edge. Adhere the side of the skin with the tabs to the subfin surface first then wrap the tabs tightly around the subfin leading and trailing edges. Finally, tightly wrap the skin over the other side of the subfin and adhere in place. Trim away any excess and then sand the root edge as you did for the wings.

### Final Wing, Rudder and Subfin assembly

1. Glue the wings in place first. Carefully align in the wing cut away areas. After gluing one wing and allowing the glue to dry, position the body on a flat surface so that the wingtip is also resting on the surface. Glue the second wing in place so that its tip rests on the surface and allow to dry. The body and both wingtips should touch the work surface.
2. Glue one rudder in place so that it projects straight away from the body and allow to dry. Measure the distance from the rudder tip to the wing tip on its side of the body. Position and glue the second rudder in place so that the measurement from its tip to the corresponding wing tip matches the rudder tip to wingtip distance on the other side of the model.
3. Glue the subfins so that they project straight away from the body tube.

There is no real need for a fillet along the wings/rudders/fins as the root edges are so long as to provide more than adequate strength when using recommended engines. It also results in a "sharper" and more realistic looking model (real supersonic jets typically have sharp wing to body joints).

Finish assembling your Interceptor according to the kit instructions and then apply a final clear coat.

### Recommended Clear Coat Alternatives

Though just about any clear spray can be used over the skin when the model is complete, I have discovered that clear sprays intended to be applied to "Digital Prints" work very well. Specifically, Blair 500 Gloss "Digi-Finish (Order # 50016) works very well. Search for it online at at your local Art Store. It dries very quickly, doesn't yellow, and forms a very hard finish. It is also available in a matte finish.

If you have problems or questions, feel free to contact me via email at: johnpursley@accur8.com

