

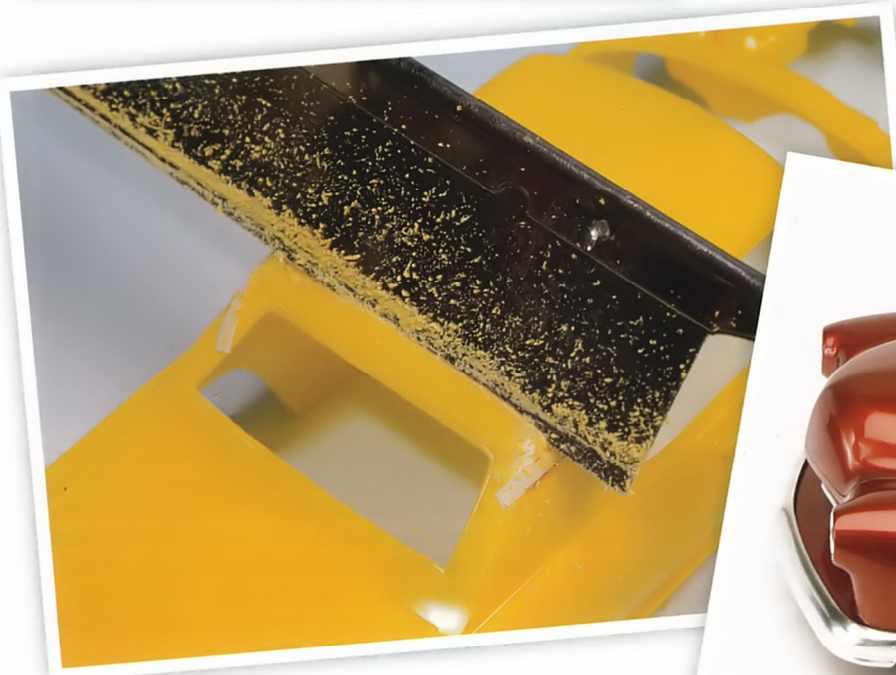
Scale
Auto
MAGAZINE

Body building basics • How to pie-section a 1950 Mercury •
Simple top chop • Upgrade a promo model to a show-quality car

BETTER BODIES for car models

A Supplement to *Scale Auto Magazine*

www.ScaleAutoMag.com





With Tim's Pheasible Phantom Land Shark II, we'll show you how to prep a resin body, convert the body style, and do all the associated bodywork.

BODY BUILDING BASICS

How to prep and modify a resin body:
scribing, filling, sanding, and more

by TIM BOYD

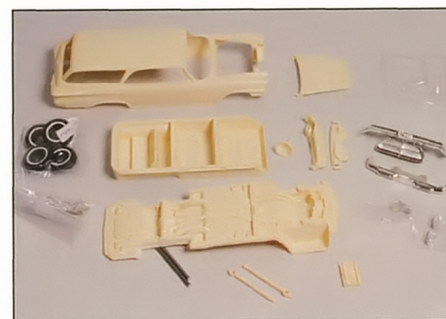
THE PRELIMINARY results are in – from the *Scale Auto* Roundtable, that is. Many of you are looking for information on the basics of model car building. We're only too happy to oblige. For this issue, we'll focus on the basics of body building. Under this broad heading we'll cover three subtopics:

- Preparing an aftermarket resin kit for building
- Converting a body from a four-door to two-door style
- Filling door lines and completing associated bodywork

To illustrate these techniques, I've been working on a long-planned project: converting a Modelhaus 1962 Chrysler New Yorker Town & Country four-door hardtop wagon to a "phantom" two-door (see sidebars).

I'll show you exactly how the project developed – including repeating the body filler/sanding/primer stage several times until I achieved the desired result.

This will give you a better idea of the type of work involved – and it will show you that with the proper amount of persistence, bodywork you'll be proud of is indeed possible! ■



I used the 1962 Chrysler New Yorker Town and Country Four Door Hardtop Wagon kit offered by Modelhaus. The kit comes complete with everything except an engine – which is offered separately by Modelhaus.



Most resin kits require soaking in Westley's Bleche-Wite to remove the casting release agent. A used dinner container from Boston Chicken is just the right size to soak the body and related parts.



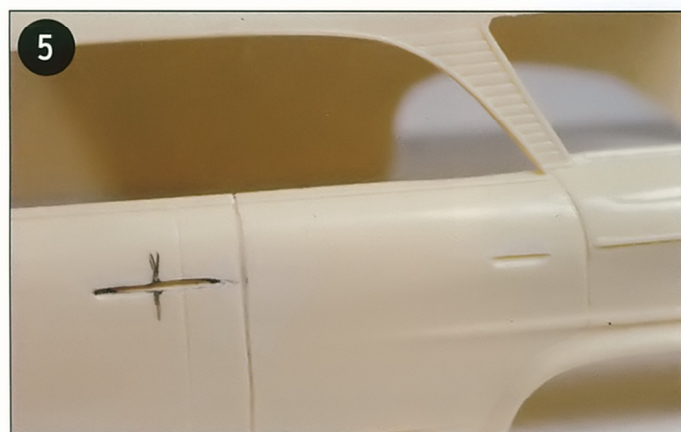
I used a JoHan 1962 Chrysler 300 hardtop body as a pattern for the correct size of the two-door configuration. Masking tape was applied over the body, and then cut with a hobby knife along the molded-in cut lines, to replicate the shape of the door.



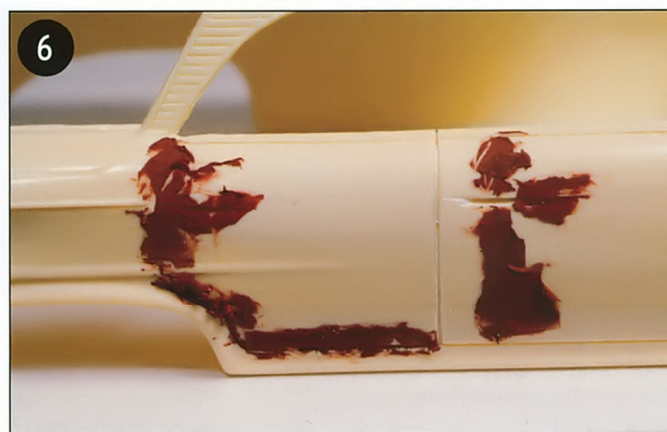
The patterns (one for each side) were then applied to the wagon body, aligning the front of the door with the existing fender-to-door joint in the wagon. I used a razor saw to carefully cut the new rear door line. Note the protective masking tape applied to the roof and rocker area, just in case.



Here you can see the difference between the new cut line for the longer two-door configuration, and the old four-door cut line.



You'll need to extend the recessed area below each door handle rearward. On the driver's side, the area to the right of the pencil mark represents the extension; the area to the left of the pencil mark is later filled with putty.



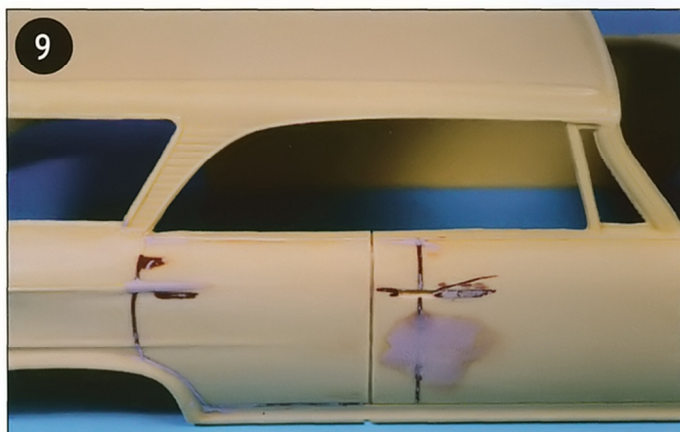
I originally tried to fill the old rear-door cut lines and the old door-handle recesses with Nitro-Stan 1:1 scale automotive body surfacer. The rust red-colored areas are where the filler was applied.



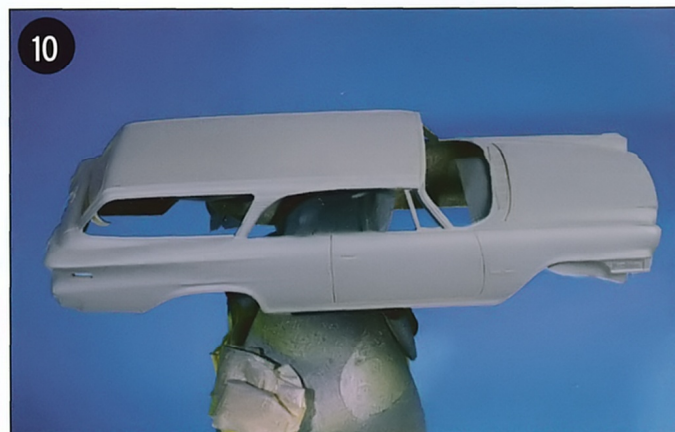
Using 3M 240- or 320-grit sandpaper wrapped around a small metal ruler, the areas were sanded down after the surfacer had dried hard. The result looks like this.



Close inspection revealed that additional molding work was required, because of the differences between the two-door and four-door rear fender configuration below the B-pillar. For this additional work, I chose Evercoat Euro-Soft 1:1 scale automotive Polyester Glazing Putty and a small tube of universal hardener.



After more sanding with 320-grit paper over a ruler, the result looked like this. Note that the remaining Glazing Putty (which appears as a pinkish-white here) covers more than just the door lines. This "tapering" of the filled area is one of the secrets to a smooth final result.



After washing and drying the body, I applied several coats of Krylon Sandable Gray Primer. I let the primer dry at least one day before handling. To the untrained eye, everything looks great - but in reality, more work awaits us.



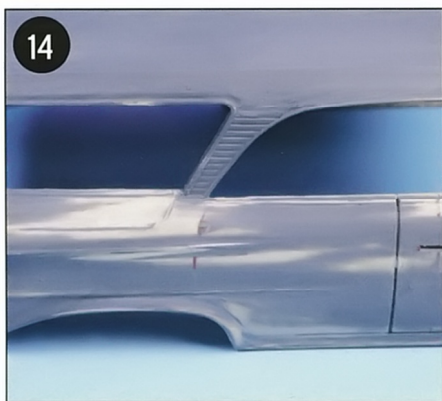
When I gave the body a close inspection, I saw this area of unevenness in front of the rear wheel lip on the driver's side. This would really stick out with a glossy finish.



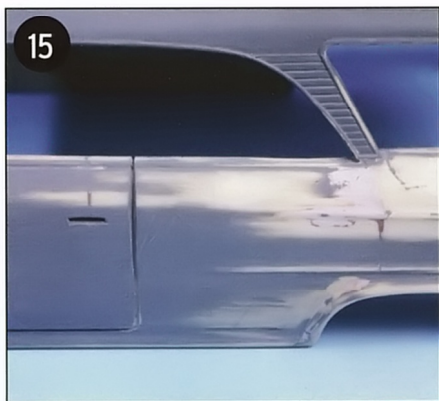
On the passenger's side, I found a funny angled depression just below the upper character line. The line sweeping down from the B-pillar and rearward also needed work; I wasn't happy with the way this area was handled on the casting master.



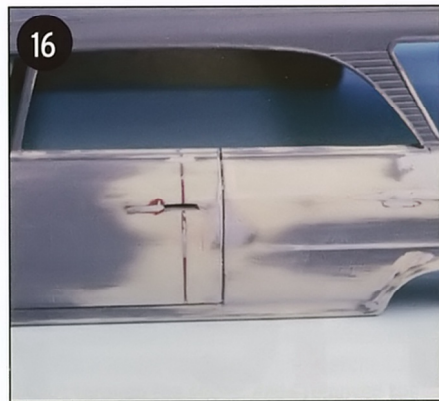
Again using sandpaper wrapped around the ruler, I began working on the problem areas. It's typical to feel discouraged at this stage, but keeping at it will eventually work wonders.



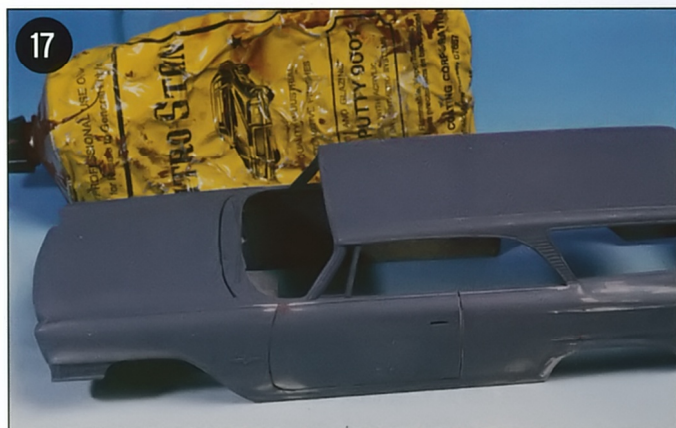
After much sanding, you can see the areas that received the most work on the passenger's side (appearing light tan in this photo), including the area below/behind the B-pillar, along the sides of the fender and door, and along the rocker panel area.



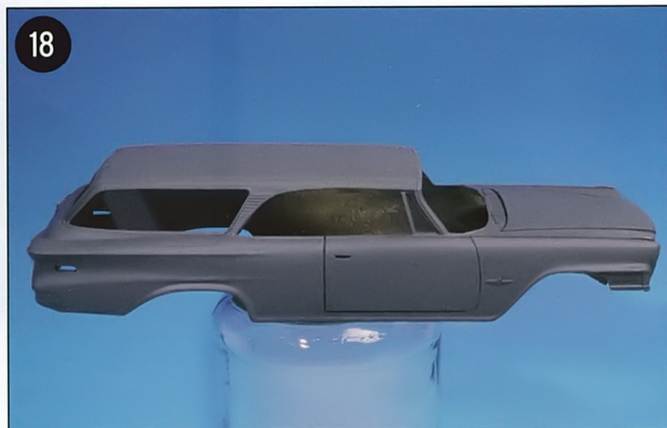
The driver's side looked like this after sanding. Note the heavy work along the fender top, the upper character line, and in front of the wheel well. But it turned out that more work was required before I primed the body again.



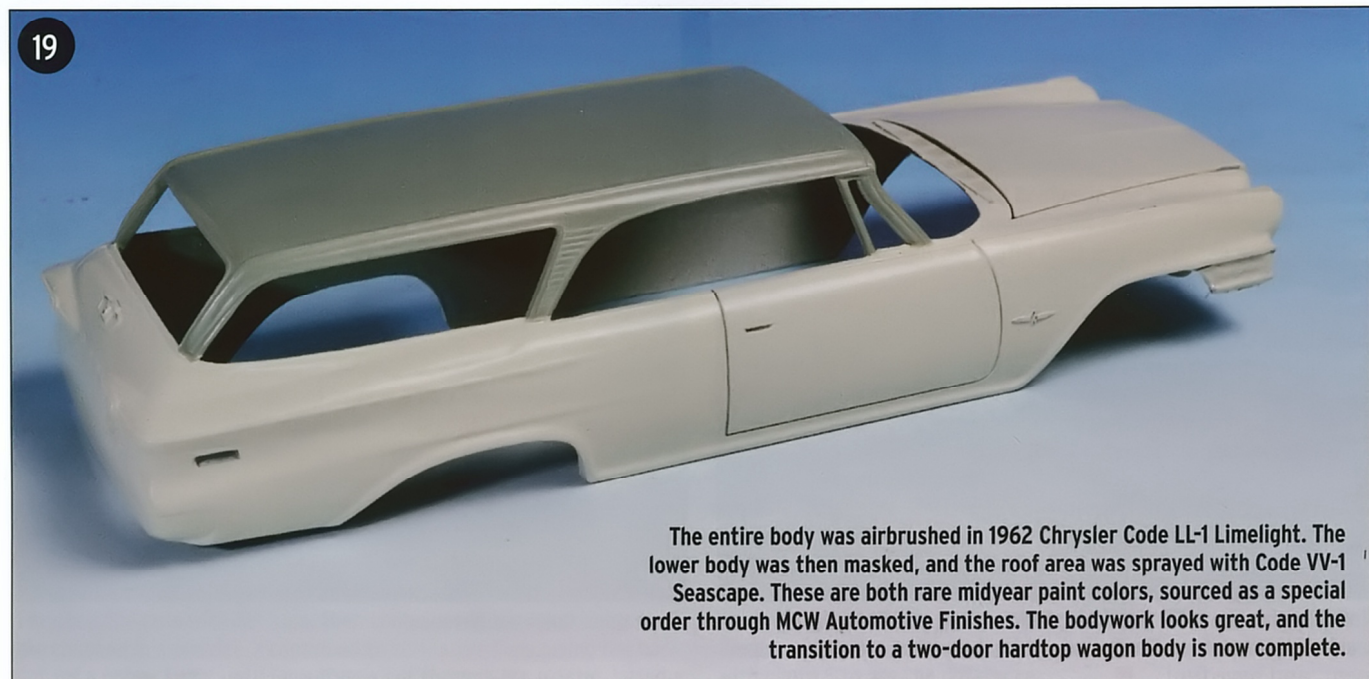
The rear cut line of the driver's door was too wide, and it was uneven. Accordingly, more Evercoat Glazing Putty was applied to this area only, then sanded down to the appearance shown.



After several more coats of primer, only minor flaws remained. I applied small "smears" of the Nitro-Stan filler to the lower front-door cutout, a small unwanted notch in the upper character line below the B-pillar, and a couple of other areas. After sanding and working on the rearward character line below the B-pillar, the body appears this way.



More primer followed, and then I reviewed the bodywork carefully. Pronouncing the bodywork done, I went over the entire body lightly with 3M 600-grit paper. Following a wash in soapy water with a clear water rinse, I set the body aside to dry and await the paint booth.



The entire body was airbrushed in 1962 Chrysler Code LL-1 Limelight. The lower body was then masked, and the roof area was sprayed with Code VV-1 Seascap. These are both rare midyear paint colors, sourced as a special order through MCW Automotive Finishes. The bodywork looks great, and the transition to a two-door hardtop wagon body is now complete.

Easy as Pie



Here's how to section a stock 1950 Mercury (rear) for a custom look. With planning and patience, dramatic results are possible.

How to pie-section a 1950 Mercury body for a lighter, streamlined look

by STEVE BOUTTE

ONE WAY to reduce the look of weight or "heaviness" in a car's body is a process called *sectioning*. Carried over from the 1:1 customizing world, the process involves removing a horizontal slice or "section" of a car's body and welding it back together.

Sectioning can have a radical effect on the overall look, or it can be subtle – so subtle that a person might really have to study the car for a while to determine exactly what has been done to it.

Another technique is called *pie-sectioning* or *wedge-sectioning*, which still involves removing a section of the body, but the dimensions of the slice are smaller on one end than the other. The piece that's removed is shaped like a wedge or a narrow piece of pie (now you know how the names came about).

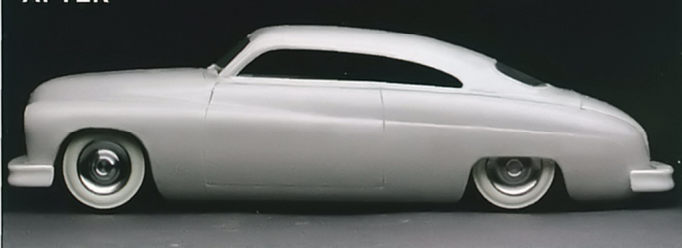
I recently used this technique on a 1950 Mercury custom body, going from a three-scale-inch cut at the rear of the car down to zero at the front of the door line. The three-inch portion wrapped all the way around the back side of the car.

After you see how the Merc turned out, you'll be ready to try sectioning on your next custom project. Give it a try, experiment, and have fun! ■

BEFORE



AFTER

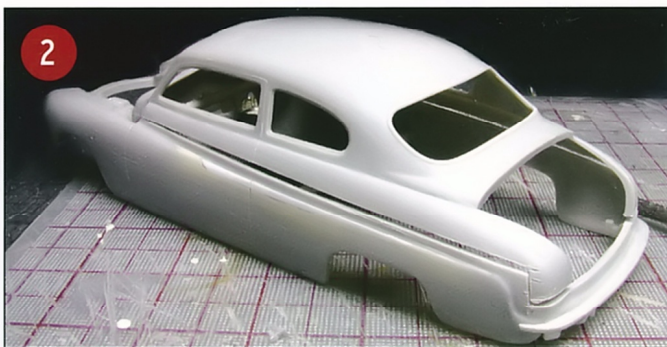


Top: I digitally "cut up" a side view of the car in a photoediting program (like Adobe Photoshop) to see what exactly I was going to do. If you don't have access to a computer or a program like that, make photocopies of the car body and cut those up. This will give you an idea of where to make the cuts before you get into the plastic.

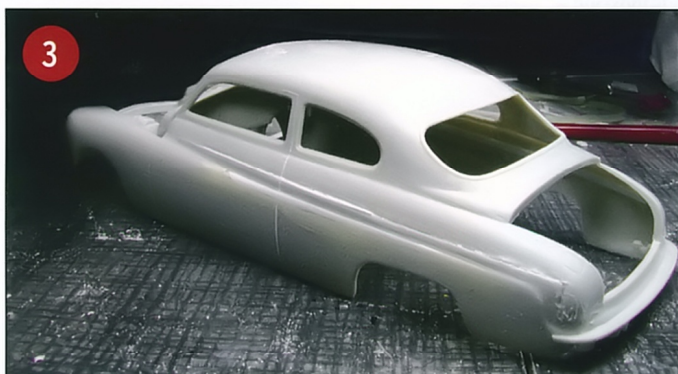
Bottom: Here's the completed body, ready for paint. The removed section was three scale inches wide at the rear, tapering to zero at the front door. Quite a difference!



I marked the cuts on the side-view photo and "eyeballed" where they would go on the body. I marked the lines with thin 3M plastic tape, and used a razor saw to scribe lightly along the tape lines. I removed the tape, and continued to cut - but not all the way through. I cut a bit on each line to remove more material, but keep the body in one piece.



The tighter cuts were made with a Model Car Garage photoetched saw blade. Finally, I was able to cut through the slices, and I removed the wedge-shaped section.



The whole body pivoted at the point of the wedge. I used superglue to hold it all together. As an experiment, I used a low-wattage soldering iron to "tack weld" the pieces on the rear fender corner. This held the body together while I checked the symmetry of the slimmer body.



Even with "proper" planning, saws and knives sometimes have minds of their own, and filling is needed to smooth those areas. I also used the filler to rebuild the curved upper portion of the body that was cut away during the sectioning.



After sanding and priming, things begin to look okay.



Pie-sectioning can also be used to change the profile of a bulky part of a car, such as this trunk - it needed a bit of weight-loss.



I marked the cuts with 3M tape, then traced along the tape with a needle chucked in a pin vise. I continued to scribe the lines, using the back side of a hobby knife, until I eventually cut through the plastic. I used a



photoetched saw blade to finish the cuts. After filler and primer (photo 8), the results are somewhat subtle, but effective; compare this view with photo 6 to see the difference.



Tim uses AMT/Ertl's 1965 Buick Riviera to demonstrate a relatively simple chopping technique that applies to certain mid-20th-century body styles. For those who have never chopped a top, this technique is a good way to begin to build your skills.

Chop That Top

It only takes two hours – we show you how – on AMT/Ertl's '65 Buick Riviera

by TIM BOYD

WITHIN HOURS of the opening of *Scale Auto's* "Roundtable" (August 2005 issue), in poured the questions – and the subject of chopping tops kept coming up: Is there an easy way to reduce the height of roofs for street rods, customs, and '50s/'60s street warriors? Can chopping be done by the less-experienced modeler? How long does it take to chop a top? Are certain types of cars easier to chop than others?

I've done articles on this subject (see References box), and the short word is that chopping anything – aside from a

1920s to early-1930s body, with completely upright roof posts – is a fairly involved procedure.

When windshield pillars (A-pillars) and rear window pillars (C-pillars) began to slant with car designs starting in the mid-1930s, chopping became far more complex. Add in the "tumblehome" that became more popular in car design as the century progressed, and chopping a top became similar to taking a section out of an upside-down ice cream cone: When you put the pieces back together, the top part is too short in length and

width to bridge the gap of the lower part of the cone.

This means that after removing the two- to five-scale-inch top section, you typically must cut the remaining roof apart in both directions so that you can extend its length and width to bridge the larger gap.

(When viewed from behind the car, tumblehome is the amount that the "greenhouse" of the car tapers to a narrower form from the top of the fenders to the roof.)

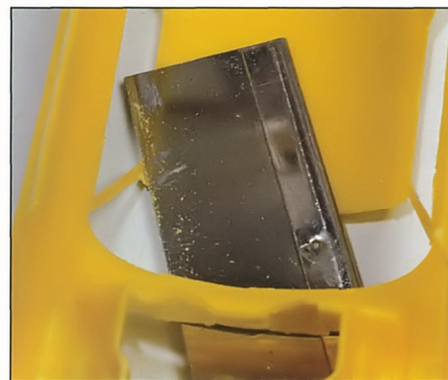
With a desire to show enough of the



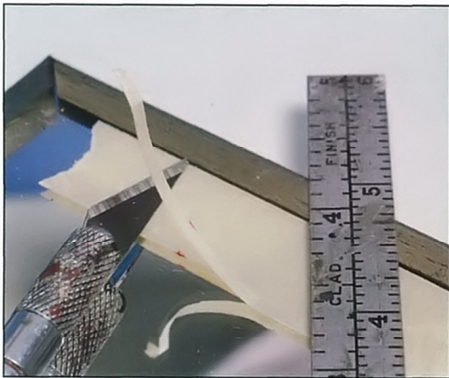
1 We're using AMT/Ertl's evergreen 1965 Buick Riviera to demonstrate how to perform a 2½-scale-inch chop to the "greenhouse" area of the body. Begin by removing the vent-window pillar (marked in red).



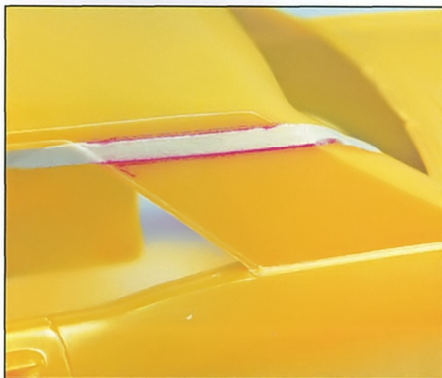
2 Instead of chopping the A-pillars, we'll bend them to a more-horizontal position than the relatively upright configuration of the stock body. To help the bending process, "score" a horizontal cut at the bottom of the A-pillars. The trick is to make the cut deep enough so the pillar will bend, but not so deep that the pillar joint breaks during handling.



3 Turn the car over and "score" along the inside joint where the A-pillar meets the roof. Cut to about 1/3 of the depth of the styrene to preserve strength, while enabling the styrene to bend at the joint later in the chopping process.



4 Place some masking tape on a hard surface (glass or a mirror works fine), then cut a strip to uniform width. In 1/25 scale, a ⅛-inch width equates to a three-scale-inch chop. For this 2½-scale-inch chop, I cut the tape to a width of 7/64 inch - "sectioning tape" in the following steps.



5 Apply the sectioning tape to the C-pillar area, with the top of the tape serving as an extension of the top of the side window opening (also known as "DLO" for "day-light opening"). I've added red marks at the top and bottom of the sectioning tape as a visual guide for the razor-saw cuts to come.



6 Apply some tape across the top of the roof, just forward of the joint of the roof top with the backlight. We'll only cut along the back edge of the tape (signified by the small arrows), so the width of this tape is not important.

chopping technique to allow our first-time top-choppers to get their feet wet but not to overwhelm them, I wondered if there was a simpler technique I could demonstrate for this article - one that would definitely reduce time and complexity, but would be a bit restricted in its application. In our own version of "Reality TV" our studio cameras would record just how it all worked out.

This simplified technique is best suited to cars of the late 1950s to early 1970s that have narrow and straight A-pillars, wide C-pillars, and relatively little tumblehome.

The 1964-71 Thunderbirds, Rivas, Toronados, El Dorados, mid-to-late-1960s Ford Galaxies, and 1969-73 Chevy Impalas are good candidates for this technique; the 1949-51 Mercurys (thick A-pillars and relatively narrow C-pillars) and the 1968-70 Chargers (severe degree

of tumblehome) would not work for this top-chopping approach.

This technique works only for mild top chops - less than three-scale-inch reduction in vertical height (less than 1/8 inch in 1/25 scale). This is OK, as when building 1960s cars, car-design experts view radical chops as being *outré*; a two-scale-inch chop yields a far better result than a four- or five-inch chop.

So although it's a bit narrow in its application, in theory our simpler approach will still apply to many of the bodies that fit the currently popular genres of lowriders, mild street customs, and "real street/g-force style" 1960s-vintage street machines.

Did our theories work? Follow the next 19 steps and decide for yourself.

In less than two hours (including the time to set up the photography and deal with some superglue that wasn't bonding

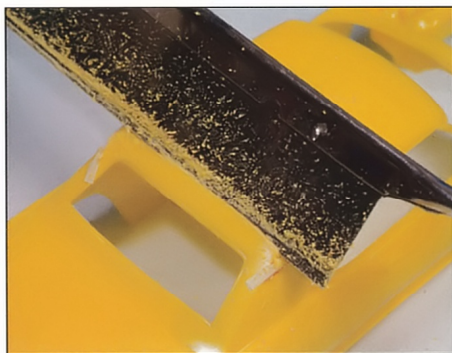
particularly well), I completed an effective 2½-scale-inch top chop on AMT/Ertl's 1965 Buick Riviera.

The finished body will require minimal use of body putty/surfacers, and no molding or reestablishment of character lines will be needed.

I don't want to oversimplify here; if this is your first top chop, you may want to practice on an extra body rather than your in-process contest-winner.

As with any technique of this type, practice makes perfect. But I rate your chances of success as very good if you've followed the guidelines above.

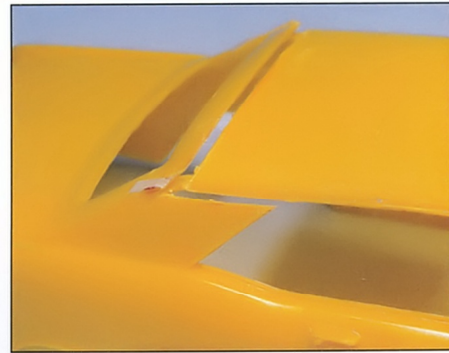
We hope that if you've been considering top-chopping for the first time, you'll accept our challenge, follow along with the photo steps, and add top-chopping to your repertoire of model-building skills. Drop us a line and let us know how it works out! ■



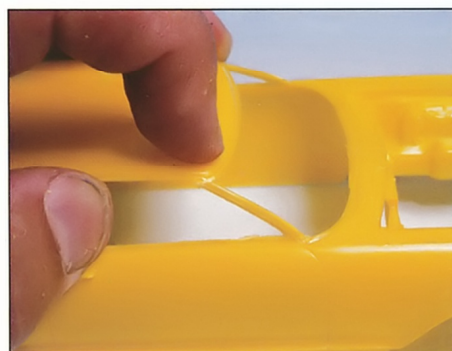
7 Begin by cutting across the top. Note that the razor-saw blade is angled to be parallel with the backlight. I cut deeply enough to reach the bottom of the sectioning tape on each side, but as you'll see, I later extended this cut all the way to the bottom of the C-pillar.



8 Turn the body on its side and complete one cut along the top of the sectioning tape, then make a parallel cut along the lower edge of the sectioning tape. Cut all the way through to the angular cut made in the previous step, so the piece of the body attached to the sectioning tape is cut free. Repeat these steps for the other side.



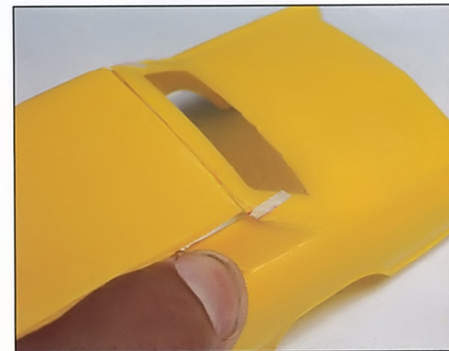
9 After the cuts are complete, the project should look like this. The roof section is standing free at the C-pillar area, held in place only by the forward A-pillars. The amount removed doesn't look like much here, but trust me: the end result will be striking.



10 Carefully push the roof section to the rear, enabling the A-pillars to bend at the intersection with the roof and the beltline of the body. This is best done as a series of bending maneuvers so the styrene will accept the new rearward and downward position of the roof panel. This approach probably will not work with more-brittle resin aftermarket bodies.



11 After matching the roof section to the C-pillars, it became obvious that I would have to bend the C-pillars inward where they intersected the roof. I extended the cut shown in Step 7, again cutting parallel with the angle of the rear window. I cut all the way to the bottoms of the C-pillars.



12 Bend the C-pillars inward with your thumbs, again using a series of bending maneuvers. To help the styrene bend, run hot (but not boiling) tap water over the intersection of the C-pillar and the fender for 20-30 seconds, then repeat the bending maneuvers. The tops of the C-pillars should mate with the slightly narrower roof panel without having to be held in place.



13 Continue to test-fit the roof in its new location by pushing it rearward and slightly downward. As shown here, you are striving for an alignment where the top of the DLO is parallel to the bottom of the DLO/beltline. When all is set, use super glue to attach the roof at the rear C-pillars.



14 With the roof in place, the rear window is now too tall. Apply some sectioning tape just below the top of the rear window opening. Remove the styrene beneath the tape by cutting along the top and bottom surfaces of the sectioning tape.



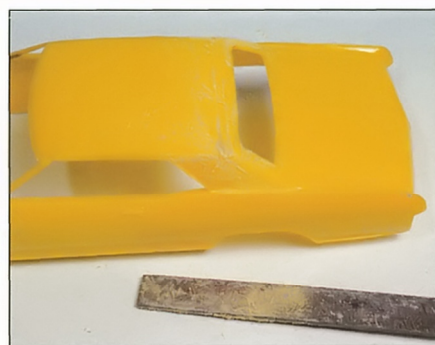
15 After the last step is completed, you'll have a separate piece of styrene representing the top of the rear window. Test-fit it back in place, filling down the mating surfaces if necessary to be sure that the top of this piece mates with the top of the remaining roof panel.



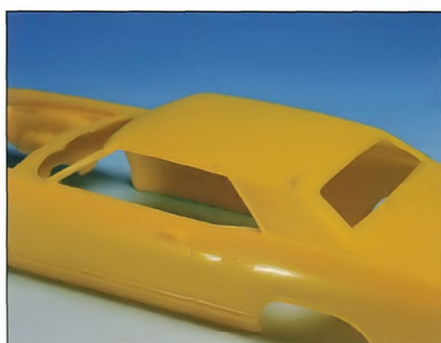
16 Here's the new rear-window treatment. In addition to gluing the top of the rear window frame in place, apply gap-filling super glue along the remaining cuts from Step 11. Reinforce earlier joints if necessary, so the body will stand up to the filing steps to come.



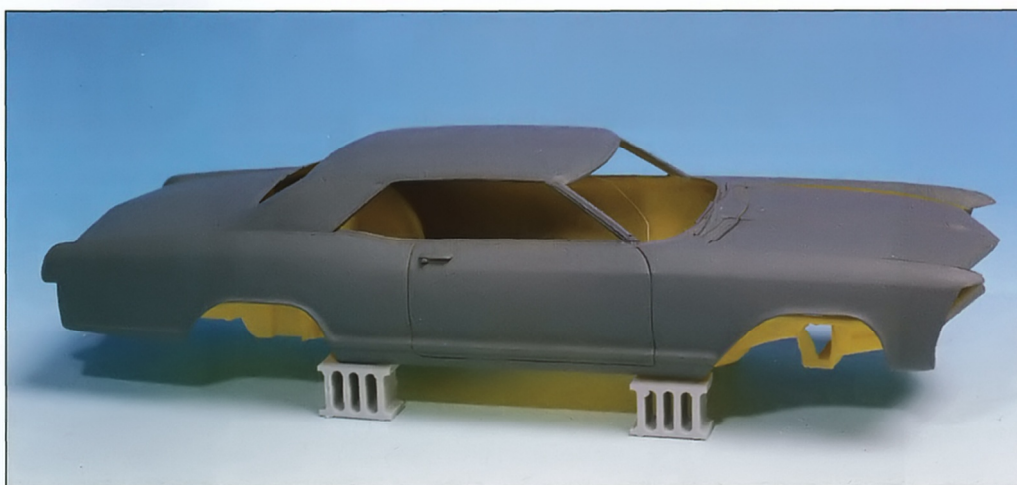
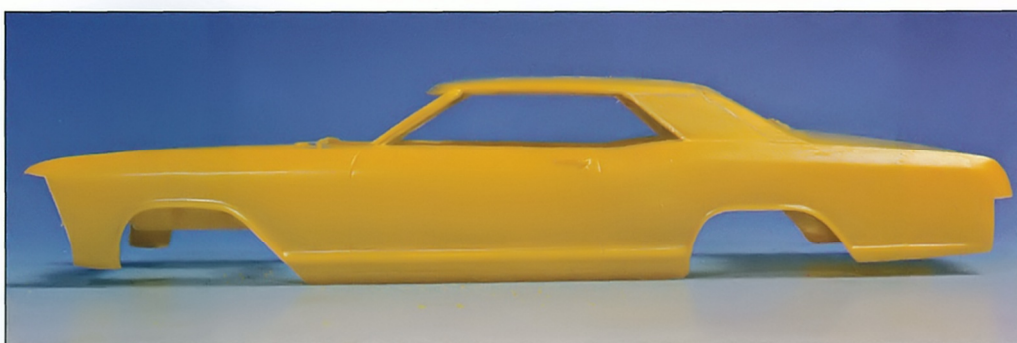
17 Before additional bodywork, I reinforced the A-pillar joints from the inside of the body with narrow strips of K&S sheet brass, glued into place with five-minute epoxy.



18 Use a flat file to "work" the mating surfaces of the roof, C-pillar, and backlight. If you did the previous steps correctly, it shouldn't take too much work to file achieve a consistent surface, requiring only minor filling along the seams to make the body ready for paint.



19 Clean up the A-pillar surfaces with the file too, in case there is any irregularity from the earlier bending maneuvers. Use the bodywork techniques in the upcoming "Body Building Basics" article (August issue) to prepare the body for the color paint coats. During final assembly, you'll need to cut the windshield apart from the rest of the clear styrene casting in this kit, but after this step it appears to fit perfectly. In some cases, you may need to cut a new windshield from clear sheet styrene to fit the new angle of the windshield pillars.



REFERENCES

"Building a Late Model Custom," *Scale Auto Enthusiast* #13, May/June 1981 (Chopping a 1970 Impala)

"Chopping the Mercury Top – Getting it Right the First Time," *Scale Auto Enthusiast* #14, March/April 1983 (Two methods for chopping a 1949-50 Mercury)

"Retro Rod," *Car Modeler* 1999 (Chopping a 1932-34 Ford pickup)





Steve Boutte's stunning 1956 Pontiac began as a simple JoHan promo model. We'll show you how he made it into a show-quality car.

From promo to primo

How to make JoHan's basic 1956 Pontiac into a show-stopper

by STEVE BOUTTE

A FEW YEARS ago, a club member told me about some car models he received from the wife of a relative who had recently passed away. The club member built mostly aircraft, and since I built mainly cars, he offered to let me come by and see if I was interested in anything.

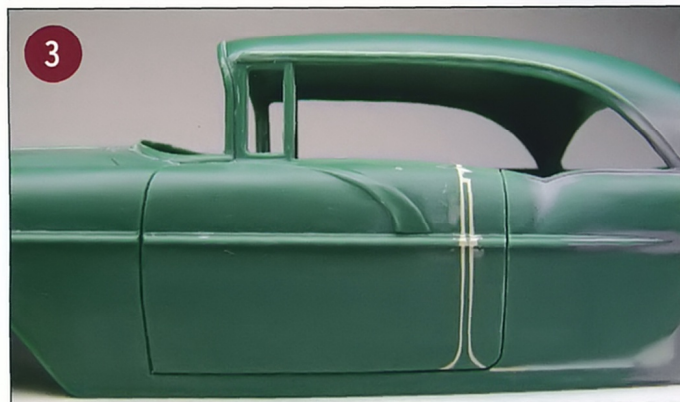
In the group were a couple of reissues of JoHan promos, including a 1956 Pontiac four-door, which is a simplified curbside with no interior. I took some photos of it to show my fellow car builder friends, and put it away in my closet.

One day at work during my lunch break, I was going through various photos I had on my computer and saw the Pontiac photos. To pass the time during lunch, I Photoshopped the body by cutting it out and positioning it lower on the chassis. I even tried different wheels, and a slight chop. That's when it hit me: I knew I had to give it a try for real.

The plan was to keep it as a mild custom with several subtle styling changes, but nothing radical except the ultralow stance and the four-door-to-two-door conversion. After a few digital renderings, bouncing ideas back and forth with Rik Hoving, I was ready to start. ■



The first order of business was body cleanup. Note the heavy seam lines on the front fenders, headlights, and top, as well as the thick vent posts and moldings. Aside from that, the body proportions are nice, and the molding is crisp. As with most customs, the door handles, scripts, and emblems would be removed, but I wanted to keep the chrome bands on the hood and fenders, as well as the side trim. To me, these said, "Pontiac."



I held the interior in place and drew pencil lines on the body in the general area of the new door line. Using dividers, I put one needle in the existing door line, and adjusted the other to line up with my pencil line. I scribed lightly, following the existing door line, which made the new scribed line parallel to the existing one.

After the new line was well established, I used the back side of a No. 11 hobby blade to finish it. I filled in the old door lines with Evercoat Glaze Coat, and used a circle template to lay out the rounded corner.



A chopped roof on a car with a sweetheart dip sometimes gives the illusion of the top being raked, or lower in the front. For that reason, I chopped the front 1 1/4 scale inches and two scale inches in the rear. I did a photo rendering to see where the cuts would be made, then "eyeballed" them in on the car. I used a razor saw and Model Car Garage photoetched blades to make the cuts. I cut each pillar and post a little at a time, getting deeper each time around, until the roof separated from the body. The remaining slices were then removed from the top.



The promo had no interior, so I ordered a resin 1955 Pontiac interior from Model Car World, but it was too narrow for the '56 body. I found that the 1970 Monte Carlo interior tub was about the right size, and had a pretty cool tuck-and-roll upholstered look.

The Monte Carlo interior tub was too wide near the dash, so I cut slits between the side panels and floor to move the sides in a bit. I added styrene to the sides of the MCW resin dash to widen it enough to fit in the Monte Carlo interior. But the console and "Darth Vader helmet" headrests would have to go!



The side trim (where the old door lines were) had to also be filled and sculpted. This took a bit of work, but was fun to do. After the initial primer coats were on, I was feeling better about the new door and trim lines. I also had to add the "sweetheart dip" in the sides of the Monte Carlo interior to match the sides of the body.



Before I glued the top back onto the body, I used small dots of super-glue on the A-pillars to hold the roof in position. After the glue dried, I checked the fit of the rear pillars to the body. I needed to make a few adjustments for a better fit, so I removed the roof and used a file to true all mating surfaces. After that, I reattached the top with super glue. I prefer to use super glue instead of solvent cements, because I feel that most of the time, super glue provides a stronger bond.



The promo headlights were unrealistic, with concentric circles molded into the clear lenses. The headlight areas also had no buckets; each had a flat, shallow area with a large hole in the middle. I used a motor



tool with a conical cutter to carefully open up the flat areas, then glued in a piece of styrene to close off the hole, creating the illusion of a headlight bucket. A parts-box lens finished it off.



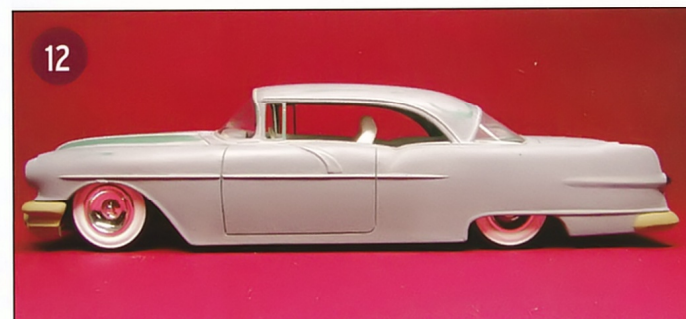
I turned my attention to the rear end of the car, analyzing what could be done to visually help it out. I removed the molded-in backup lights and smoothed out the areas where the lights had been. I also cut off the molded taillight lenses and filed those areas flat. I knew I wanted to have some sort of molded-in gravel shield between the body and bumper, but I wasn't sure how to work it in.



Removing the backup lights changed the look of the rear end to a less-flowing line, and gave the back end a more-upright look. After studying side-view photos, I added styrene and filler below the taillights, and decided to lower the bumper. This seemed to make everything fall into place, and I was able to add the wraparound lip with styrene strip and filler. To finish things up, I added a couple of scale inches of material to the inside of the bumper, and raised the bottom trunk line approximately one scale inch.



I knew that the kit glass would not work with my chopped top, and the distortion from the thickness of the clear is not something I like to see. I used a technique described by Juha Airio in an old SAE to carve a channel in the inside of the roof, as well as adding strips of .020" x .020" styrene where the body might be too thin to carve a channel. Unlike Juha, I wasn't able to get .010" clear styrene to bend perfectly and stay clear, so I used .005" acetate instead.



It took a quite a few tries to get the front and rear glass to fit without problems. I would test-fit, then sand here, trim there, until I finally got both to fit in the body with no glue, and no buckling from tension. The ends of the front bumper (near the wheel wells) were modified to look more like the 1:1 bumper by adding material, making them more rounded. I used filler to add a radius to the area of the windshield frame at the base of the A-pillar, and the bullet taillights make their debut at this point.



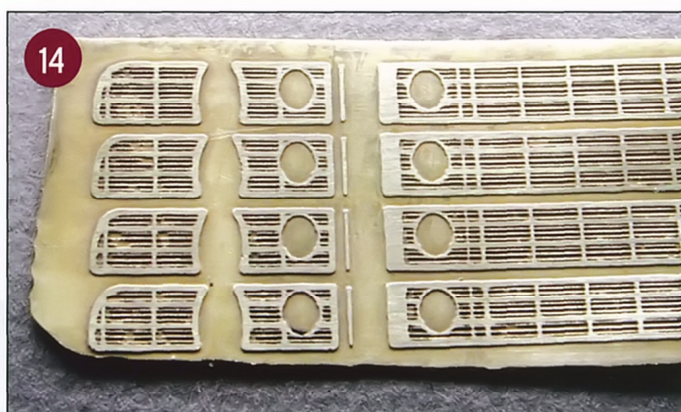
With the bodywork almost complete, it was time to finish the interior. After doing a bit of research, I found that the MCW dash was okay, but I wanted to see if I could make the detail a bit better. I removed all of the molded-in detail and added the two areas on the bottom of the dash on each side of the steering column.



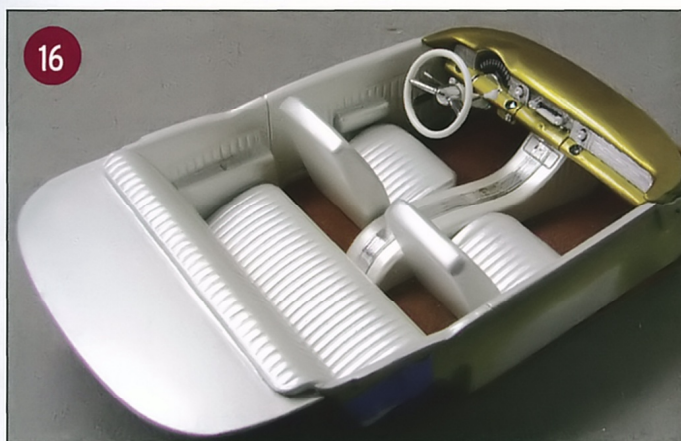
I made a couple of dash knobs by chucking small-diameter styrene tubing in a motor tool and machining the shapes with a hobby knife. Resin copies were made and placed in small drilled holes in the dash. The brass inserts are in place, but still need some fine-tuning. The radio push-button area is a small piece of styrene with grooves carved in it. The glovebox button is a piece of wire. You can also see some filler on the cowl side of the dash that was added to make the interior fit together with no visible gaps.



I wanted a scale metalflake paint job for the roof, and I did this with a basecoat of HOK Gold Metallic, then spraying clear with gold metallic powder mixed in. Candy tangerine was sprayed on top of that, followed by clearcoats. Just like 1:1 flake jobs, quite a bit of clear was needed to "bury" the flakes and make the surface smooth. The rest of the body consists of a gold metallic basecoat, topped with several coats of Candy Pagan Gold and clear.



I measured the areas where the dash inserts would go and drew up the artwork using a CAD program. I printed the artwork, cut out the paper copies, and made adjustments to the artwork to get the fit as tight as possible. I printed the artwork on Press-n-Peel blue, ironed the artwork to a sheet of .005" brass, and put it in a small container of ferric chloride (see Ken Hamilton's article, "A Rusted Development," in the August 2006 issue). I did a "partial etch" on the inserts, which left the back of the sheet solid, and only etched the front of the sheet.



The gauge faces were drawn on the computer and printed out on clear acetate. Bare-Metal foil was applied to the brass inserts and in various places on the dash. Alclad chrome was used in other places, as well as on the steering wheel. The center console was scratchbuilt from styrene, and the chrome center trim was foil-copied from the hood of the car, then glued to the console. The seats are painted House of Kolor Snowwhite Pearl, with no clearcoat.



After the clear coats were polished, I applied quite a bit of Bare-Metal foil, then darkened the panel lines with thinned black acrylic paint. Then it was on to final assembly, which is fairly easy with a curbside. Even so, bad things can still happen, but I was able to avoid the dreaded "glue fingerprint on the side of the body" - this time, at least!