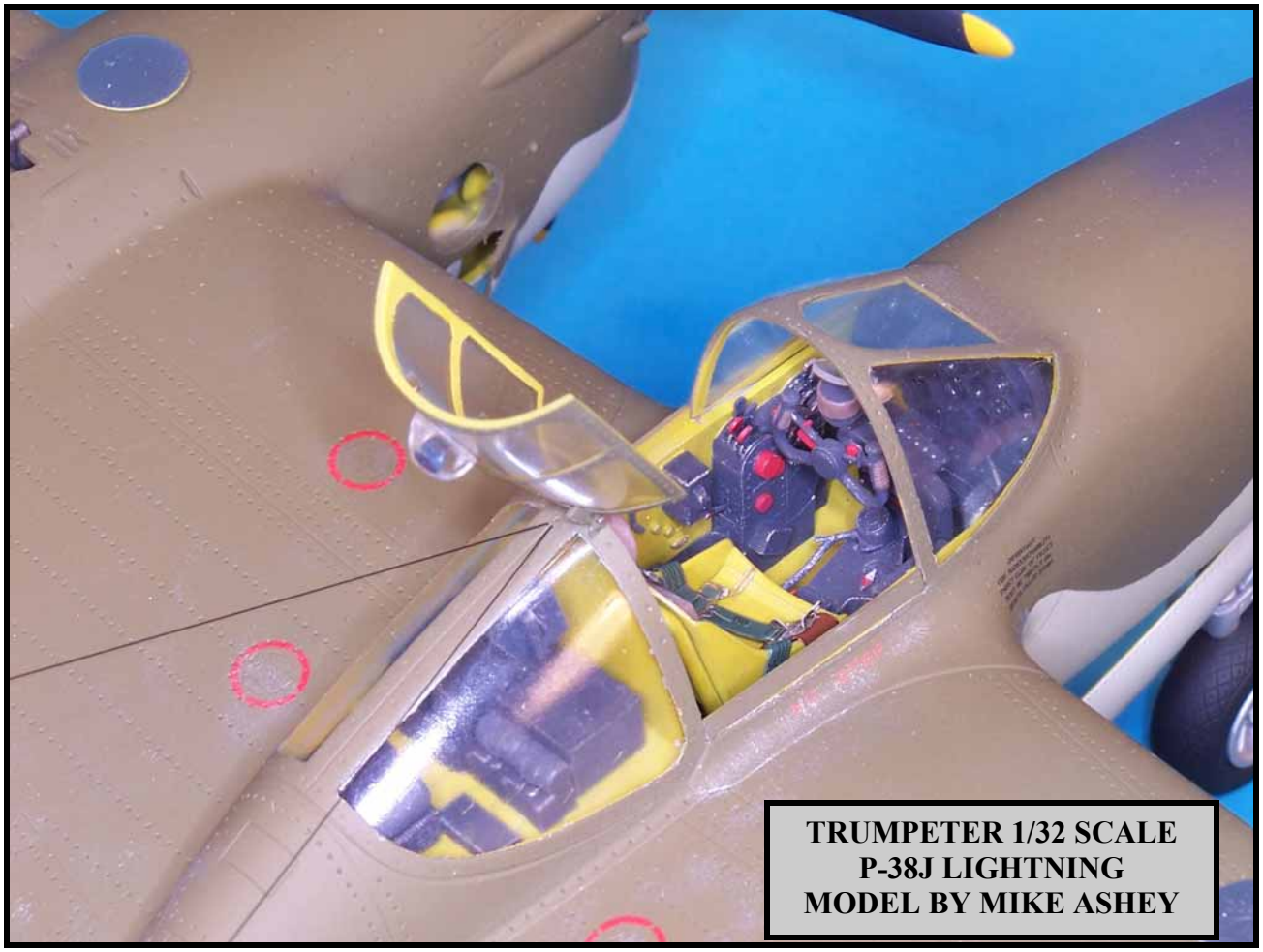


CHAPTER 3

COCKPIT CONSTRUCTION AND DETAILING

WORKING WITH PHOTOETCH INTERIOR DETAIL SETS

You can purchase interior photoetch detail sets which will either dress up the existing kits interior parts or a detail set that could just about supply enough parts to completely rebuild the interior. These photoetch detail sets can be either painted or unpainted. Eduard has the largest selection of photoetch detail sets. They are well engineered, fit together well, they have lots of fine etched or raised detail and their painted sets are superb!

I cut off photoetch parts as I need them and I do all my cutting and assembly on a Plexiglas surface and I use a single edge razor blade for all my cutting needs. The fold lines on Eduard photoetch parts are usually very precise, but sometimes hard to see especially on pre-painted parts so look closely at them before you start bending. To fold the parts I use either flat faced needle nosed pliers and a single edge razor blade or two single edge razor blades or a combination of both. The choice depends on the situation. I also run the backside of each part that will be a gluing surface along a stationary piece of 400 grit sandpaper to clean the backing so that super glue will have a better bonding surface.

Parts that just fold over to a ninety-degree angle can easily be done with the flat nosed pliers and a single edge razor blade. Place the part into the pliers with the fold line along an outer edge and use the tip of the single edge razor blade to fold the part. Parts that have a bottom and four sides are usually shaped by slightly bending the sides along the fold lines. It is important to start with a clean bend so that the completed bend will be sharp and flat. If you try to work the initial bend by just folding it with your fingers the edge of the bend will be round instead of being sharp and flat.

Once the fold lines have their initial bend you can work them into their correct positions using tweezers and a toothpick. When the sides have been folded into their correct positions and the edges butt up against the other edges of the part apply a tiny bead of super glue along the interior corners. You want to add just enough glue to hold the part together. Photoetch shapes, especially boxes, can be pretty delicate and fragile so I reinforce their interiors to add strength. This is very helpful when painting these parts, as you will be handling them a lot.

I use small plastic strips to reinforce the corners of large box shapes and I also place these strips along the open edges of these photoetch shapes for a better gluing surface. I cut the strips longer than I need so that I can position them with tweezers. I dip the end of the plastic strip into a small puddle of super glue and then carefully position the strip at the interior corners. The super glue will bond the plastic to the photoetch almost instantly so you need to be precise in your positioning. Once all the strips are in place I trim them to length and then add a bead of super glue along their lengths to add additional strength to the corners. When the glue has dried I form fit small lengths along the open edges of the box shape and then glue them into place. This will provide a wider gluing surface for the part.

To add strength to small parts pick a strip size close to the interior void size, trim down the plastic so that it fits snuggly inside the void and then glue it into place. If you get super glue on the outer surfaces of the photoetch, the glue can be scraped off with the tip of a number 11 X-Acto blades. If you are working with pre-painted parts and some glue has seeped onto the painted surface give the outer surface a coat of Testors Dullcote to hide the glue.

For small parts such as throttle and mixture handles you will need to check their fit before gluing. If you are using a photoetch assembled throttle quadrant, the actual throttle handles can sometimes slip too far down into the assembly so be careful when attaching them. If you are adding small photoetch levers to kit supplied parts be sure that you drill the opening large enough to accept the photoetch part. I like to paint these small parts on their photoetch trees first, remove them and attach them with tiny drops of white glue so that I have some working time to position them correctly. Once the white glue has dried I apply a ting drop of super glue to add strength to the attachment point and I then touch up the part with a detail brush.

To reproduce the ball handles on control levers apply a small drop of white glue to the tip of the lever with a toothpick. The glue will dry into the perfect shape of a ball. If there are circles on the photoetch electrical and radio boxes chances are there is an instrument or dial face that should be there. Use the outline as a guide to add flat white paint applied carefully with the tip of a toothpick or detail brush to color in the circle. Then punch out a decal or placard instrument using your Waldron punch with the closest diameter to the circle and attach the instrument face.

If the box has indicator lights apply tiny drops of white glue applied with the tip of a round toothpick to the locations. After the glue dries use a sharpened toothpick tip or a detail brush to paint the indicator lights which are usually red, green or yellow. If there are switch locations on the part drill out small holes and add stretched sprue or small diameter round stock attached with super glue. The lengths of plastic should be pre-painted so that once they are glued into place you can cut them to length, and then touch up the tips.

WORKING WITH RESIN DETAIL SETS

Resin detail sets can add a very high level of realism to open cockpits, but there can be a lot of cleanup work involved. Most resin detail sets have pour plugs, which need to be removed, and how it is attached to the part will determine how you will remove it. Before you do any cutting or sanding of resin parts I recommend that you take inventory of all the parts to be sure that they are all there and that none are damaged. Damaged or missing parts can be replaced by the manufacturer. Always wash resin parts before working with them to remove any mold release agents. You can soak them in warm water and Ivory soap for a few minutes and then scrub them with a soft toothbrush. Rinse the parts to remove the soap residue and let them dry.

Large resin plugs can be cut down using a razor saw and the remaining excess resin can be removed by running the part across a stationary piece of sandpaper. When cutting resin place some paper towel under the cutting area and wear a dust mask over your mouth and nose as you do not want to breath in the residue resin dust. When sanding resin parts always wet sand them whether you are using stationary pieces of sandpaper or a sanding stick. The resin residue will glob up making it easy to clean up.

Be very careful when sanding resin as even 400 grit sandpaper will remove resin rapidly from a part so check your sanding work often and go slow. Good resin detail sets have resin parts with minimal pour plugs. The small parts are usually found on trees. You can easily remove them with a number 11 X-Acto blades. When cutting small parts off leave some of the thin pour sheet attached to the part. Once the part is removed you can then clean it up. Parts such as frames will have a thin layer of resin between the framing. Typically this resin is .010 inches thick or less and can easily be cut out with your trusty number 11 X-Acto blade.

All the major components that fit inside the fuselage should get a fit check. You may need to do some minor trim work to get everything to fit correctly so go slow when you sand, shave or cut and be sure too form fit the parts into place. Once you are satisfied that all the parts fit correctly you are ready to complete any subassemblies and prime the parts. Priming the parts is important as it affords you the opportunity to check for any flaws such as pinholes or voids where the resin did not fully fill the cavity of the mold. You can fill these with tiny strips of plastic by dipping the tip into a puddle of super glue and then sticking the tip into the pinhole or void. Once the glue has dried cut the strip and carefully scrape or sand it smooth. At this point, painting, assembly and gluing proceeds just as if it were plastic a kit. You should always scrape paint off gluing surfaces and use super glue to attach resin parts to one another or to plastic. Small parts can be attached with white glue if the parts are painted.

BUILDING THE INSTRUMENT CONSOLE

There are many kits on the market today where the instrument console has the instruments engraved onto the part. Fortunately these kits also supply console decals which can be used to enhance the plastic surface. To get a really good looking result from a kit console, first paint the console the appropriate color and then give it a gloss coat. Punch out the individual instruments from the decal sheet with a Waldron punch and apply each decal to its respective location on the painted console. This is a very slow and tedious process but if you are careful you can get a fairly good looking console. When you are finished give the console a coat of clear flat to seal the decals and restore its appearance.

Some newer kits come with a transparent console, a plastic backing and a clear acetate film or paper instrument panel that is sandwiched between the transparent console and the backing. Sometimes the transparent part has holes for the instruments and sometimes it's just a solid piece of clear plastic. For a solid clear piece you have two options; one is to mask the instrument locations and the other is to drill them out. If you decide to drill out the instrument locations, I recommend that you thin out the clear plastic a little by running it across a stationary piece of sandpaper, as these parts tend to be rather thick.

To mask the instrument locations use a Waldron punch to make masking tape disks that can then be placed over the instrument outlines of the clear part. This is a slow process as you have to separate the Waldron punch, place a strip of masking tape over the appropriate punch hole, replace the top part of the punch, punch out the disk and then repeat the process for the next disk. You will also have to punch out a lot of masking tape disks to get a few good ones. Sometimes using two layers of masking tape works better than one.

The second approach, and the one I like best is to drill out the instrument locations. Since clear plastic is more fragile than colored plastic you will need to be careful when drilling. Gently center punch each location and then drill out a small hole. Select the drill bits you will be using and what you will need to do is use progressively larger bits to open up the instrument hole. If you try to cheat and use too large a drill bit you will crack or fracture the cleat plastic. I also place the clear instrument face on a wood base when drilling.

Once you are done masking or drilling you can paint the clear instrument face the appropriate color and be sure to paint both sides. If you are using a paper instrument placard use tiny drops of white glue to attach it to the back of the console. Line up the instruments carefully and be sure that the glue is pressed flat. If you use super glue on the paper you might stain the instruments ruining the part. If you have a clear acetate part paint the backing flat white so the instruments will stand out, position the acetate onto the back of the clear part and attach with tiny drops of super glue. Complete the assembly by super gluing the backing to the console. I like to run a bead of super glue around the perimeter of the completed assembly for a strong bond. You can then scrape and sand the edge smooth and touch up with the console paint color.

Another approach is to purchase a photoetch detail set. Eduard makes great cockpit detail sets for hundreds of different aircraft models in 1/72, 1/48 and 1/32 scale. Their consoles are very easy to assemble, and they are well engineered and have excellent fit. You get a console face, clear ace-

tate sheet with the instruments printed on it and a back piece. Most photoetch consoles need to be reinforced to add strength to them. Trace the outline of the console's backing onto .020-inch white sheet stock and cut out the new backing. Paint the photoetch console and then carefully position the acetate part onto the back of the console so that the instruments are centered in their respective holes. A few drops of super glue will secure the acetate part into place. Glue the white plastic backing to the photoetch console and run a tiny bead of super glue around the perimeter. The white plastic will highlight the detail on the instrument faces, although you might also want to also paint the back of the acetate flat white.

Sometimes photoetch consoles have several layers and in these cases plan your assembly carefully and reinforce with plastic whenever possible to add strength to the assembly. If you are working with Eduard's pre-painted photoetch sets, to help prevent damaging the pre-painted surfaces wrap small lengths of masking tape around the ends of your tweezers.

If the console has raised detail for indicator lights, these can be simulated by adding a drop of white glue to each location using a round toothpick as an applicator. These glues have a high surface tension and will form a perfect hemispherical shape. After the glue has dried paint it the appropriate color using the tip of a round tooth pick as an applicator.

SEATS AND SEAT BELTS

Wherever possible I like to use the kit-supplied seat as a starting point. Most new kits supply seats with no belt detail molded onto it, but there are lots of older kits where the belt and seat are one part. If the kit seat is thick you can thin it by running the part across a stationary piece of sand paper. If the seat has molded on seat belts you can carefully scrape them off using a stencil knife and a number 11 X-Acto blade and then smooth out the surface using a small length of sandpaper wrapper around a length of balsa wood.

Prior to attaching seat belts paint the seat and dry brush the edges with silver paint to highlight the shape of the seat. To replace the seat belts I recommend purchasing Eduard's per-painted seat belts. In 1/48 and 1/72 scale, the belts are one piece and all you have to do is some minor bending and then attach them to the seat with super glue. Carefully cut them from the photoetch sheet, bend them onto the seat and backing so that they take the shape of the edges and curves of the seat and then attach them with tiny drops of super glue. Be sure your tweezer tips are covered with masking tape to protect the painted surfaces.

If you are working in 1/32 scale, the Eduard pre-painted seat belts need to be assembled. The first step is to fold the belts at the locations where you want to put the adjustment buckles, which is usually about half way along the length of the belt. I use a set of flat nosed needle pliers, with the inside surfaces cover with masking tape, and a single edge razor blade to make the initial bend. I then exploit the bend by working the photoetch seatbelt into a tighter bend almost collapsing it onto itself. The bend needs to be tiny as the slots for the belt on the adjusting buckle are only 1/32 of an inch apart. Thread the bent seatbelt through both slots of the adjustment buckle and work it up to the fold. Once the buckle is positioned correctly expand the belt and then press it flat to set the buckles location. Once you have the center adjustment buckles in place, carefully fold the tabs at the end of the belts for the remaining belt hardware. Next you can add the remaining

photoetch details such as the adjusting straps.

Once I have the belts assembled I like to form the belts to the shape of the seat at their respective locations by carefully pressing the assemblies onto the seat. Go slow when shaping the seat belts, as you do not want to pop off any glued on details. Attach the belts with tiny drops of super glue. After the super glue has dried apply some Testors Dullcote where the super glue is exposed on the painted surfaces, which will appear to be shiny. The Dullcoate will make the super glue blend into the flat painted surface and it will disappear.

If you are working with a resin seat and the belts are molded onto the seat I do not recommend that you attempt to remove the belts, as it is too easy to damage the resin part. I recommend that you paint the seat, then mask off the belts and paint them and then carefully pick out the metal components with a detail brush. Another approach is to purchase a photoetch detail set that has a seat and use it. Photoetch seats can be very fragile so reinforce them by laminating .015-inch sheet stock to the sides and backing after you assemble it.

Jet aircraft ejection seats are very complex pieces of machinery and most jet aircraft kit seats do not do them justice. I recommend that if you really want to add a high level of detail to your jet cockpit purchase a resin ejection seat. Carefully painting, highlighting and dry brushing will bring out all the detail that was added by the manufacturer. The pour plugs are removed the same was as described in the section on working with resin parts.

GUN SIGHTS

Most manufacturers supply some type of gun sight part, which usually has the correct shape, but lacks detail. Most World War Two fighter aircraft were fitted with some type of reflective gun sight which was centered either at the top of the console or above it, while modern jets have heads up displays which combine computer aided gun and missile aiming along with instrument readings. The reflective glass for the gun sight is positioned so that the pilot's eye could look through the reflective glass, on through the front of the windshield and out to the target.

To dress up the sides of the gun sight I usually add some small, thin plastic disks that I punch out with a Waldron punch tool. You can also add a switch or two with stretched sprue and to really add some realism attach a small instruction decal. Most gun sights are a light shade of flat black. Do not add the clear parts until you have finished all your painting. If the gun sight needs a reflective glass plate, but none was supplied in the kit, you can add this by cutting a small rectangular shape from clear sheet plastic. Glue it in place with white glue.

ADDITIONAL DETAILING

If you decide to install interior framing keep in mind that vertical framing is wider than horizontal framing. To draw the lines for the framing on a curved surface use a thin strip of sheet stock of about .020 inches thick. If you decide to install both types of framing, I recommend that you do the vertical ones first and then form fit the horizontal ones. Since the horizontal frames will be in sections and positioned between the vertical frames you will need to insure that they are all installed along a straight line. I install all the strips along one line, adjust them until they appear

straight and then place a drop of super glue with a thin wire applicator along the underside of each length. The capillary action will pull the glue under the plastic strip.

If you want to add some additional interior plumbing use small diameter round stock for straight lengths and moderate bends. You can secure the bend's position by applying tiny drops of super glue at the bend point. If you need to run the piping along interior contours use small diameter solider or soft brass beading wire. These metals are easy to shape and contour around curves, corners and over framing. Be sure to paint these parts before you install them. An easy way to paint these small diameter lengths is with a sharpie indelible ink marker.

QUICK TIPS

CUT OUT PHOTOETCH PARTS WITH A SHARP BLADE ON A PLEXIGLAS SURFACE

CUT OFF PHOTOETCH PARTS AS YOU NEED THEM

TO GET SHARP BENDS IN PHOTOETCH, SHAPE THEM WITH FLAT FACED NEEDLE NOSED PLIERS AND SINGLE EDGE RAZOR BLADES

REINFORCE PHOTOETCH BOX SHAPES WITH SMALL STRIPS OF PLASTIC

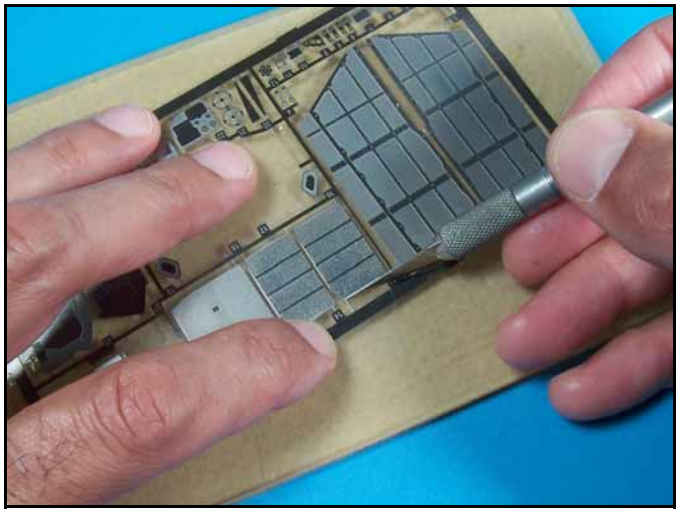
ALWAYS WET SAND RESIN TO REDUCE THE DUST AND USE CIRCULAR "8" MOTIONS TO ENSURE AN EVEN SURFACE

ALWAYS WASH RESIN PARTS TO REMOVE THE MOLD RELEASE AGENTS

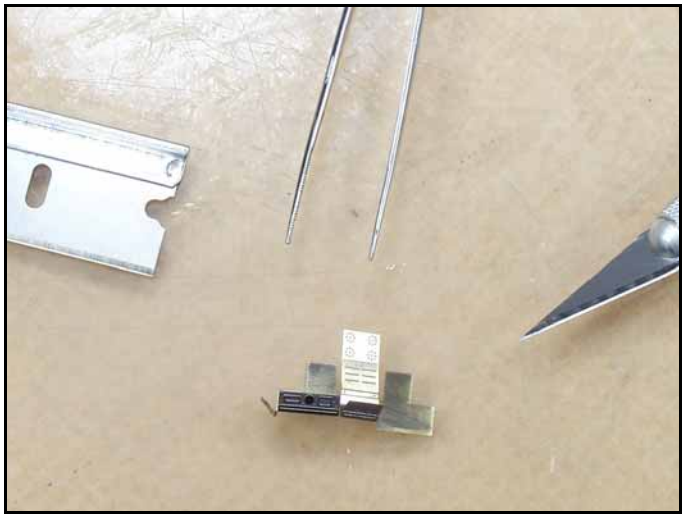
USE TESTORS DULL COAT TO HIDE SUPER GLUE ON PAINTED PHOTOETCH ASSEMBLIES

INSTRUMENT DECALS ARE BEST PUNCHED OUT WITH A WALDRON PUNCH TOOL

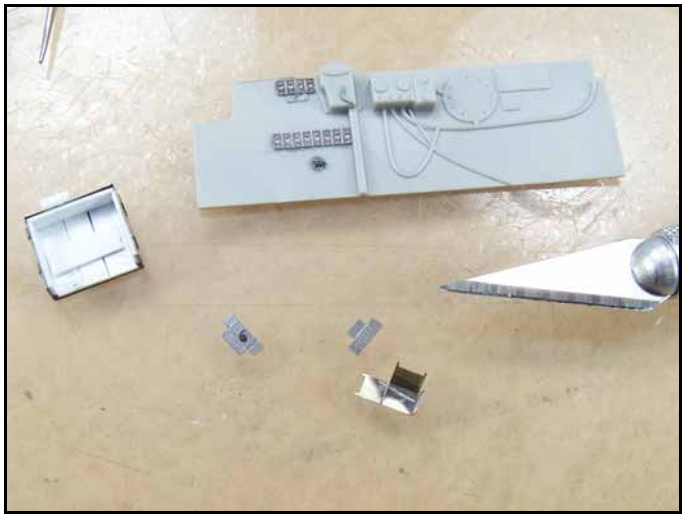
WHEN DRILLING CLEAR PLASTIC, GRADUALLY INCREASE THE DIAMETER WITH MULTIPLE DRILL BITS



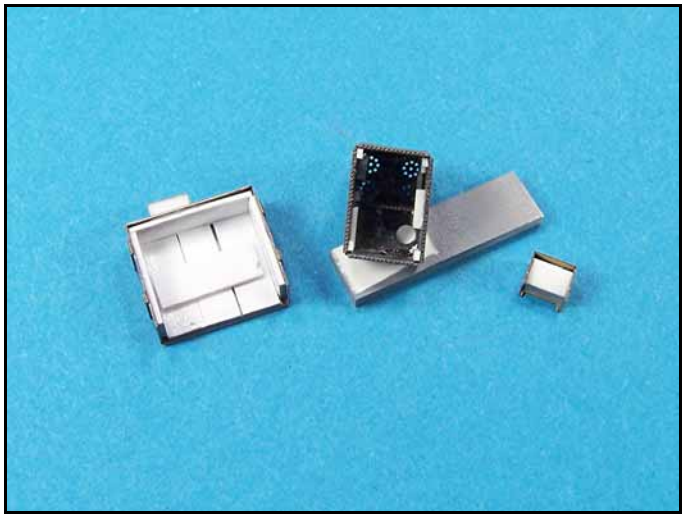
Always cut photoetch on a Plexiglas plate with a sharp blade and only cut the parts off as you need them You can clean off any excess stubs on the part with a sanding stick.



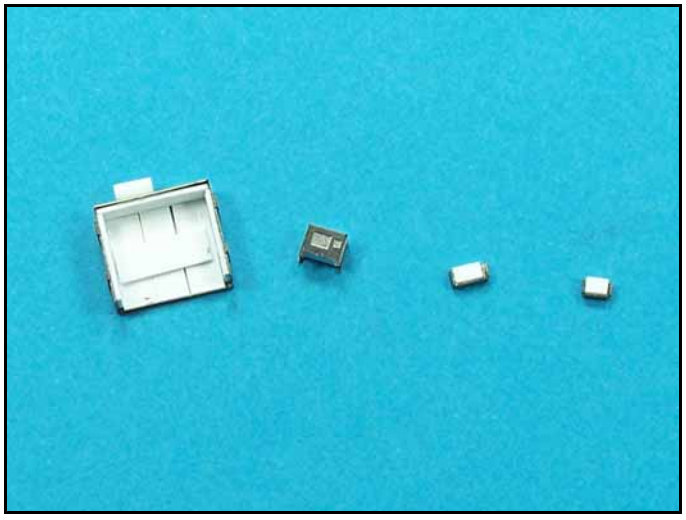
Photoetch box shapes are best partially bent along their fold lines. Once the metal is slightly worked along the fold line you can complete the shape by bending the sections with a set of tweezers and the tip of an X-Acto blade.



These photoetch parts are being cut off and glued into place one at a time. Working slowly in a stepped process will always yield better results with photoetch parts.

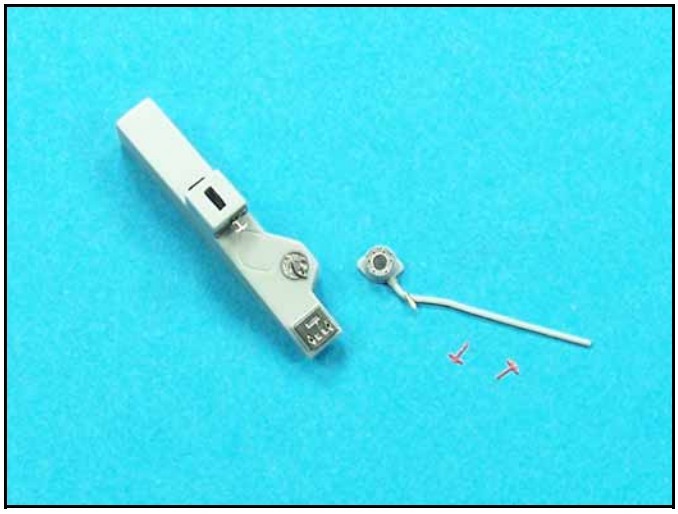


These box shapes photoetch parts had beads of super glue applied along the interior seam and fold lines. Small strips of .020 inch plastic strip were then added to strengthen the part and provide for a wider gluing surface.

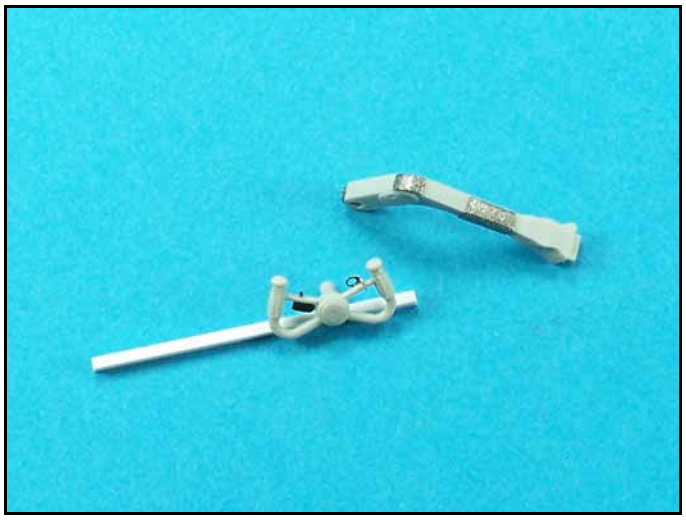


Even these small box shapes were reinforced with small bits of plastic to strengthen them.

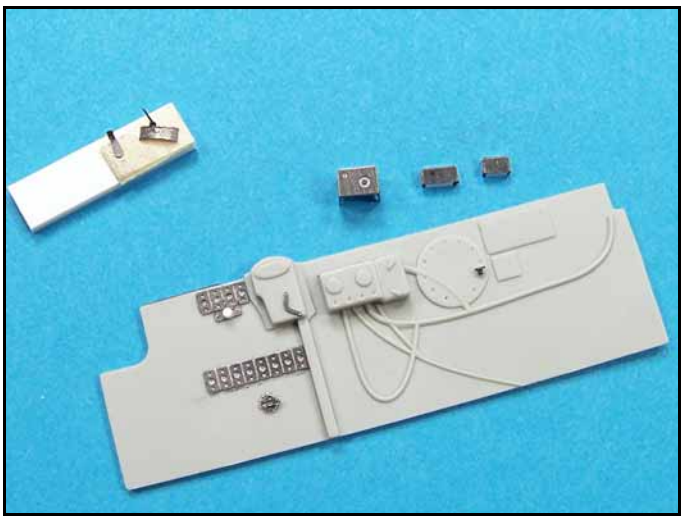
These small name plates were shaped by rolling a Waldron punch rod across the part. I use a slightly smaller diameter rod than the diameter that I need so that the photoetch part would fit snugly in place.



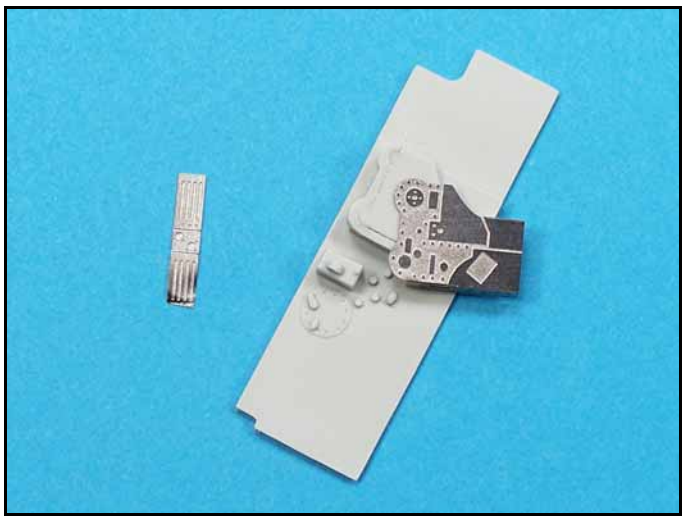
Photoetch parts can greatly enhance the appearance of the plastic kit parts. I place tiny drops of super glue at the photoetch part location and then position the part in place.



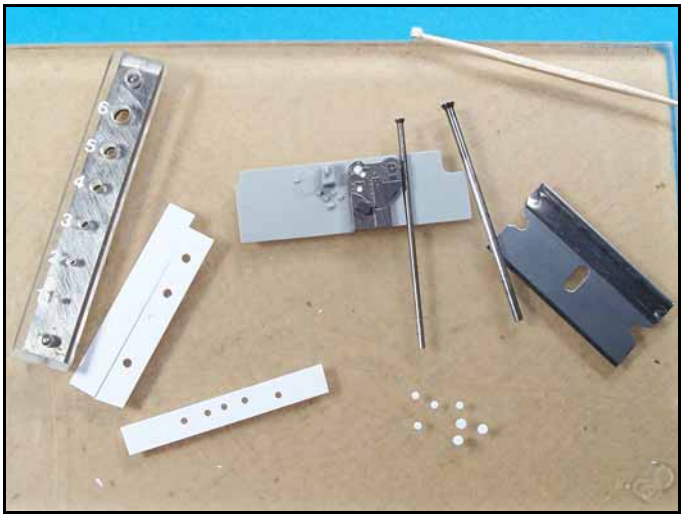
These parts will look much better once they are painted and the small added details are painted with a tiny detail brush.



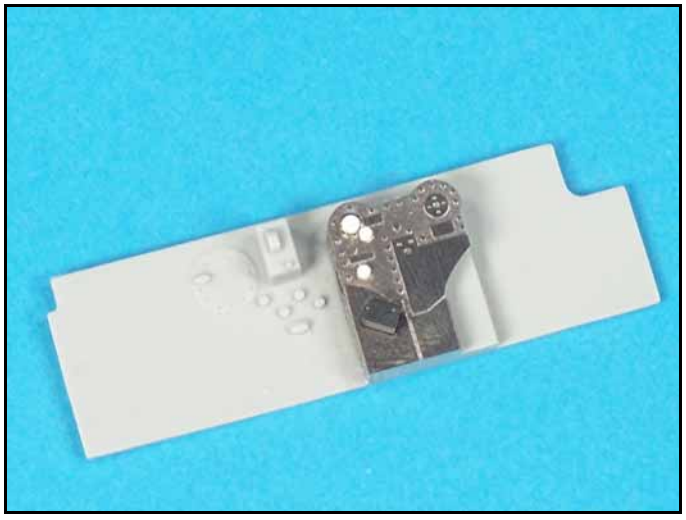
The addition parts on the sides of the cockpit will greatly enhance its appearance resulting in a very busy looking interior once the parts are all painted and drybrushed.



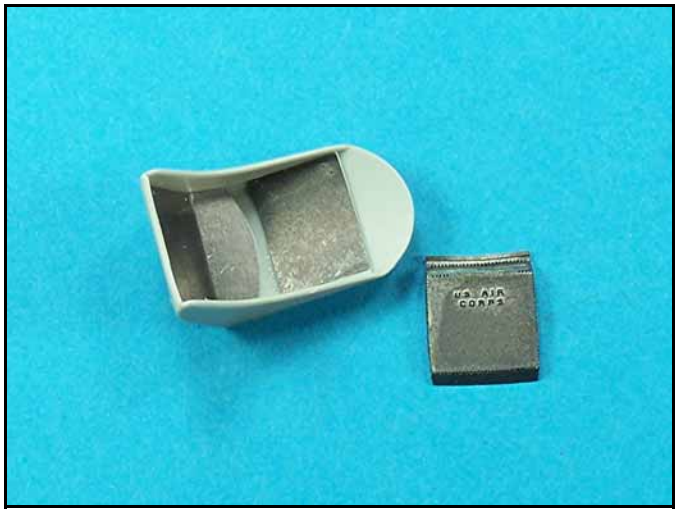
I do not always use all of the photoetch parts. The upper face plate on the throttle quadrant would be very difficult to shape and place correctly. I decided to stick with the larger side plate.



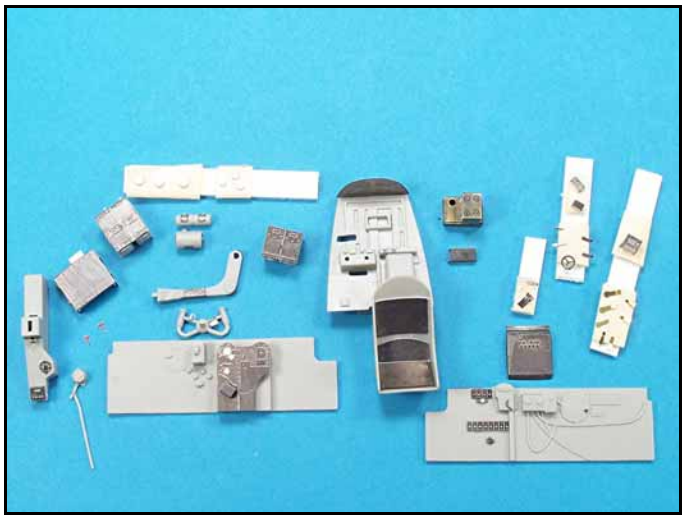
To help place the additional parts that get attached to the side plate, I used by Waldron punch tool to make some different size disks.



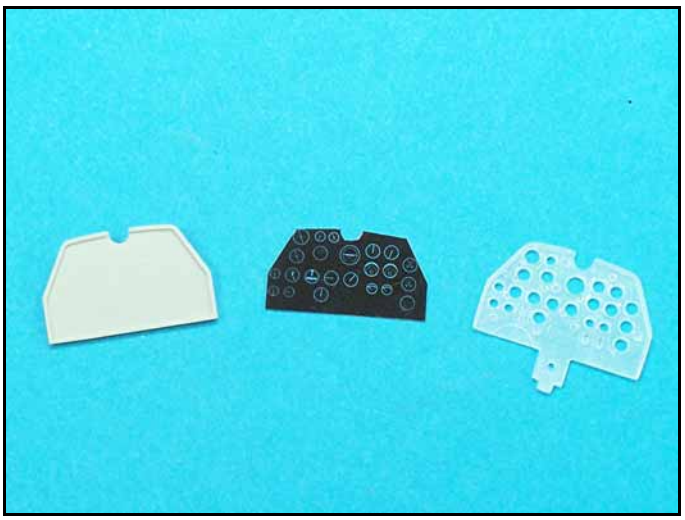
The disks were super glued into place and they will help enhance the appearance of the parts by creating a wider three dimensional effect when the additional parts are attached.



Although cockpit photoetch detail sets include a seat, I like to use the kits seat. I thin out the sides and the back and use the photoetch details to enhances the seats appearance.

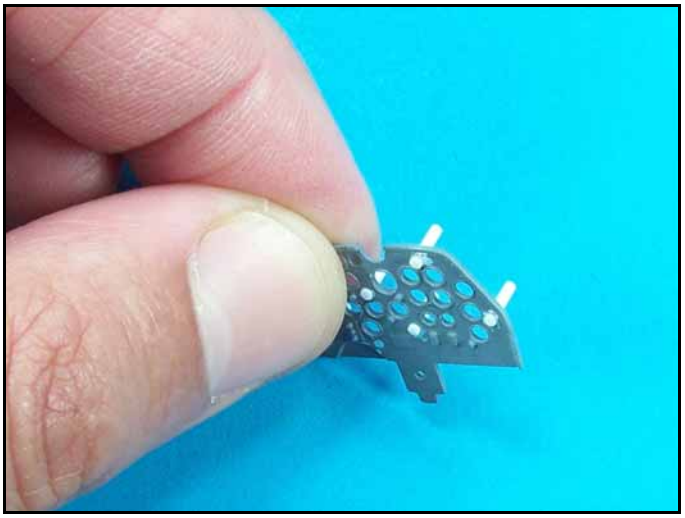


All of the kit parts for this 1/32 scale P-38J have received their photoetch details and they are now ready for priming and final painting, detailing and weathering.



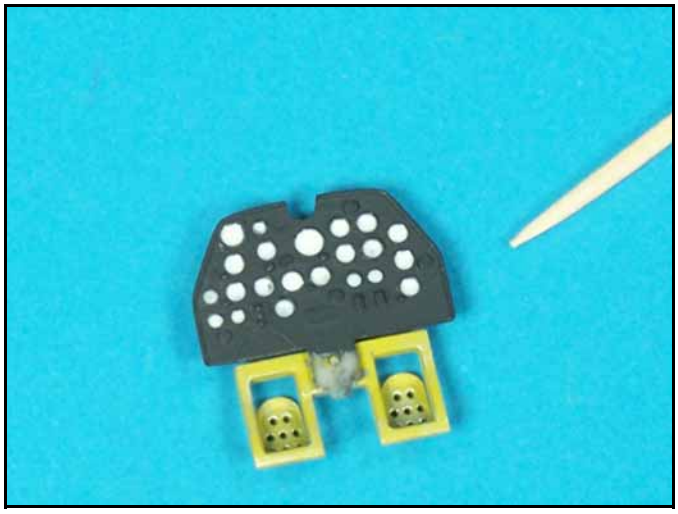
Many new kits have different types of console assemblies that include an acetate sheet with instrument details on it. The sheet gets sandwiched between the front console and its backing.

The clear plastic console on this P-38J was thinned out by running it across a stationary piece of sandpaper. If the plastic is to thick the instruments will appear to be set to deep into the console.

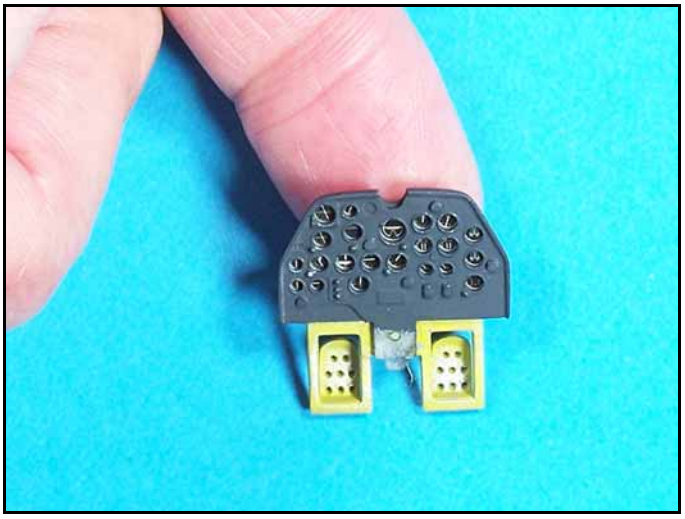


The console on this P-38J had some mold punch outs on its surface that I did not see until I primed the part. To fix the problem I drilled out the punch marks, glued round plastic stock in place, trimmed and sanding them smooth.

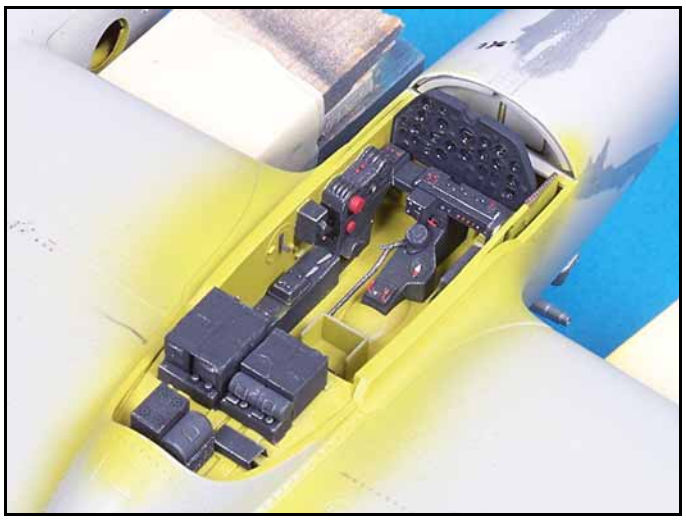
All the interior parts on this 1/32 scale P-38J have been painted, drybrushed and weathered. Note that the backing for the console is painted white so that the acetate instrument details to be clearly seen once the console is assembled.



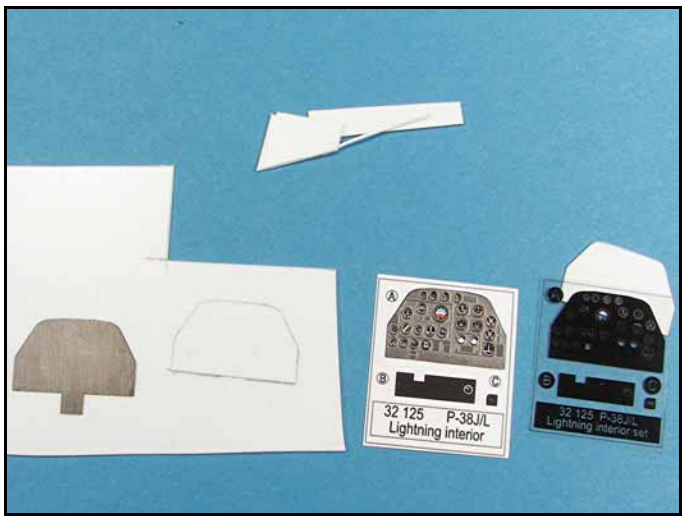
The p-38 J console has been assembled and I then placed drops of white glue onto the instrument surfaces to replicate the glass cover plates of the instruments.



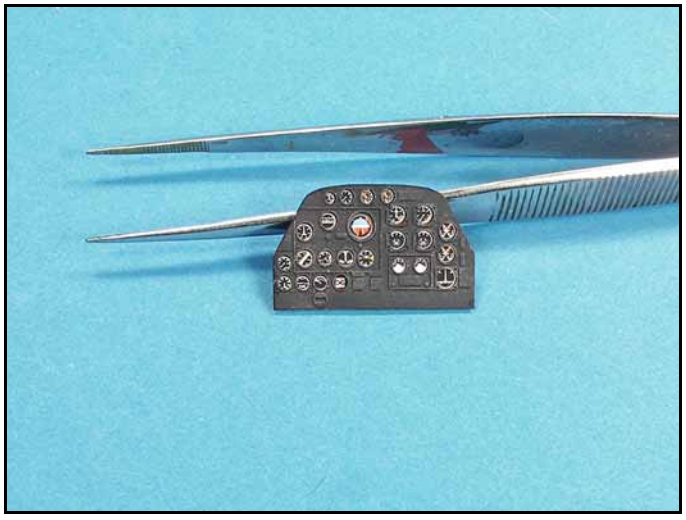
White glue dries clear and this instrument console will look great once it is installed inside the cockpit.



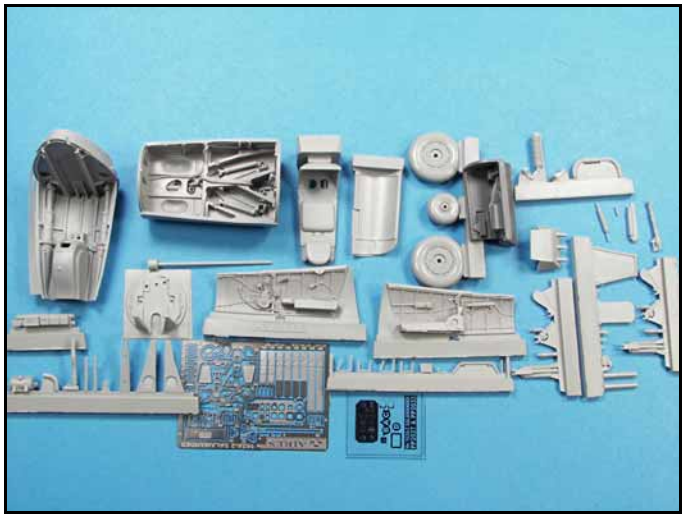
The cockpit on this 1/32 scale P-38J is starting to really take shape. Note the top of the throttle quadrant and the details associated with the throttles and the engine fuel mixture lever locations.



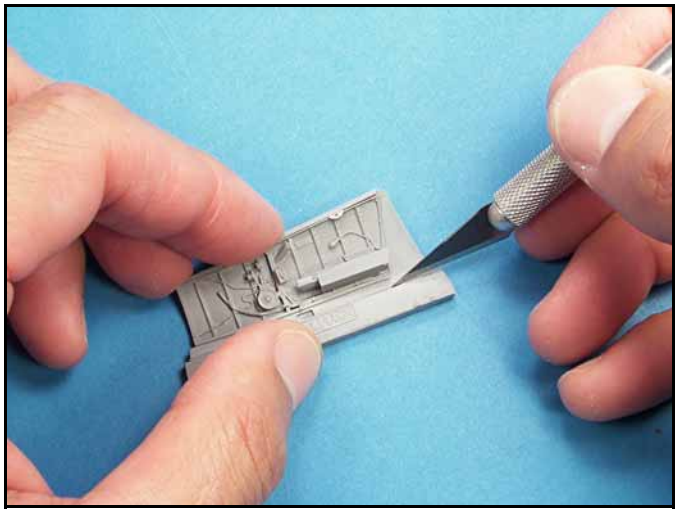
This is the photoetch console that came with the Eduard detail set for the P-38J. I traced out a thicker backing on .020 inch sheet stock to add strength to the assembly.



This is the assembled photoetch console that I could have used for my 1/32 scale P-38J project. I decided to use the paper instrument detail sheet because it had some color to it.

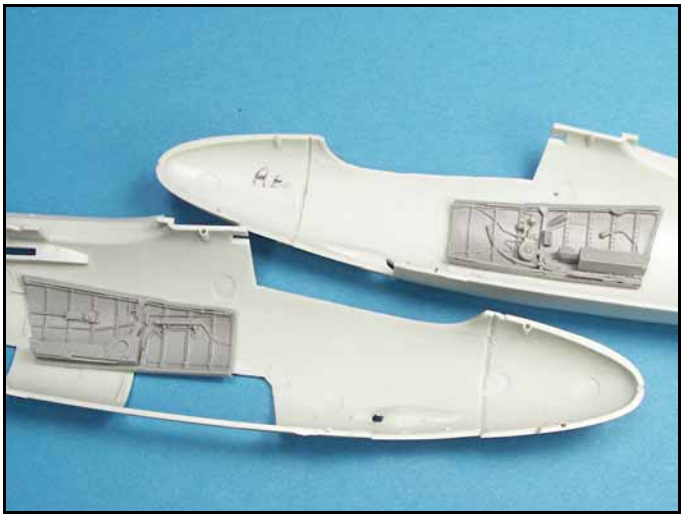


Resin cockpit detail sets provide you with everything that you should need to enhance the cockpit of your aircraft model. This detail set is for the Revell 1/32 scale He-162 Salamander and it includes engine and wheel well details.

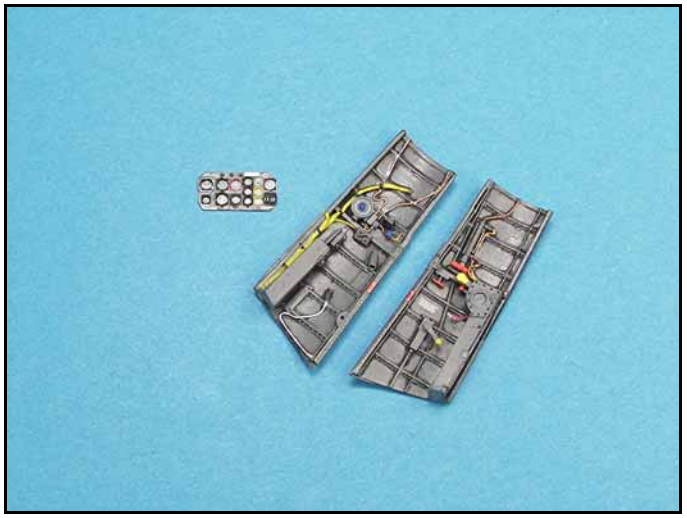


To remove the resin pour plugs on the cockpit side panels scribe along the base of the plug with a sharp number 11 X-Acto blade to remove it. Finish removing the excess with a sanding stick.

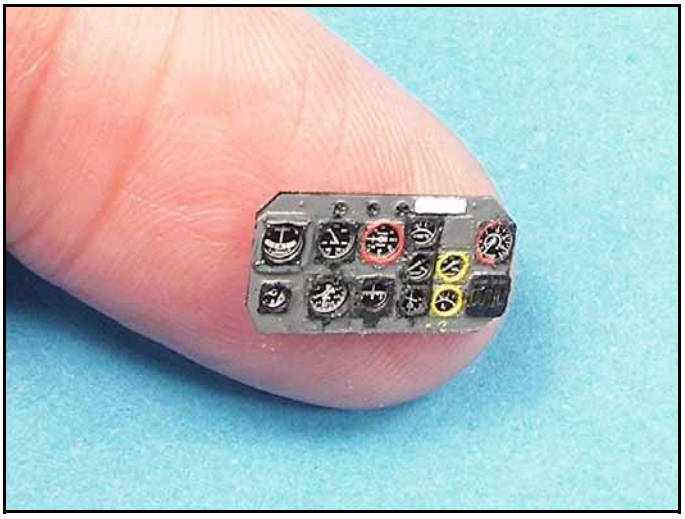
Small resin parts can be cut off in a variety of ways. Chapter two has several examples of different methods. The resin sheet between the framing can be scribed and removed with several passes of a number 11 X-Acto blade.



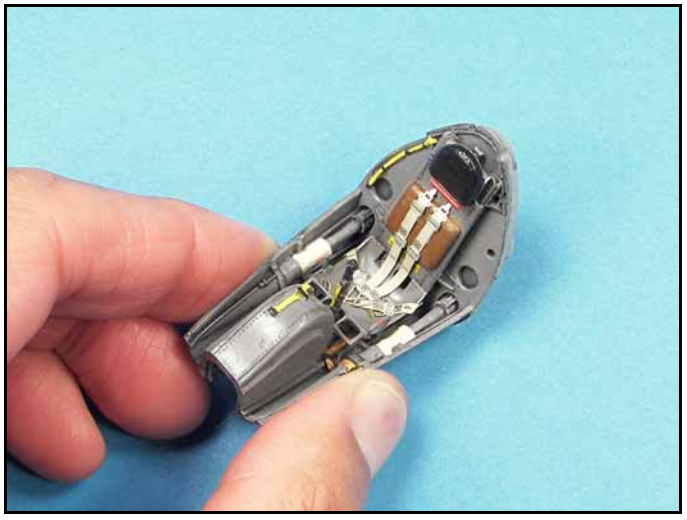
The molded on interior detail on the Revell Salamander's fuselage sides was carefully sanded off so that the resin parts would sit correctly. Model by Scott Weller



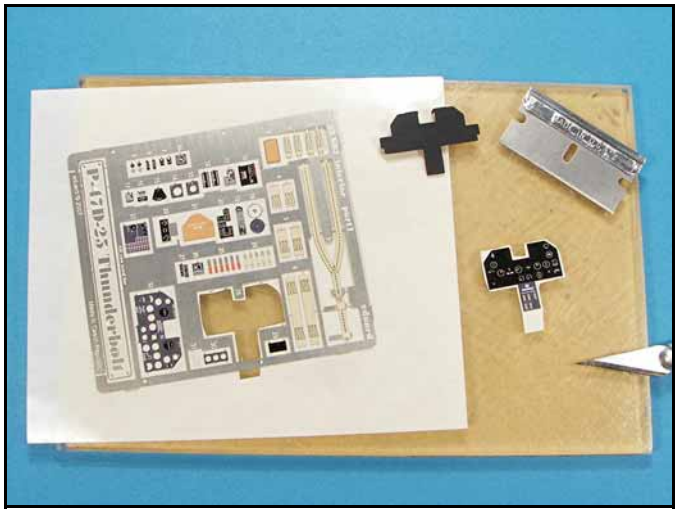
Careful detail painting can really bring out all the added details on resin kits. With the addition of some wash along the framing, these parts will really enhance the cockpit interior. Model by Scott Weller



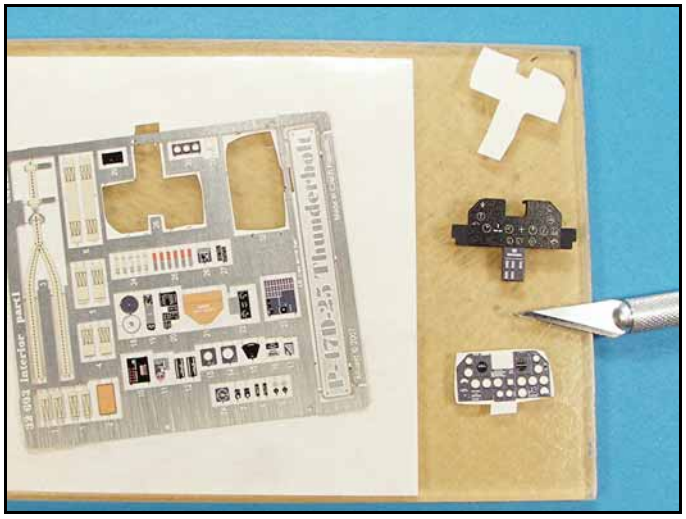
The instrument console for the Revell Salamander is a photoetch front with an acetate instrument sheet and a backing which was painted white to enhance the instrument detail. Model by Scott Weller



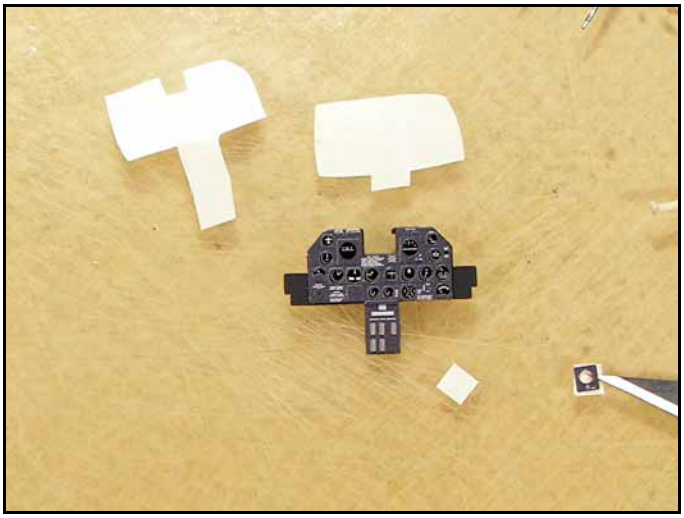
Now that all the cockpit parts and the seat belts have been added, this assembly is ready to be added to the kit. Note how all the different colors and shades enhance its appearance. Model by Scott Weller.



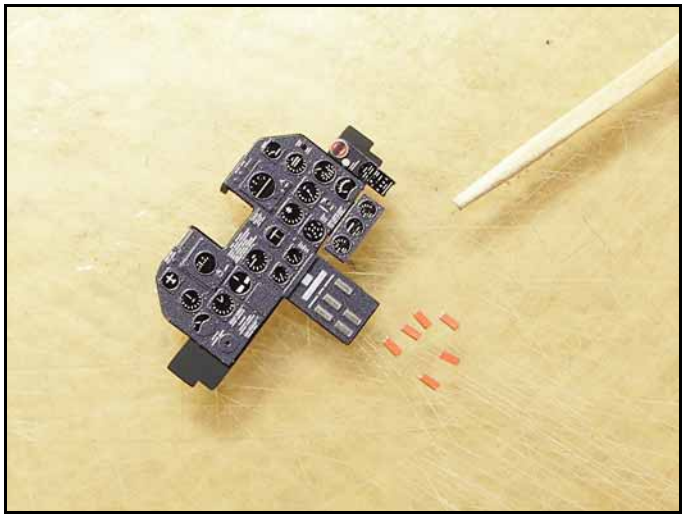
Eduard's prepainted self adhesive photoetch parts should be cut out with some of the backing attached to the part. The long backing tab will make it easier to peel it off as you handle the part.



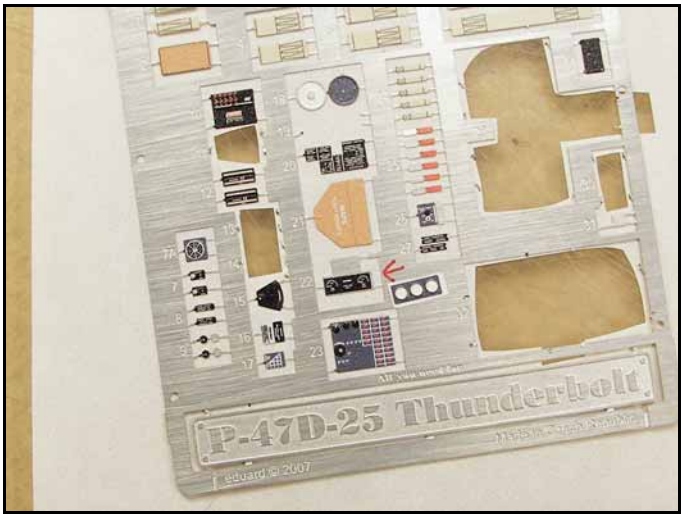
The first layer of the console has been positioned onto the kits part. You need to be farley precise when you lay down self adhesive photoetch parts as you will not be able to move it a lot once it starts sticking. Press firmly once in position.



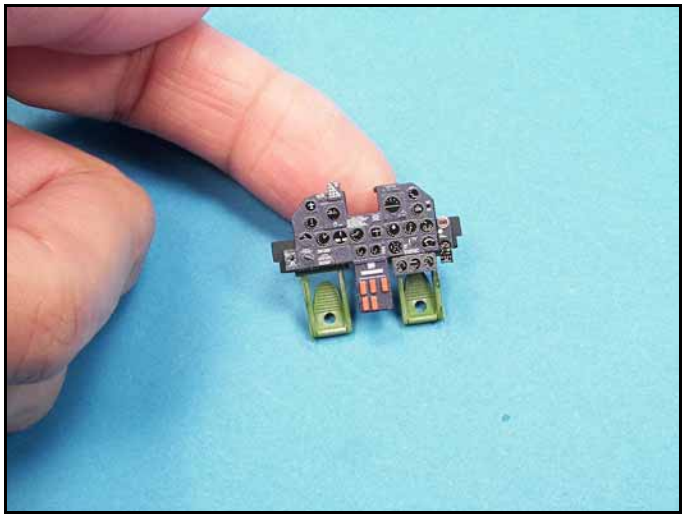
Here again you need to be farley precise in positioning the parts. You can slide it a little and I used the ends of tooth-picks to accomplish this. I noticed that the sliding became more difficult in a minute, so position it quickly.



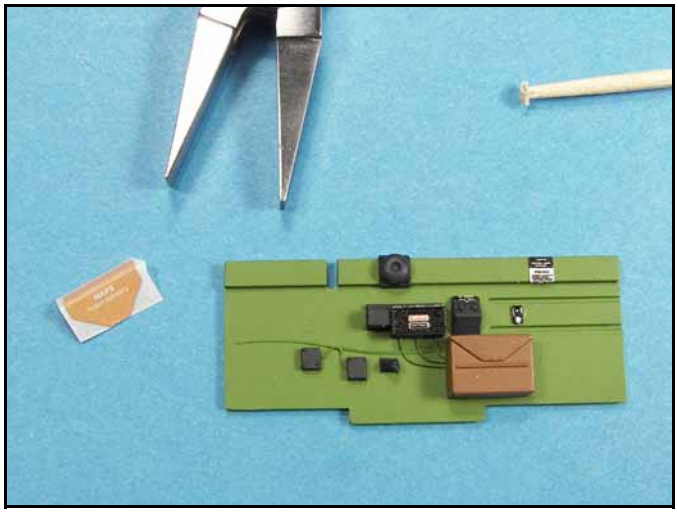
Although these small red parts had some adhesive I also used tiny drops of super glue to attach them once the parts were positioned. I moistened the tip of the toothpick to pick up these tiny parts and place them in there respective locations.



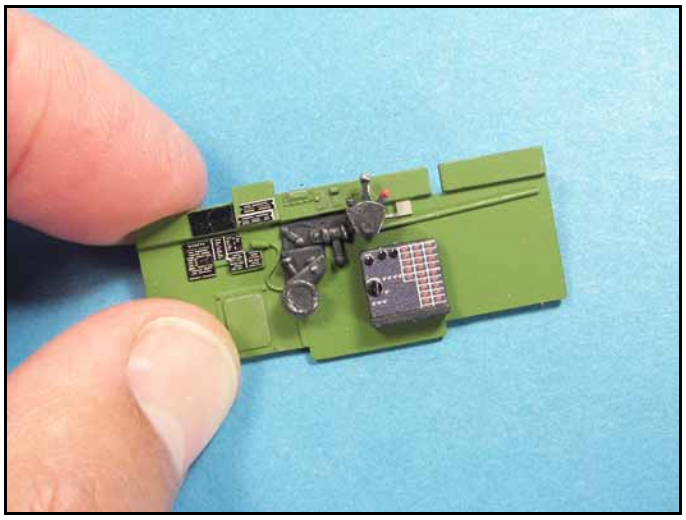
I also found that you can attach parts to one another while one part is still attached to its tree. On smaller parts I found it easier to assemble them in this fashion, although next time I will also try assembling the console this way.



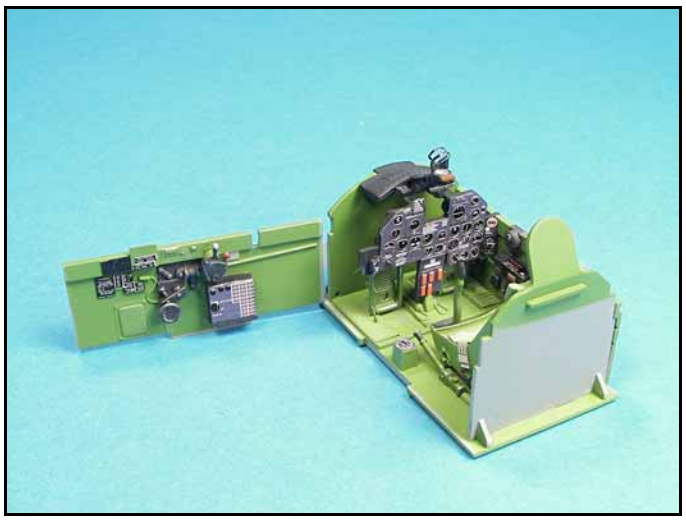
The console is now completely assembled and it looks very impressive. I was concerned about the color differences be-tween the prepainted colored console and the flat black color I used for the backing, but it looks great!



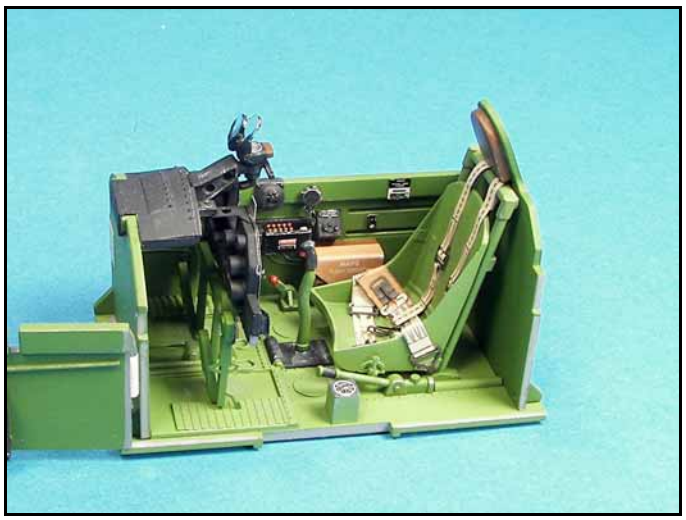
For self adhesive photoetch parts that need to be shaped leave the backing on the part and bend it with flat faced needle nosed pliers.



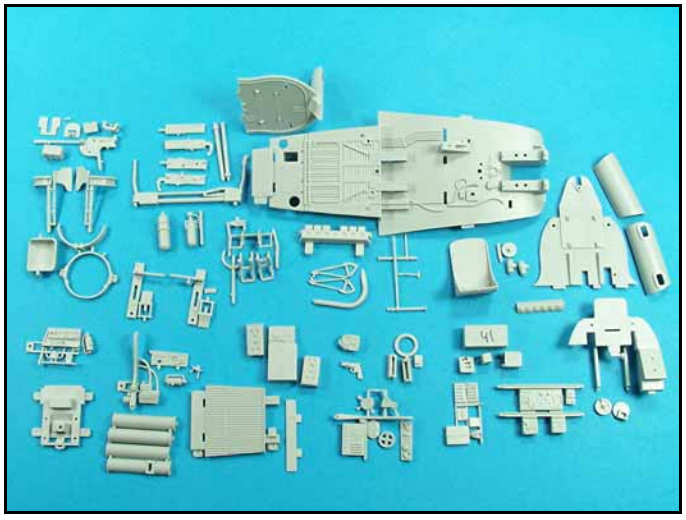
The left side cockpit panel has received all of its kit and photoetch detail parts. Note how clean the panel looks. You can use Testors clear flat paint to hide super glue that overflows onto painted surfaces or photoetch parts.



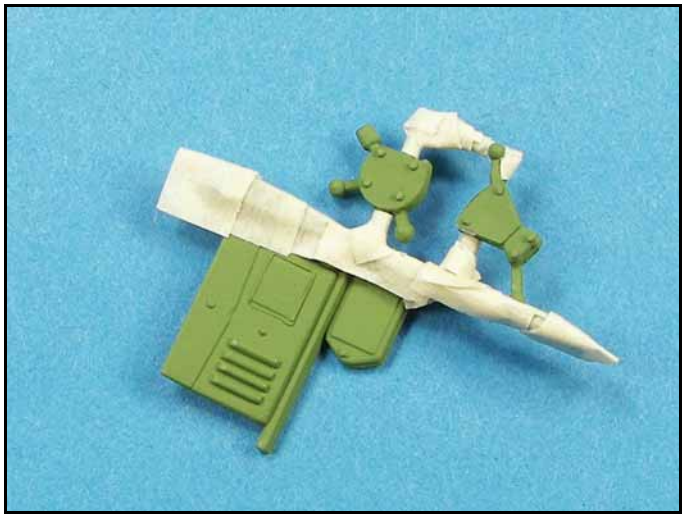
This is the assembled 1/32 scale Hasegawa P-47D cockpit with a combination of kit parts and Eduard's prepainted photoetch parts. Note the slightly different shades of interior green between the sides and the floor.



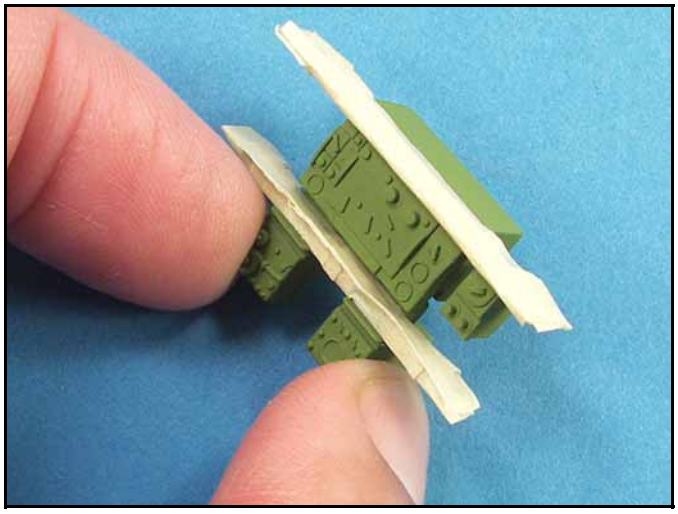
The only problem I discovered with the Eduard photoetch parts was that the canvas map case top should have been wider. The reflective lenses for the gun sight are kit parts.



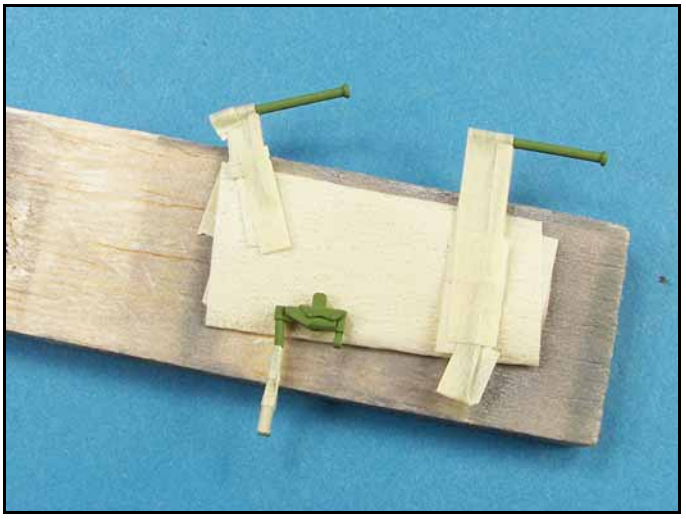
Sometimes kits have such extensive interior detailing that the only thing you need to add are Eduard's colored seat belts. Such is the case for the Trumpeter 1/32 scale SBD Dauntless.



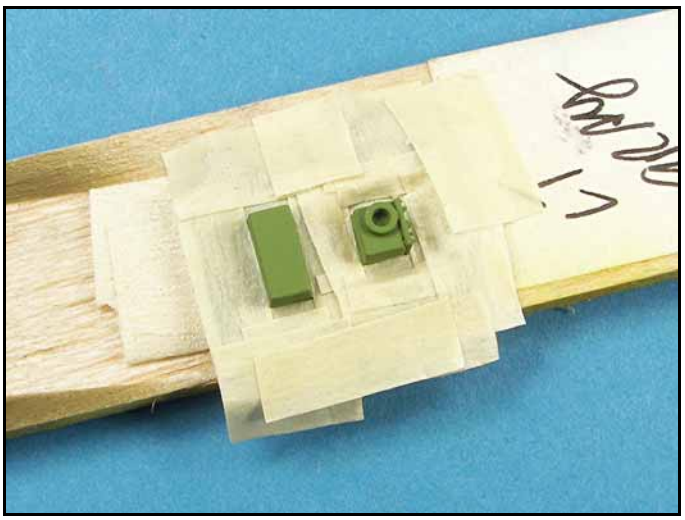
The side detail parts were painted their base colors and then carefully masked. The next color to be added will be flat black with a little white added so that the resulting color will not be so black.



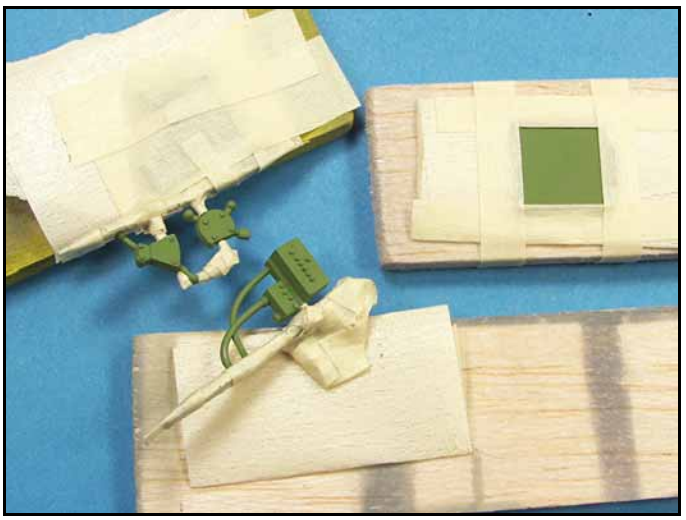
This masking took some time to get into place so that their would be sharp demarcation lines between the interior green framing and the black instrument boxes.



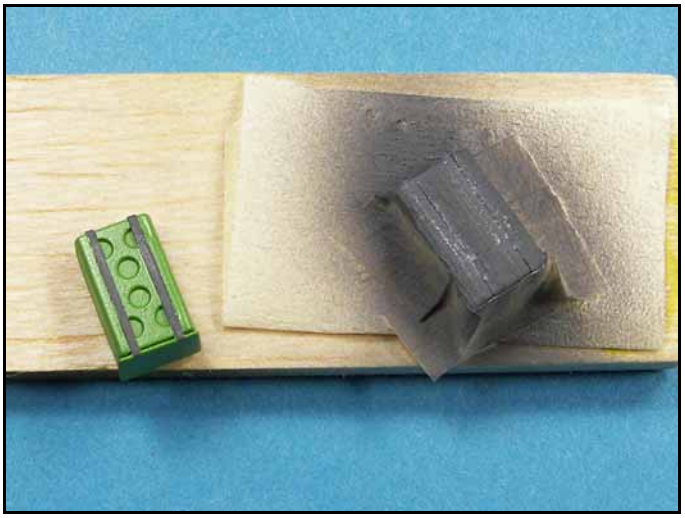
These parts were masked and then placed onto tape that is folded over onto itself. I like to use strips of balsa wood for mounting small parts for painting.



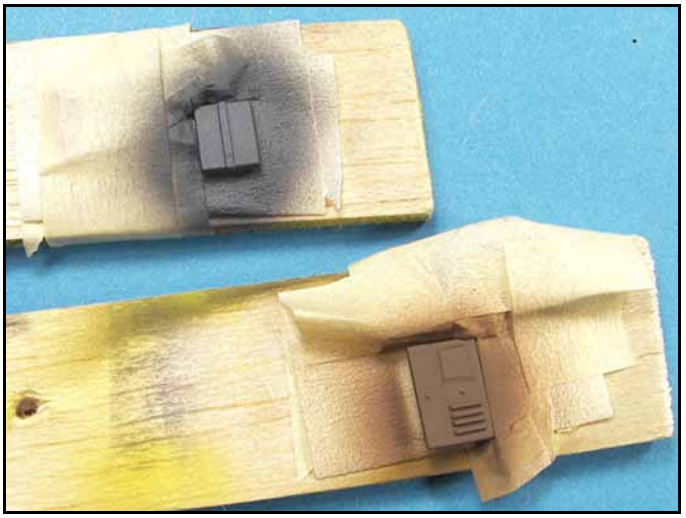
These parts were positioned onto the masking tape first and then small strips were applied to mask off the areas that were to be painted.



Multiple strips of tiny lengths of masking tape covered these areas. I used the tips of tweezers to help position the tape so that the edges wrapped around the parts completely.

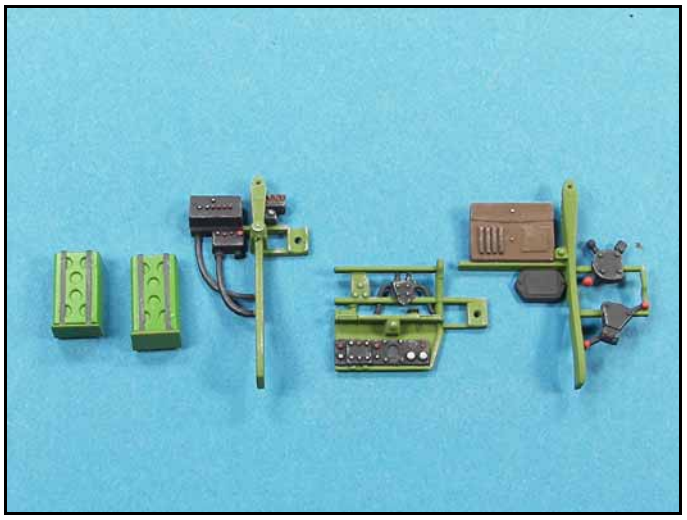


Here I painted the canisters first, then masked the green areas and airbrushed the black straps. To get crisp, sharp lines always cut masking tape with a sharp number 11 X-Acto blade and a straight edge.

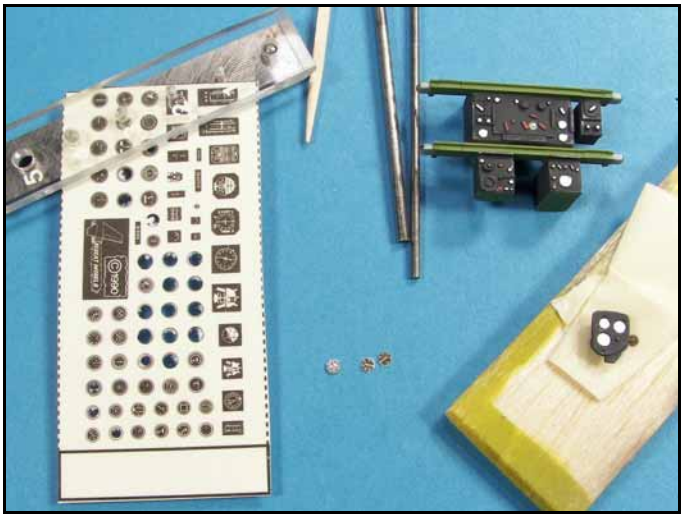


One last example of masking. The lower part was painted the base interior green, then masked for the black control boxes and then masked again for the leather case. I then removed all the tape at one time.

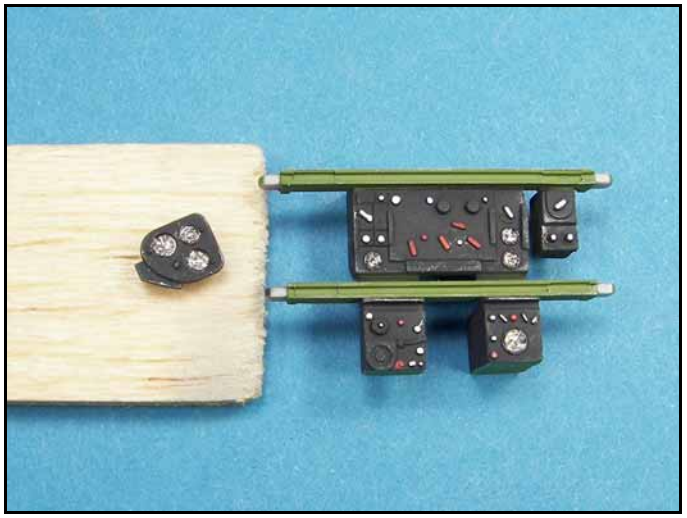
I added brass beading wire to the antenna reel to add an additional level of detail to the cockpit. This reel was turned by the copilot to pay out the antenna for better communications.



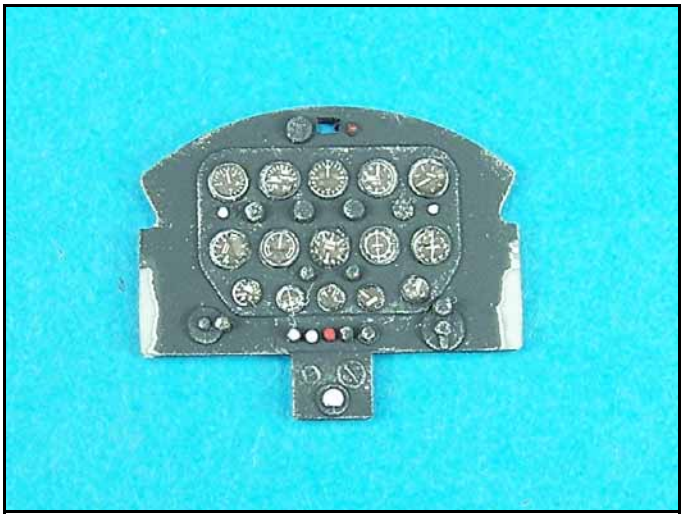
These interior parts have received their detail painting and drybrushing and they are ready for installation. See chapter 7 for tips on drybrushing.



The communications and navigation boxes need some dial faces which I made with an instrument decal sheet. The decals were punched out with a Waldron punch set and white glued into place.

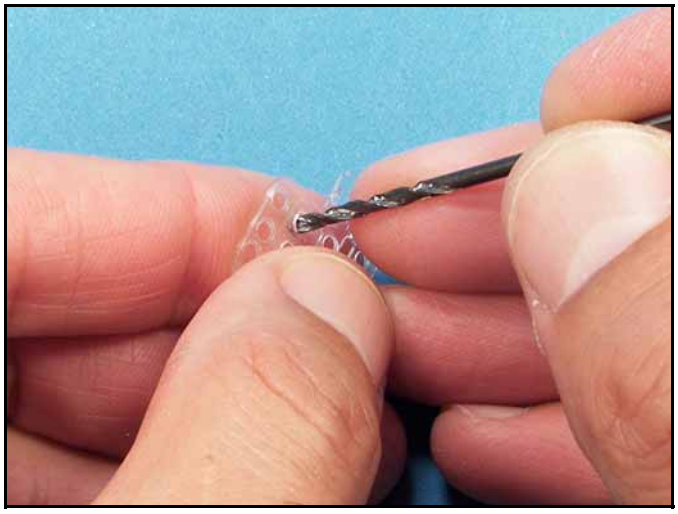


The finished boxes look much better with the dial faces added. I picked out the surface details using the end of a round toothpick that I dipped into red and silver paint.

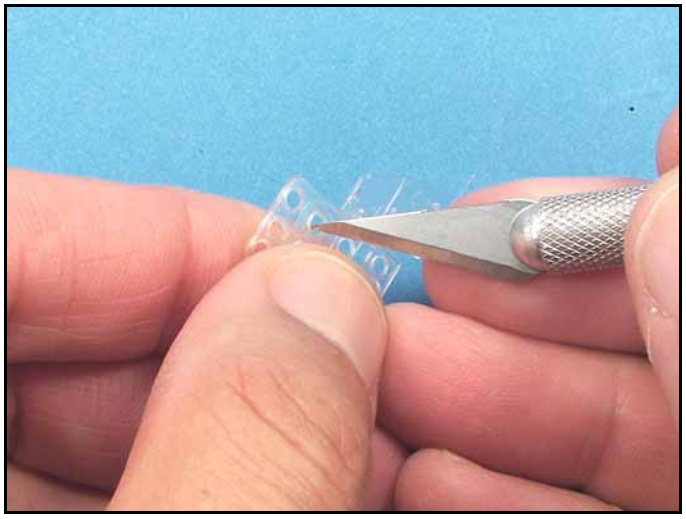


You can also use decal instruments to add detail to just about any kit console. This console is from Trumpeters 1/32 scale Mig 3.

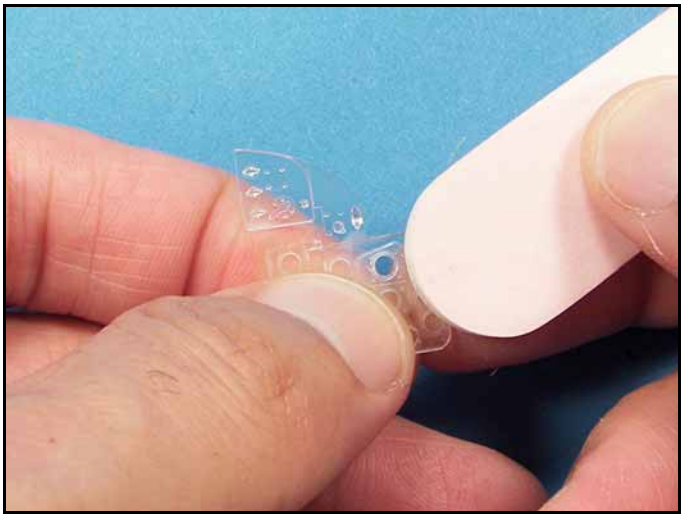
Some large scale kits come with a solid clear console face which either needs to have the instrument locations masked or drilled out. I chose to drill them out. All of the drill bits were used to carefully increase the size of the holes.



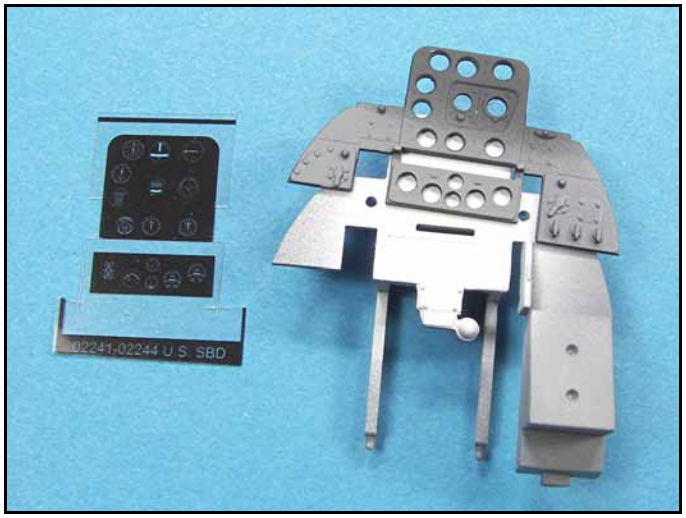
I put a slight indentation in the center of each drill location and started with a small drill bit. I used progressively larger bit sizes until I achieved the desired opening. Go slow and peel away small amounts of plastic at a time with each bit.



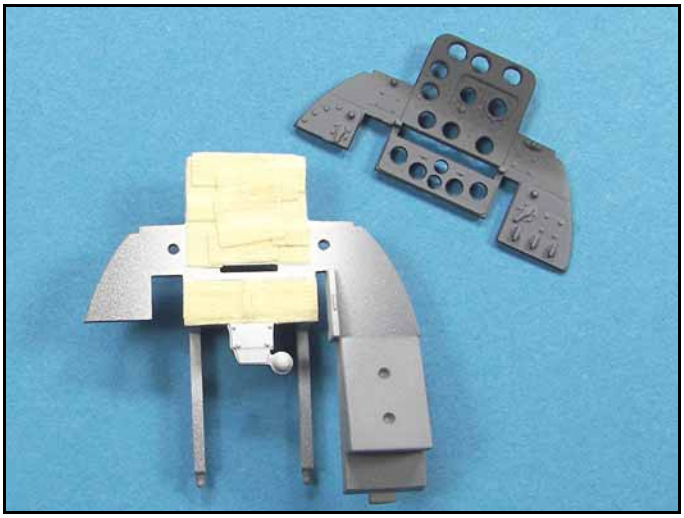
To clean up the edges of each hole I used the tip of a number 11 X-Acto blade. Here again go slow and check your work frequently so you do not gouge the edges of the plastic.



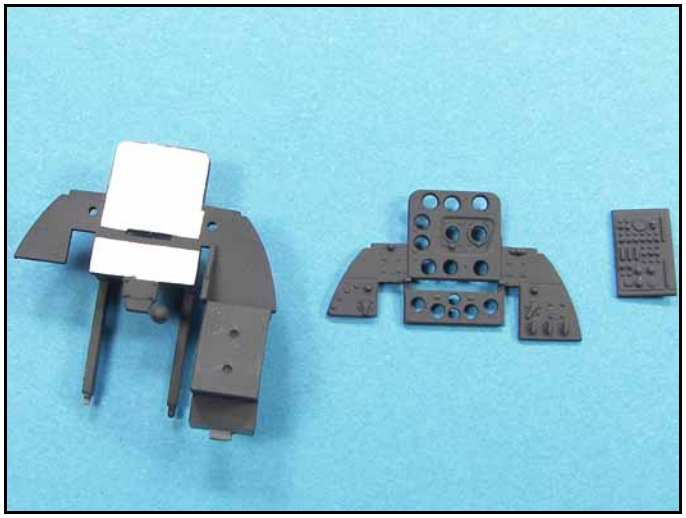
I used the tip of a sanding stick to smooth out the surfaces of the plastic around the drill locations to remove any residual plastic and a drill burs.



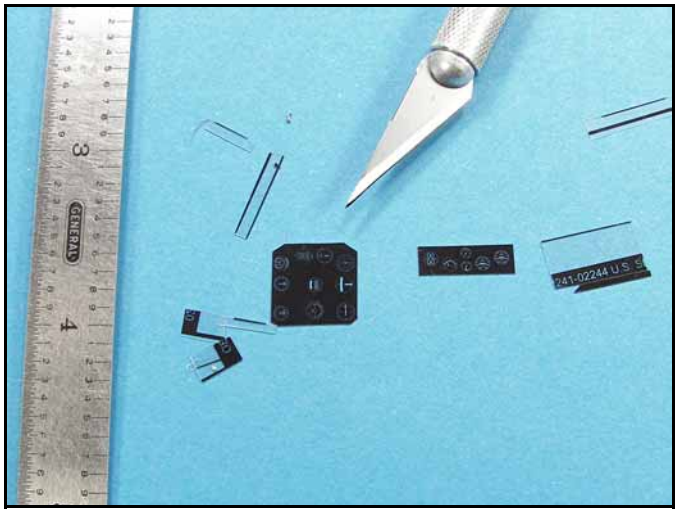
The console backing was airbrushed flat white and the consoles face was primed, check for flaws and then air-brushed flat black.



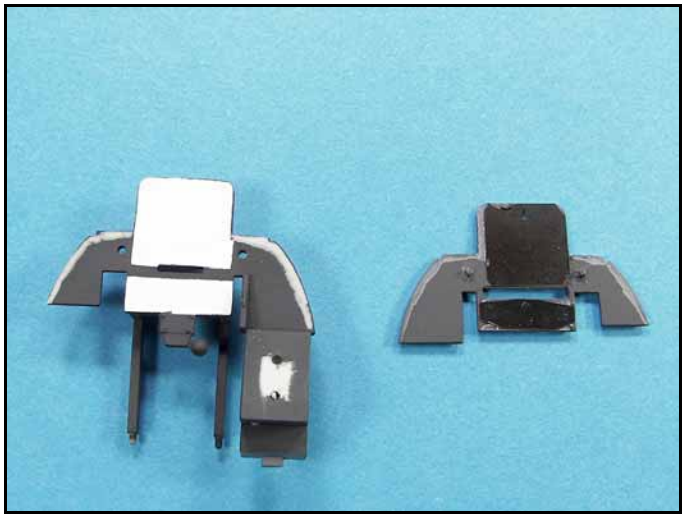
I masked the flat white area of the backing so that the remaining surface area of the part could be airbrushed flat black.



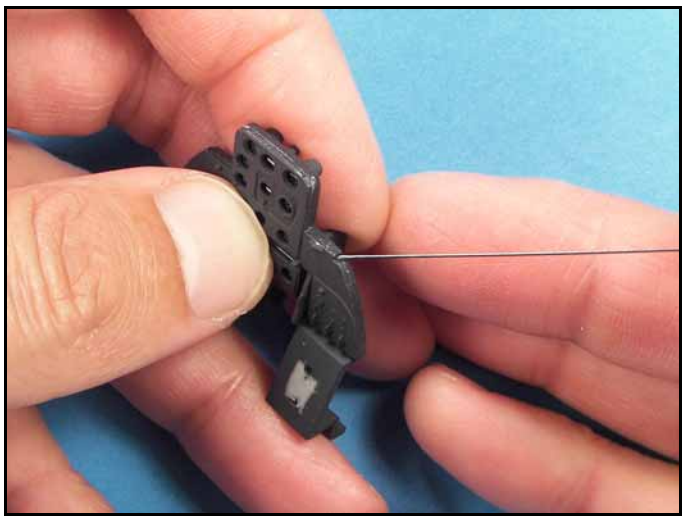
The main console parts have been painted and they are ready for drybrushing and detail painting. I added some flat white to the flat black so that the resulting color would be a dark charcoal.



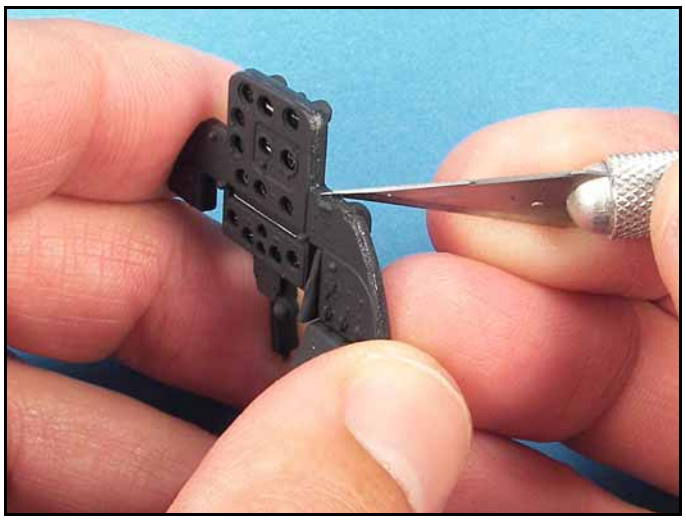
The clear acetate sheet was carefully cut using a sharp number 11 X-Acto blade and my trusty stainless ruler.



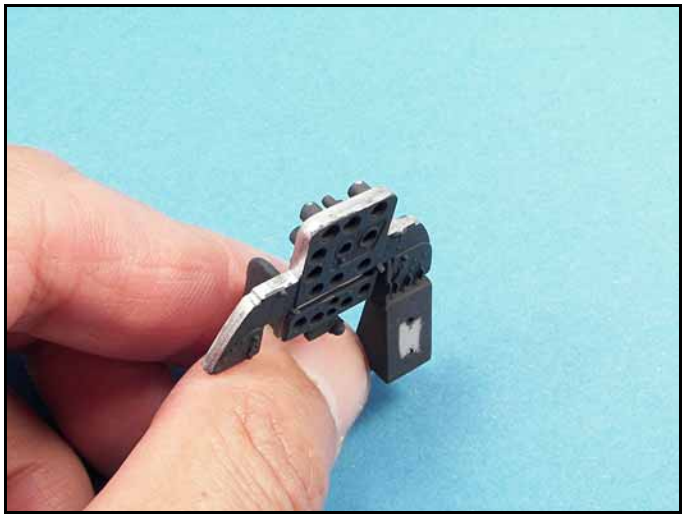
The two acetate sheets were positioned onto the back of the console face and the edges were glued in place with tiny drops of super glue.



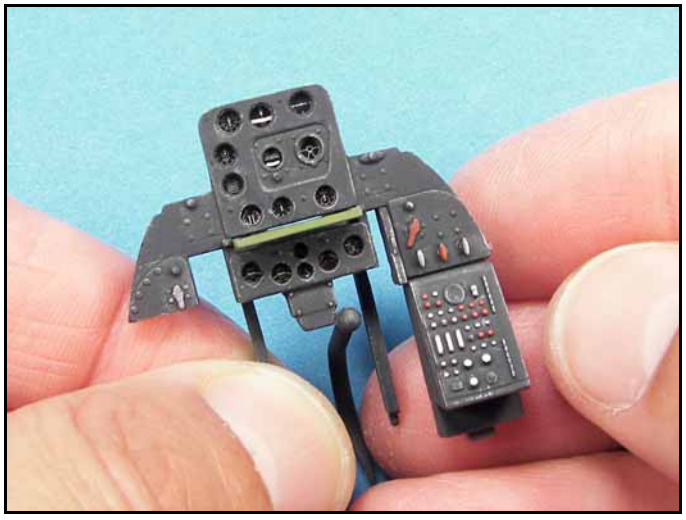
Next I sandwiched the front and back halves of the console together positioned them and then ran a bead of super glue around the perimeter.



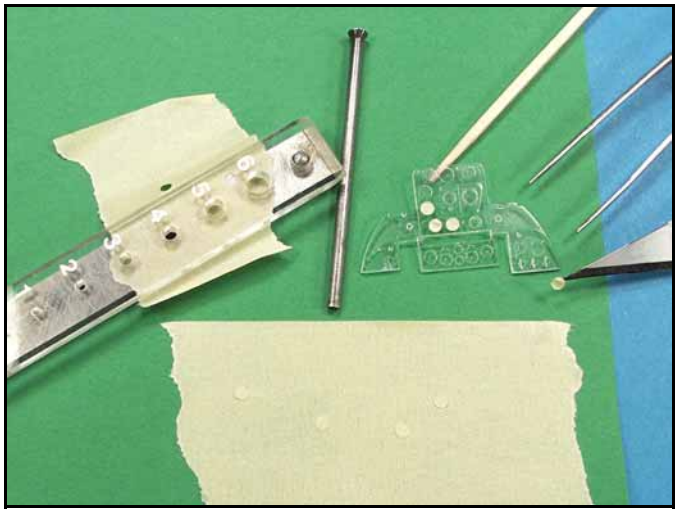
Next I carefully scraped the perimeter area flat to remove the excess glue.



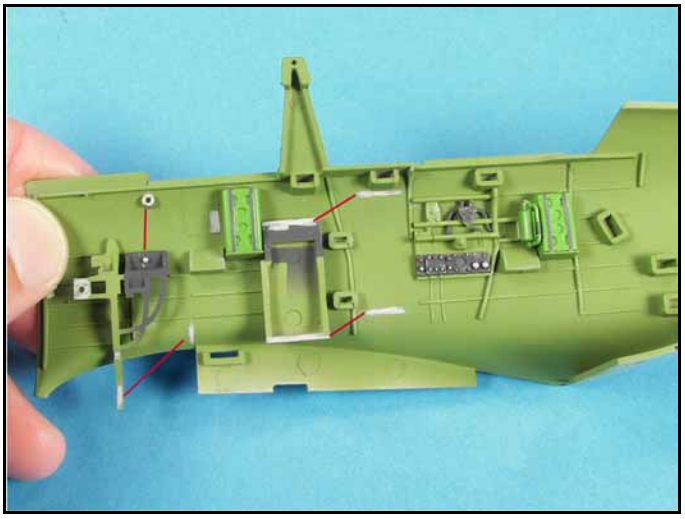
I check the seam line with Testors silver paint, added more super glue where needed and then sanded the surface of the perimeter smooth with a sanding stick. I masked the face of the console and airbrushed the perimeter.



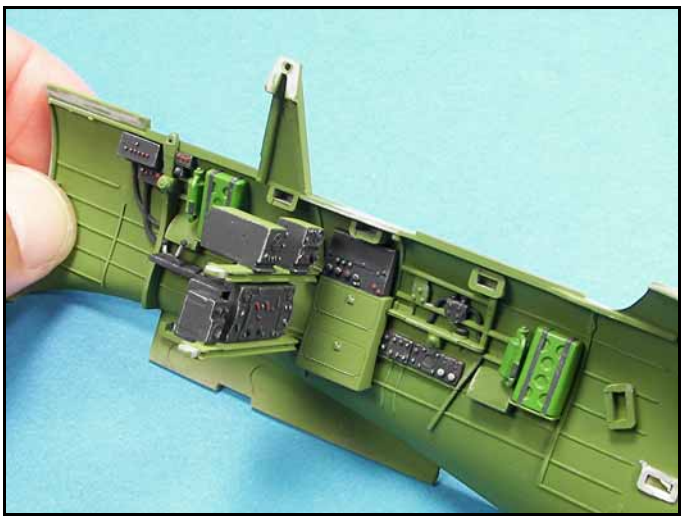
The surface details were picked out with my trusty toothpick and a lot of patience. The one thing I should have done was to thin out the console face so the instruments would not be set so deep into the console.



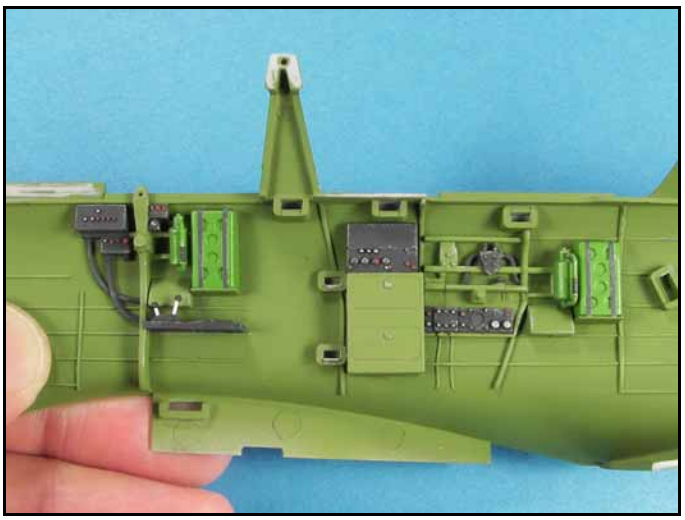
The alternative to drilling out the instrument faces is to mask the instrument locations. You can use your Waldron punch tool to make small masking tape disks which you can carefully position onto the console face.



When attaching interior parts to the cockpit area don't forget to carefully scrape off the paint at the glue locations. Otherwise the parts may fall off after you glue the fuselage halves together.



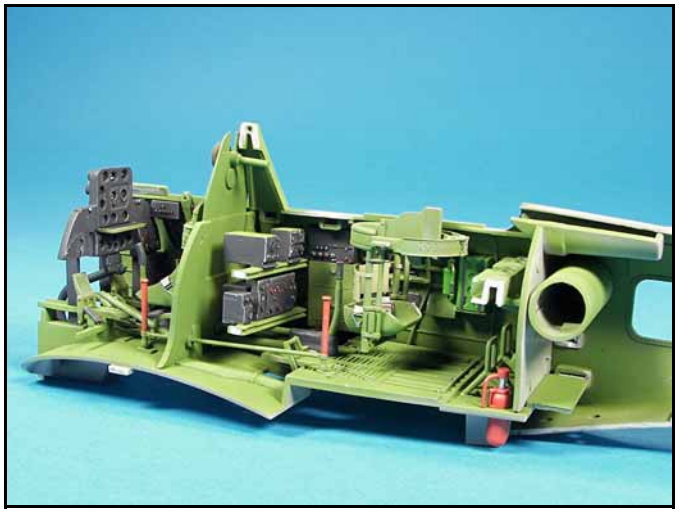
I did a final fit check on the communications and navigation part and found that it did not fit correctly between the fuselage halves so I scraped away some of the plastic and slightly shortened the width.



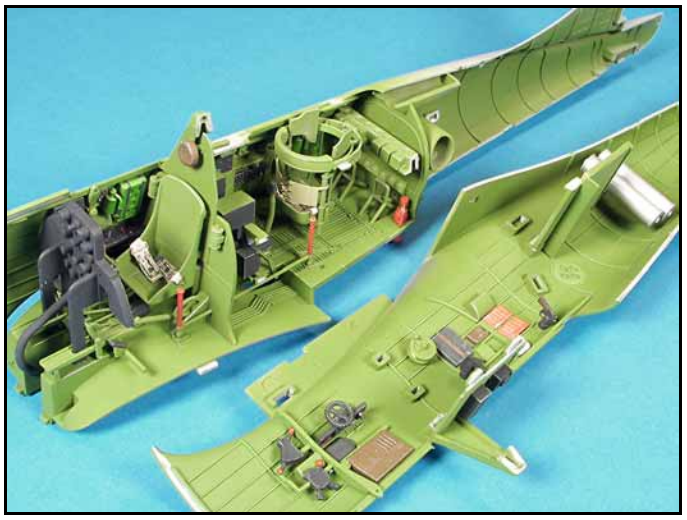
The right side of the fuselage has now been completely assembled and almost ready for the cross part and the center section. Note how a good paint job with sharp demarcation lines

The center section of the cockpit assembly is also done and all the detail parts have been painted and added. Note how subtle drybrushing and different shades of the interior green color make the assembly stand out.

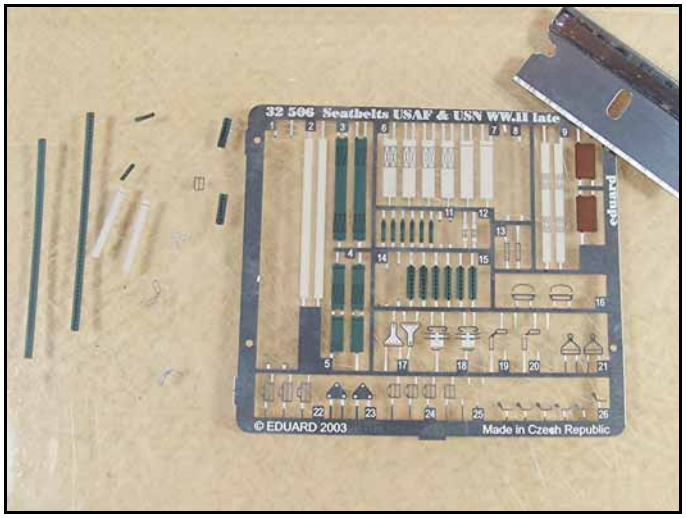
The left and right halves and the center section are done and all that remains is to attach several cross pieces and the cockpit will be closed up.



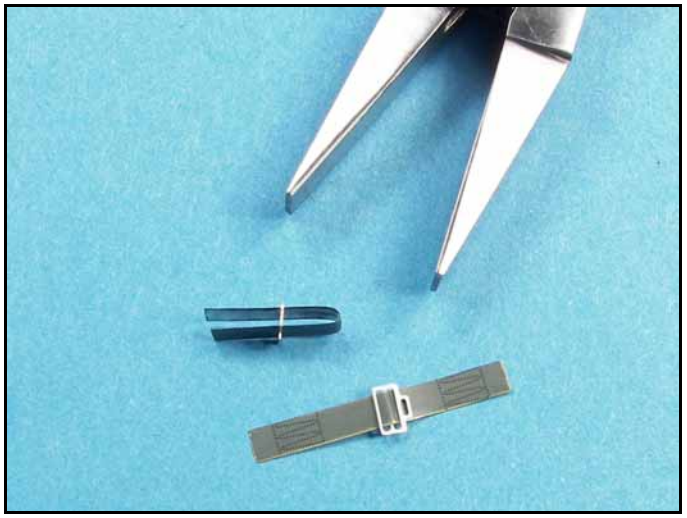
Note how the combination of the color shades, individual colors, drybrushing and careful assembly add that extra level of detail to a cockpit.



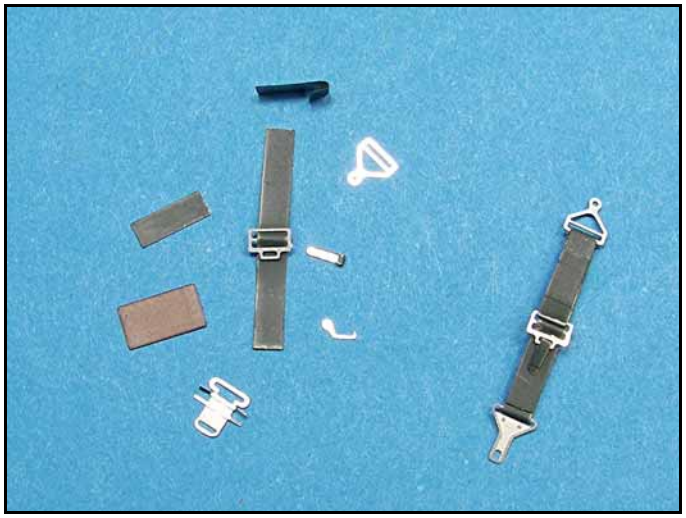
This 1/32 scale Dauntless cockpit was the most detailed out of the box assembly that I have ever constructed. The only after market item that was added were the Eduard prepainted seat belts.



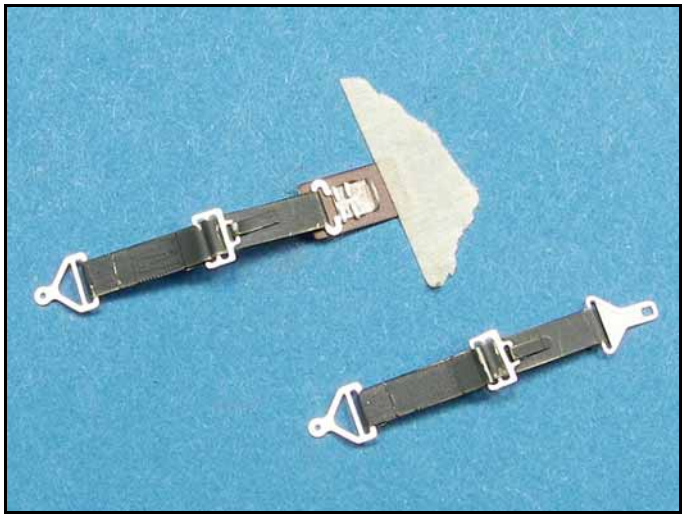
Eduard's prepainted seat belts are easy to assemble once your get the hang of it. Do all your cutting on a plexiglas sheet and cut the tree stubs as close to the part as possible. Sanding off residual stubs on small parts can be challenging.



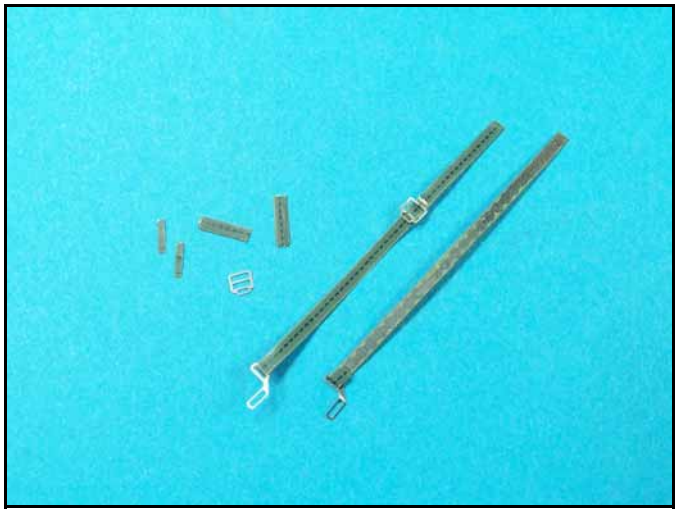
To position an adjusting buckle, fold the belt over onto itself, slide the buckle to the bend, then press it flat. On self adhesive belts, place a piece of the backing paper between the belt's tips when folding to prevent them from sticking.



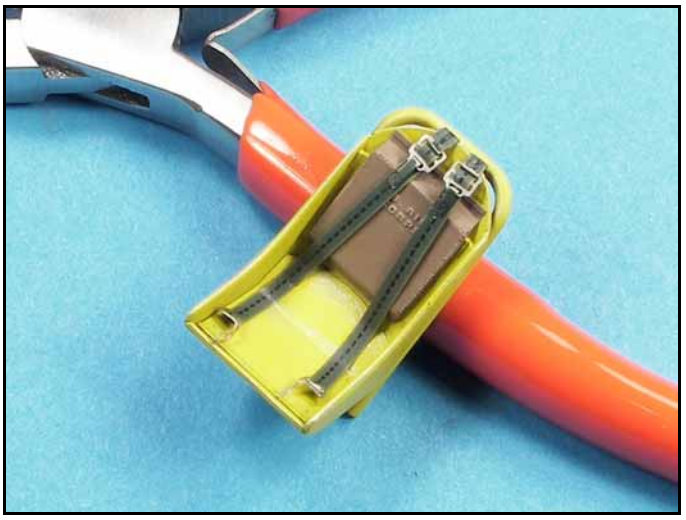
I like to assemble one belt at a time. The end folds for the belts buckle hardware can be small. You need just enough length to slip the hardware's end loop through the bent portion of the belt so that you can fold it over.



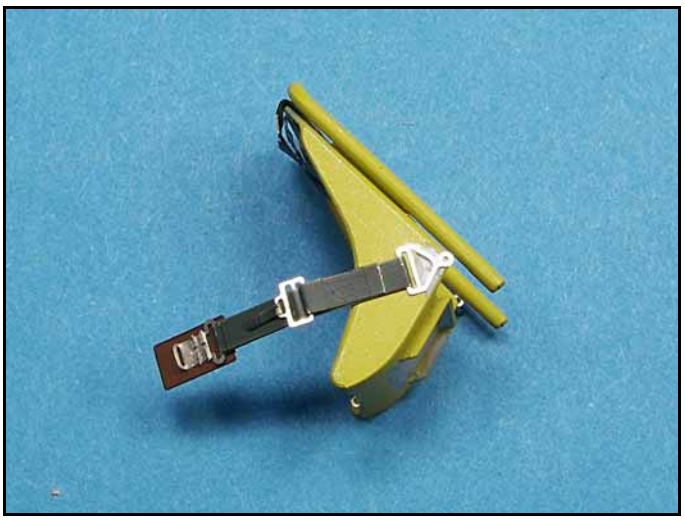
To glue the hardware to the belt, tape one end of the assembly so that you can pull the belt tight to center the hardware. Place a tiny drop of super glue at each hardware location. Hide the super glue with Testor's clear flat paint.



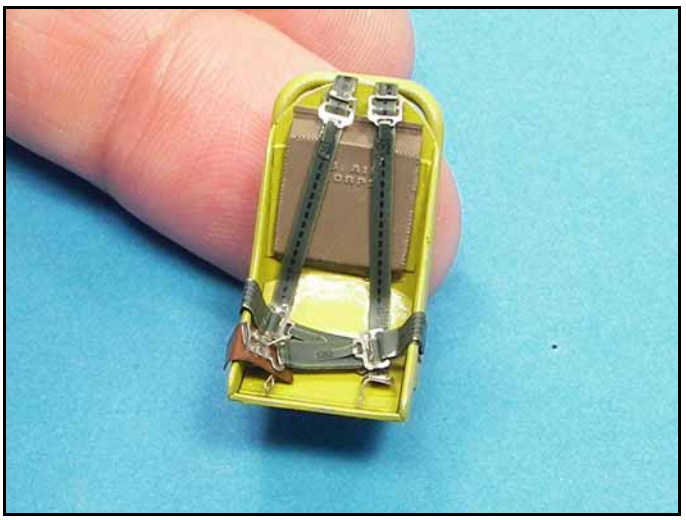
The shoulder belts assemble the same way as the waist belts. This time I attached the end buckle hardware first, then bent the belt to slide the adjusting buckle into place. Both methods work equally well.



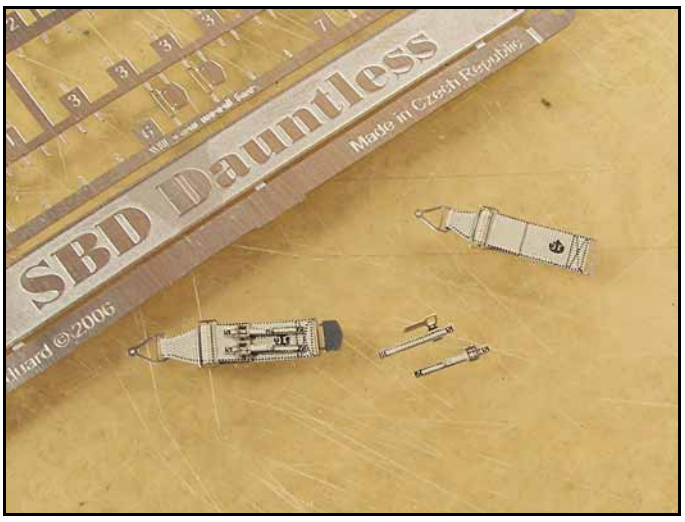
I like to install the shoulder belts first. Glue the back attachment points first and then carefully press the belts length against the seat so that the belt drapes down the seat backing. Glue into place with tiny drops of super glue.



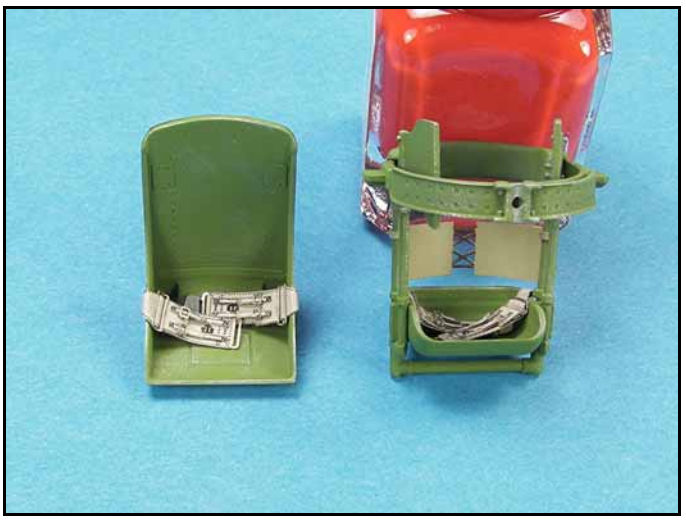
Scrape away some of the paint to get the buckle hardware to attach firmly to the seat. Press the belt over the edge of the seat first, then onto the seat's bottom.



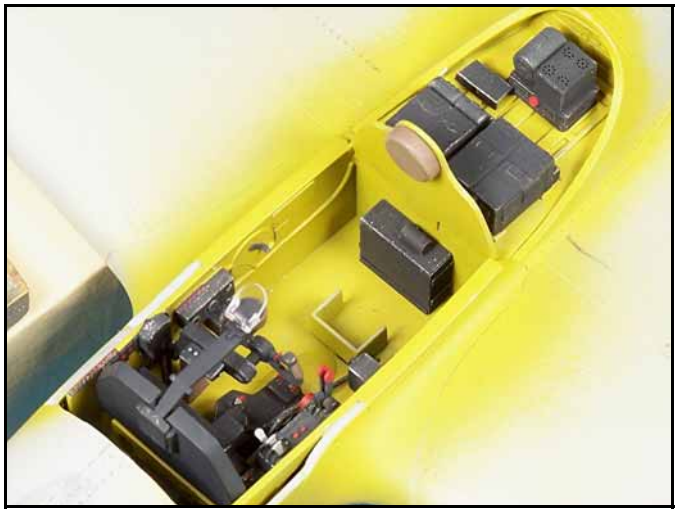
The belts have all been attached with Super glue and Testors clear flat applied to the glue spots to make them disappear. This 1/32 scale seat is going to greatly enhance the cockpit of my P-38J.



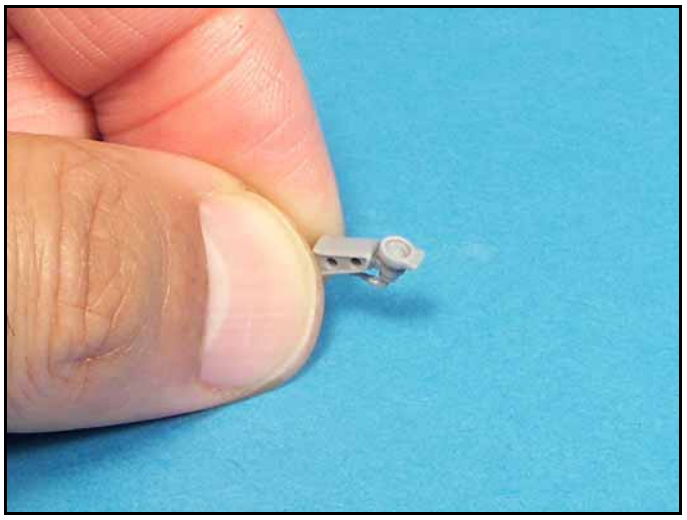
Some belts have lots of small adjusting straps. Position them, hold the in place with the tip of a toothpick and super glue them into place.



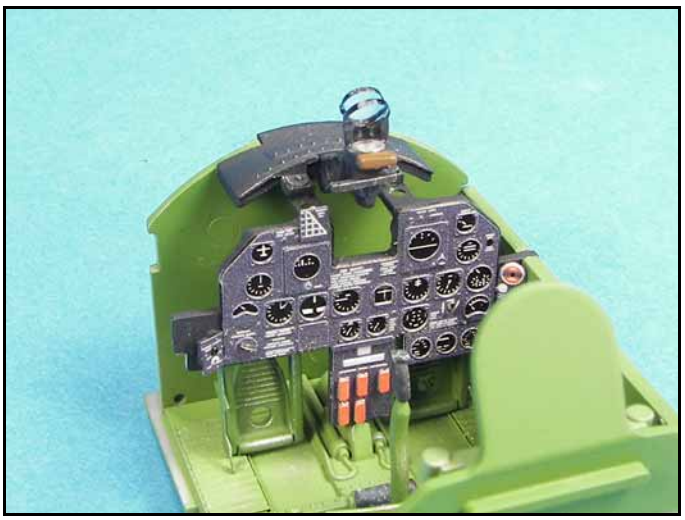
The waist belts on these seats are much wider than later World War II US seat belts. These wider belts were a lot stiffer so they didn't conform to the seat as well as thinner ones did.



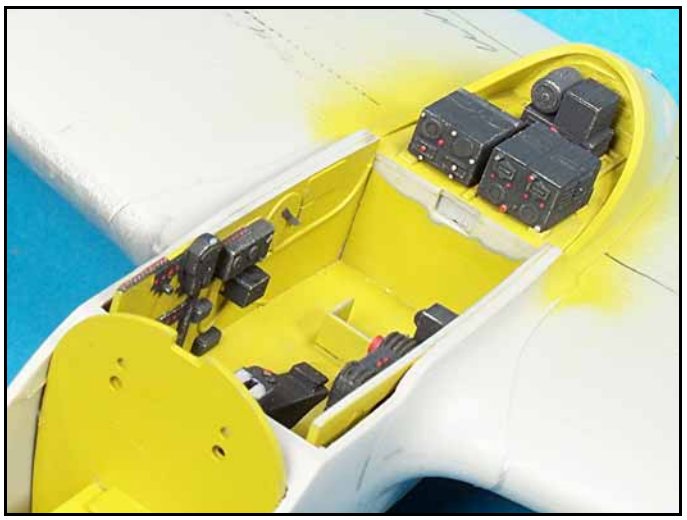
The gun sight on this P-38 J had a few tiny disks attached to it which I made with my Waldron punch tool. I painted them the same shade of black as the gun sight and they are hard to see. Use different shades to get tiny parts to stand out.



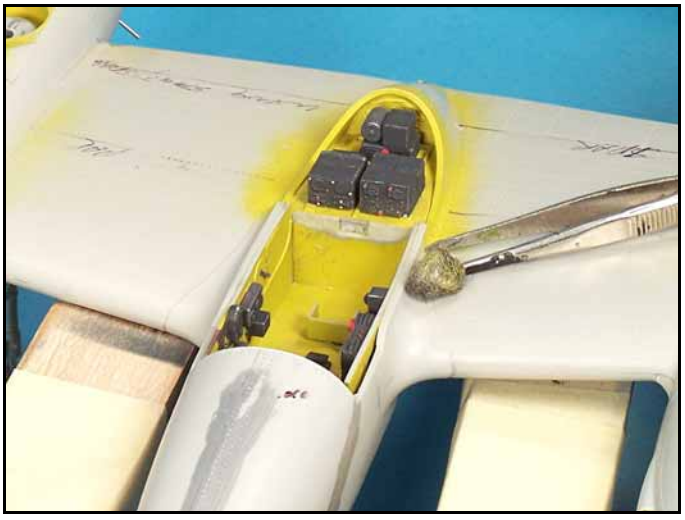
I carefully drilled out the top of this 1/32 scale P-47D gun sight so that I could install a clear lens punched out with my handy Waldron punch tool. I painted the inside silver and secured the clear part with white glue.



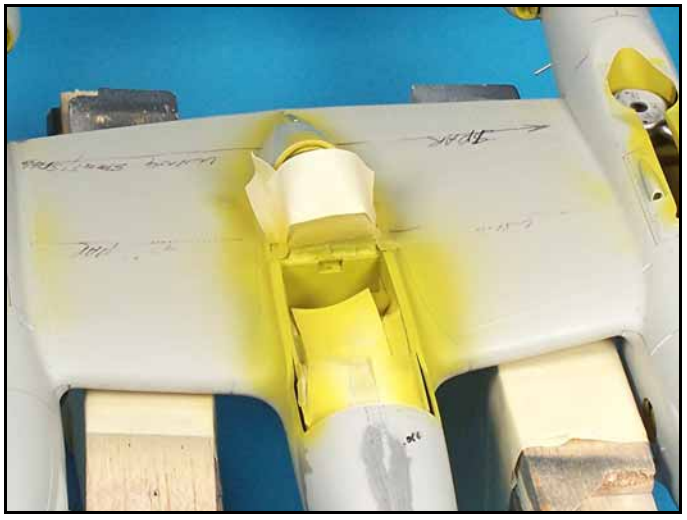
The addition of the clear base lens, plus some careful detail painting really enhances the appearance of the Hasegawa 1/32 scale P-47D gun sight. The reflective lenses on the gun sight are from the kit.



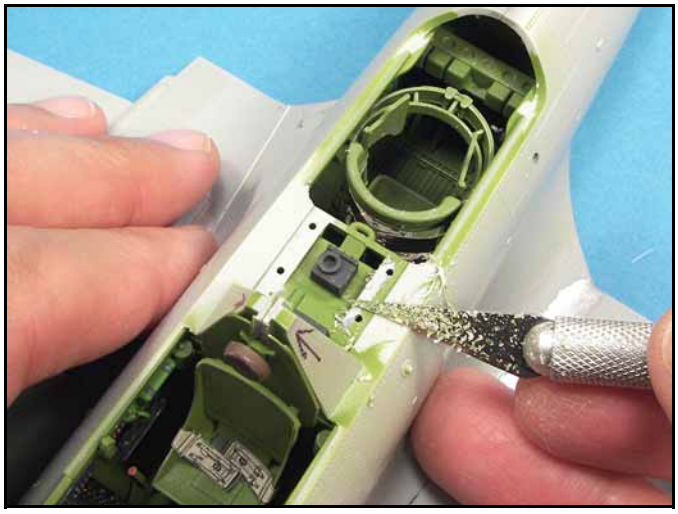
Sometimes cockpit interior seams can be a real challenge to remove. I placed a tiny drops of super glue along the seam line and then carefully scraped the surface smooth with the tip of a number 11 X-Acto blade.



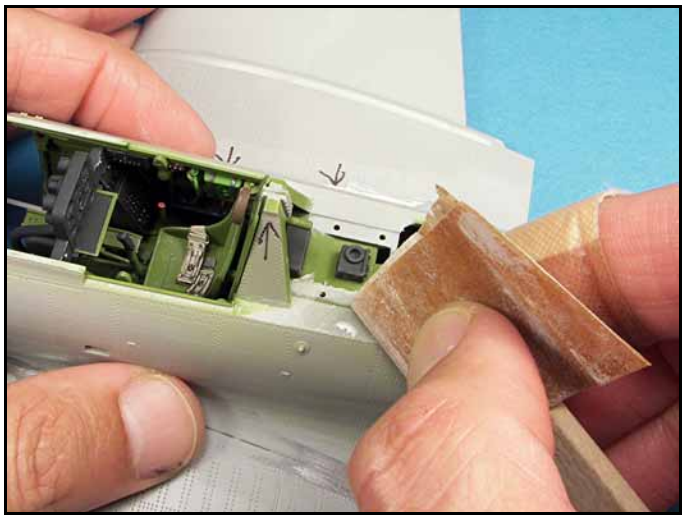
To smooth out the plastic I used a small ball of 0000 steel wool held with a pair of sturdy tweezers. To remove the tiny specs of the steel wool I used my airbrush to blow them out.



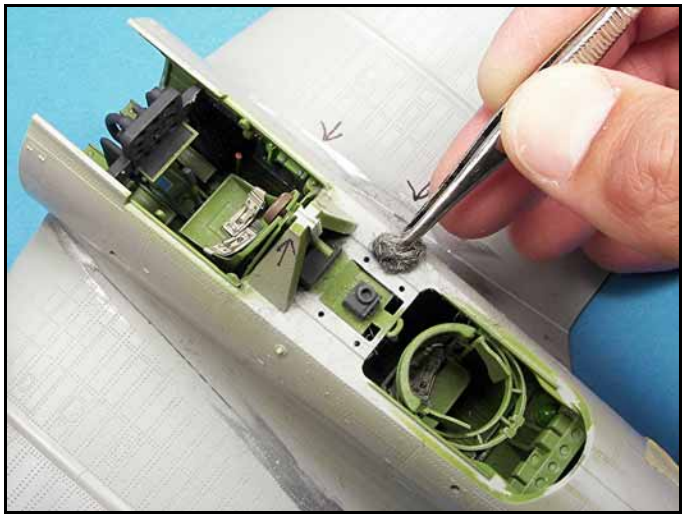
I carefully masked the interior area and then primed the surface, checked for flaws and then gave it a finished coat.



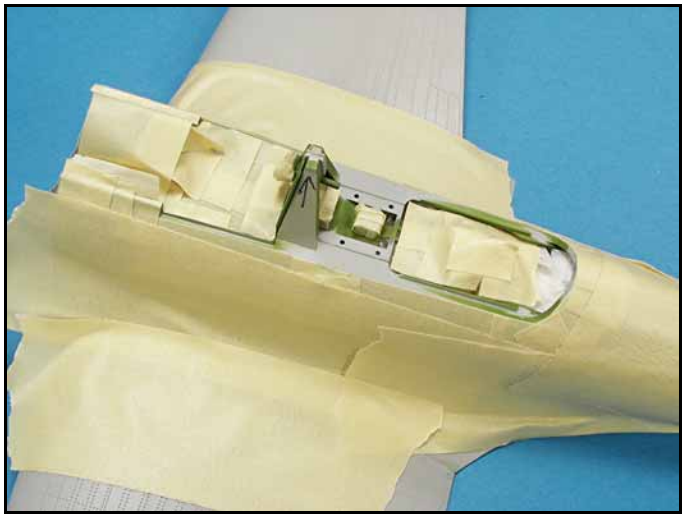
Here is another example of “after the fact” seam work. The top cross member of this SBD had seam lines on both sides that needed to be fixed. I carefully scraped the areas smooth after applying a bead of super glue to the seams.



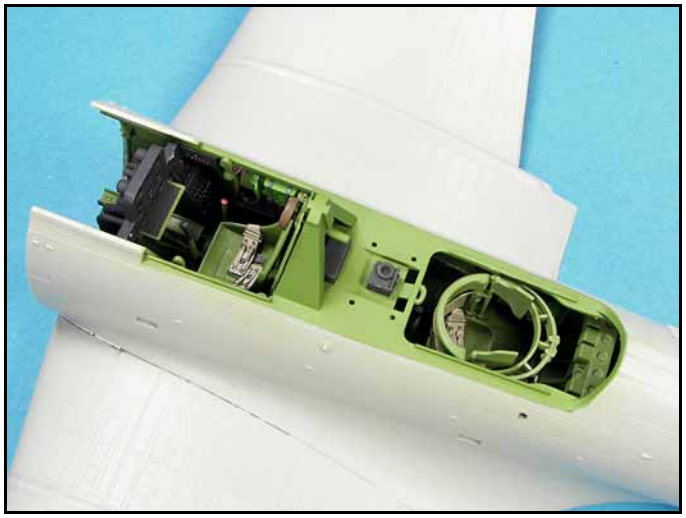
I then wet sanded the area smooth with sand paper wrapped around a section of balsa wood. I had to work carefully so that I would not damage the raised detail.



To smooth out the plastic and the remaining paint I polished the area with small balls of 0000 steel wool.



I careful masked the areas and the primed the exposed surface to check for flaws. I found a tiny area which I fixed by applying tiny drops of super glue which I smoothed out with a fresh ball of 0000 steel wool.



The area looks one hundred percent better now that the seam lines on both sides of the cross member have been fixed. The steel wool smoothed out the edges of the existing paint so that the new paint would blend in and be undetectable.

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