



AOPA's
Catch-A-Cardinal
SWEEPSTAKES

When we introduced the 2007 sweepstakes project (the refurbishment of a 1977 Cessna Cardinal) to you in February, we told you it was going to be a “family” project.

At that point, I didn’t even know Janelle and Lisa Hammer, of Aerodesigns, the mother-daughter aircraft interior team that would transform the Catch-A-Cardinal’s seats and side panels. Nor had I talked more than a few minutes with the people at Vantage Plane Plastics who would ensure we had all-new interior plastic for the airplane. And we had yet to line up the full roster of contributors responsible for every-

thing from seat belts to soundproofing—all the details that would bring your airplane’s insides from a “5” to a “10.”

It’s not that I was completely disorganized. Really. We just had to get first things done first, and the interior was the icing on the cake—and the icing goes on last, I’m pretty sure.

By the end of the summer, however, the interior team was working late nights in the upholstery shop, plastic manufacturing plant, and completion hangar in Alva, Oklahoma, to finish the last big work package on an amazing airplane.

Like butter

Because so much of the airplane’s refurbishment was in progress in Griffin, Georgia, under the direction of The AvNet’s Dan Gryder, I searched for an interior shop in the southeastern United States that could produce quality work in a timely fashion.

My hunt led me to Aerodesigns, which at the time was based in Sylvania, Georgia, just outside Savannah. I spoke with Janelle at length and checked the company’s stellar references: Aerodesigns may be a small shop, but every client related how pleased they were

Stunning transformation

The smooth touch of new **BY JULIE K. BOATMAN**



John Diacon and Brad Churchill, of Vantage Plane Plastics, strive for the perfect fit for the Cardinal's interior plastic. Janelle Hammer, of Aerodesigns, works with Churchill on the preceding page.

with the results—and how pleasant it was working with Janelle and Lisa.

I called one more time, and took a deep breath: Would Aerodesigns like to participate? Not only did the Hammers say yes to a donated interior, but also in March they came to pick up the pilot and co-pilot seats so that they could reupholster them prior to the airplane's debut at the Sun 'n Fun Fly-In and first flight. The rest of the interior would wait until all other major work on the airplane was complete, after EAA AirVenture in July.

As we talked about the design, Lisa made several suggestions that you'll see played out in the final product—dark carpet to hide stains, black and red accents to add depth to the seats, and accent stripes on the side panels to bring the interior together visually. She connected me with Aviation Safety Products and Alamo Plating for expert rewiring and replating of the Cardinal's seat belts: Those belts went from Sapphire Blue to Pearl Beige, with Satin Nickel hardware. Aircraft Interior Products produced a

gorgeous roll of wool cut pile carpet from the Jackpot line, specifically 790 Jaguar (which is black with khaki flecks for added depth), that not only covers the floorboards but also forms the lower portions of each side panel and door panel.

The Hammers suggested Rick Mayfield, of Mayfield Aviation Leather, for the airplane's upholstery. Originally we thought about installing cloth seats with leather accents for a more utility-style look and higher wearability, but Mayfield convinced me that high-traffic leather was the best way to match the Cardinal's top-notch airframe refurbishment with a stunning interior. The Premier Ivory leather is buttery smooth and has stayed cool during our hot summer flights.

A final recommendation? Additional soundproofing from SoundEx. The ma-

Who's behind us?

Aerodesigns' Janelle and Lisa Hammer

Janelle Hammer started into the aircraft upholstery business in 1975 at the behest of her husband, Mike. He owned an aviation business in Laredo, Texas, and often contracted with other companies to install interiors in light general aviation airplanes. Janelle, a former home economics teacher, recalls, "He said, 'You sew, you can do this,'" to which she answered that she needed a heavy-duty sewing machine. She got a blank check to buy one, which she still uses today to bind carpet. Janelle worked on interiors in South Texas for 15 years, took a hiatus, and then launched Aerodesigns in 1995 after the family had moved to Fernandina Beach, Florida, and then to Georgia.

Janelle's daughter, Lisa, joined the company in 2003, fresh from college with a graphic design degree. Lisa handles the design work, quotes, and marketing; the company completes about 30 to 35 airplane interiors each year. The move to Alva, Oklahoma, had its roots several years ago, when Aerodesigns was one of the first to sign onto Vantage Plane Plastics' installer program. The mother-daughter team completed a Cessna 150 for Plane Plastics, and was invited to join forces in earnest earlier this year. Call 580-327-2932 or visit the Web site (www.aerodesignsinteriors.com).

Featured contributors

Vantage Plane Plastics

Vantage Associates, an aerospace interior manufacturer on the west coast, acquired the Plane Plastics division from Kinzie Industries (based at the Alva Municipal Airport since 1951) in November 2000. Plane Plastics opened a new facility at the south end of the airport in February 2005, further expanding its business. Lead by Vice President Scott Brown, Plane Plastics hosts a talented team to direct its growing general aviation product line.

Currently, Plane Plastics offers more than 3,000 FAA/PMA (parts manufacturing approval) parts, including aftermarket interior parts for Cessna, Piper, Beechcraft, and other light general aviation airplanes. In addition, the company is the OEM (original equipment manufacturer) interior plastic supplier to the Quartz Mountain Aerospace 11E. For more information, call 866-307-5263, or visit the Web site (www.planeplastics.com).

Mayfield Aviation Leather

Rick Mayfield fulfilled a longtime ambition when he obtained his private pilot certificate in 1994. And the first thing he did? He refurbished the interior of the Cessna 172 he had purchased for his training. Using his wife's talents in leather furniture design and manufacturing as a springboard, Mayfield turned his passion for aviation into a thriving business. Mayfield Aviation Leather is the result.

Mayfield understands the ins and outs of a detailed aircraft refurbishment project—he took everything but the wings off a Cessna 210L. He's done the interiors of six aircraft of his own as a hobby, but early on translated it into success: Mayfield sold leather to his first aviation customer in 1995. His association with leather manufacturers has enabled him to develop "high traffic" aviation leather that complies with all FARs—Mayfield has carved a niche. And the Catch-A-Cardinal benefits from all-new leather, thanks to his company—this is their third AOPA sweepstakes project donation. Call 800-342-7729 or visit the Web site (www.aircraftleather.com).



Lisa Hammer, of Aerodesigns, builds up the rear seats with new leather covers to match the Cardinal's striking exterior.

terial lining the Cardinal's fuselage is essentially a sandwich of several different nonabsorbent foam layers, backed by a silver layer consisting of bubble pack encapsulated in aluminum foil.

Plastic or plastic?

You don't have much choice when it comes to the Cardinal—if you're planning an interior makeover, you're gonna deal with a lot of new plastic. Luckily, we had Vantage Plane Plastics, of Alva, on

board from the beginning with a set of interior plastic parts. The company was in the process of reworking its kits for the Cardinal; it had an RG already in the shop for this reason and jumped at the chance to have the Catch-A-Cardinal (a fixed-gear model) to help them fine-tune pieces that varied between the two models. Cardinal models vary just enough from year to year—and even more so after years out in the field—to make a one-size-fits-all solution elusive.

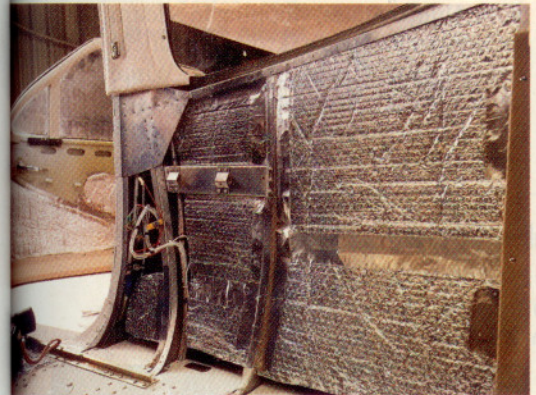
Tools from the trenches

5 for your ultimate interior

How do you create an interior that suits your fly-style? Here are five steps to comfortable flying for you and your passengers.

- 1. Build a foundation.** Now is the time to really inspect your airframe if you haven't had a chance. With the interior completely gone, it's much easier to get to problem areas. Address them, and apply protection wherever possible before moving forward.
- 2. Go for best fit.** A good interior installation requires a thorough understanding of the airplane, since parts may need adjustment in order to fit properly—especially in decades-old airframes. Your shop should show expertise, and go beyond simply having a supervising IA to rubber stamp the work.
- 3. Recognize a pattern.** Don't just grab the color codes for your exterior paint and match them—spend time considering how the airplane will be used. Think about whether you operate in the heat or the cold, think about where you like to stow charts and supplies, and think about how you're going to keep it clean. Use light colors on seldom-handled areas for cabin brightness; use dark colors on heavy-use areas to help these places look sharp for the long haul.
- 4. Sign it off right.** A proper logbook entry for an interior installation is every bit as important as one for an overhauled engine. In addition to STCs and field approvals for any modifications, your paperwork stack should also include burn certificates for materials such as leather and soundproofing.
- 5. Promote pocket protection.** "Just say no to pocket abuse!" says Lisa Hammer. Although a good refurbishment includes reinforcement for heavy-use areas, you can help maintain your interior's like-new looks by avoiding storage of your entire NACO subscription in the pilot-side door pocket.

Scott Brown, vice president of Plane Plastics, and Tyson Tucker, marketing manager, were happy to work with Aerodesigns on the interior—in fact, the Hammers redid a Cessna 150 for Plane Plastics to use as a demonstrator a couple of years ago—but there was change afoot. The companies on the airport in Alva have joined forces to build a network of shops that will cover all aspects of interior completions. Aerodesigns was invited to move its facilities to Oklahoma in late June under special tax incentives intended to grow business in this rural community.



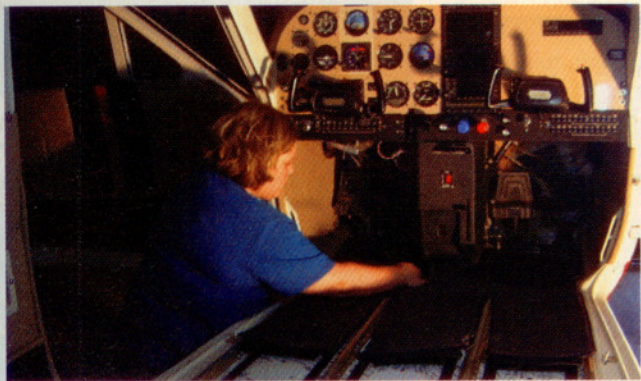
The SoundEx soundproofing behind the fuselage panels makes for a quiet airplane.

The inside job

In early September, your Cardinal saw a string of several days with up to five people at a time working on various aspects of the interior. Gryder flew out to Alva to help with the last-minute touches and ensure everything came together on schedule, capping off his consistent efforts to shepherd the project along.

The plastic fitting took place over a couple of weeks, with the Plane Plastics crew placing the raw, unpainted plastic pieces, then removing them to make adjustments for a precise fit. Once satisfied with each one, the crew painted the parts a soft white to keep the interior light and cool.

In the meantime, Aerodesigns had sewn the covers for the rear seats, built up the new foam for the seats, and put together the panels for the doors and the aft cabin. They finished the aft bulkhead and inside of the baggage door in the same creamy leather that covers the seats. The ladies rolled out the carpet on the floor patterns and cut it, then placed it in the airplane for the correct fit before surging it to finish the edges. Lisa laid Velcro to secure the carpet to the floorboards—all those signatures that mem-



After a final fit and surging, the carpet goes in. Next, the seats and seat belts bolt in, finishing the new interior.

Another road trip

With a new interior now gracing the Cardinal, we flew the lower central portion of the United States, stopping in Siloam Springs (Smith Field's Skydive Skyranch) and Lakeview, Arkansas (Gaston's White River Resort); Memphis, Tennessee (Downtown Aviation at DeWitt Spain Airport); Huntsville, Alabama (Moontown

bers left at Sun 'n Fun (along with many of the folks who worked on the airplane) are now hiding beneath the new carpet.

New sunvisors slid into place, and reworked subpanels from Air Capitol Dial came back from its facility in Wichita ready to be installed below the instrument panel. Finally, the seats, seat belts, and shoulder harnesses went into place.

Catch your own Cardinal—today

Come next year only one lucky winner will fly AOPA's refurbished Catch-A-Cardinal 1977 Cessna 177B Cardinal off into the sunset—but there's no reason why you can't snag a little experience in the airplane today.

Excuse me?

Yes, you can open that wide cockpit door, slip into the left seat, and take the Cardinal's controls in Microsoft's Flight Simulator X. Simply go to AOPA Online (www.aopa.org/sweeps/fly) and download the "virtual Cardinal," a software add-on developed by Flight 1 Software (www.flight1.com) that replicates the Cardinal on your computer. It's available free to current AOPA members.

What could you do with the virtual Cardinal? You could trace the route of Julie K. Boatman's "Cross-Country Cruise" (October 2007 *AOPA Pilot*), or plot your own barnstorming flight anywhere else in the world.

While the Cardinal software is completely functional, Jim Rhoads and his crew of software developers are putting the finishing touches on the simulated airplane's virtual cockpit, a Flight Simulator feature that allows users to seamlessly pan around the cockpit, operate controls, and adjust displays. The virtual cockpit is created by photographing the completed interior, then combining those digital images. It will be available soon as an update to the virtual Cardinal; watch for the news of its release in *AOPA ePilot*.

To fly the virtual Cardinal, you'll need a personal computer running Windows XP or Windows Vista, and Microsoft Flight Simulator X. A control yoke or joystick also is needed (rudder pedals are optional), and a high-speed Internet connection is strongly recommended to download the program because of its size (approximately 46 MB). The Catch-A-Cardinal Sweepstakes software is not compatible with earlier versions of Microsoft Flight Simulator.

Flight 1 also created virtual iterations of last year's Piper Cherokee Six and 2005's Commander 112A sweepstakes airplanes for an earlier version of Microsoft Flight Simulator, and members downloaded them more than 30,000 times. Although they are no longer available, your virtual Cardinal is waiting for you right now.

—Michael P. Collins



TOP: DAN GRIDER

CONTACT

Air Capitol Dial

www.aircapitoldial.com

Aircraft Interior Products

www.aipsource.com

Alamo Plating

www.alamoplating.com

The AvNet

www.theaviatornetwork.com

Aviation Safety Products

www.aircraftseatbelts.com

Bose Corporation

www.bose.com

Downtown Aviation

www.downtownaviation.com

Falcon Field

www.kffc.org

Gaston's White River Resort

www.gastons.com

Moontown Airport

www.moontownairport.com

Richard B. Russell Regional Airport

www.floydcountyga.org/airport

Skydive Skyranch

www.skyranch.com

SoundEx

www.soundexproducts.com

Airport); and Rome (Richard B. Russell Airport) and Peachtree City (Falcon Field), Georgia, before landing back in Griffin prior to AOPA Expo in October.

Boy, is it quiet in there with that new interior! Not the bad kind of quiet, either. After spending more than 50 hours sitting on the new seats, I can attest that the new foam and smooth leather makes a difference in comfort on a long trip. But judging by the times I forgot to turn on the active noise reduction on my Bose X headset (the winner gets four of those, by the way), I can attest to the Cardinal's comfort from a noise perspective too.

With the engine break-in complete, including a changeover from mineral oil to the regular stuff, plus the installation of refurbished wheel pants on the horizon, I'm looking forward to final performance figures—I'm sure you are too.

AOPA

E-mail the author at julie.boatman@aopa.org.

INTERACTIVE ▶

AOPA PILOT ONLINE



Check out the latest video from the Cardinal on tour and the interior refurbishment on AOPA Online.

www.aopa.org/sweeps0711