Building a Center Channel for an **Altec A7-800**

By William Eckle

Here's a match made in speakerdom. This joint effort adds a center channel to a pair of classic Altec speakers.

PHOTO 1: Center channel (top) for existing Altec speakers. (Subwoofer is on right, out of picture.)

About 20 years ago, a friend acquired a pair of Altec A7-800 (Voice of the Theater) speaker systems. He didn't like the cabinets and asked me to recommend an alternative. We decided an Altec "Malibu" cabinet would be the best compromise for size and performance. So we built a pair of thicker and better-braced copies of Altec "Malibu" cabinets and finished them in oak. My friend fell in love with these speakers over the years, both for their sound and appearance.

THE SETUP

Fast-forward to 2006. My friend now wanted a center channel speaker to go with his "Malibus." He specified he'd like to use Altec parts, if possible, and he'd like the center-channel speaker to match the general appearance (only much smaller) of his "Malibus," and be close in sound (timbre and so on) to his main speakers (**Photo 1**).

PHOTO 2: The "Malibu" cabinet we built for the Altec A7-800.

I wondered what Altec would offer in the way of a center channel speaker if they were still in business, to match the "Malibus" we had built (**Photo 2**). Having used Altec 8″ 755s as TV speakers for years, I thought they'd make a good basis for a center-channel speaker, because they were designed for speech intelligibility, which is just what is needed for a dialog channel.

THE QUEST

We decided to look for a pair of Altec 8″ 755 drivers and an Altec 3000H tweeter on eBay. Pairs of 755s were going for outrageous prices on eBay, but after 10 months and many failed bids, we acquired a pair of Altec 755s, a 3000H tweeter, and an N3000 crossover at reasonable prices in four separate purchases. It turned out that singles went for much lower prices than one-half-of-a-pair. We also purchased an L-pad from Madisound to adjust the tweeter level because the Altec crossover had a 0, –2, and –4dB tap to adjust the tweeter output. This would have been awkward to adjust once the cabinet was sealed.

THE CABINET

We planned for the basic cabinet to be made from ¾″ Baltic birch (**Fig. 1**). Note: The front and back are ¼″ oversize to allow routing flush to the basic box once they are glued and screwed on the box. The addition of ½″ MDF on the front is not only to deaden and strengthen the front, but also to allow later installation of ¾″ solid oak quarter-

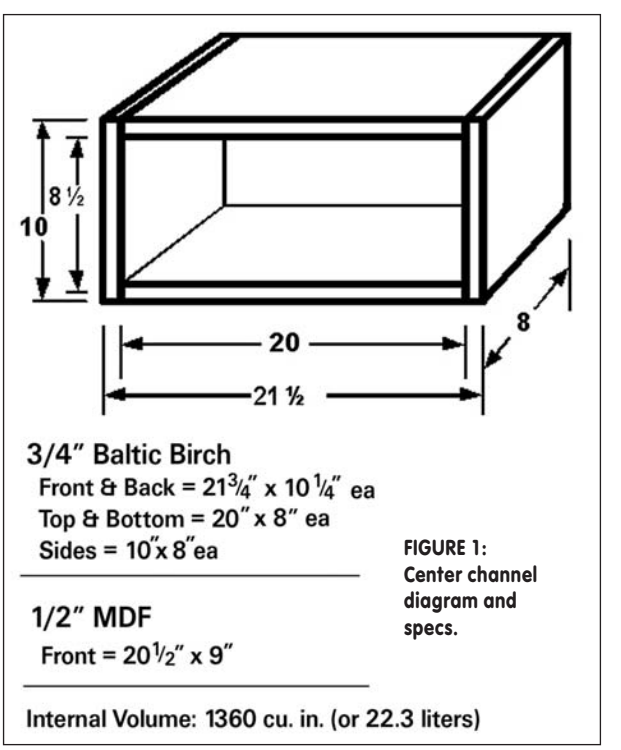

FIGURE 1: Center channel diagram and specs.

PHOTO 3: Edge work on the center channel speaker.

round moldings on all the front edges.

We covered the entire box (including the bottom) with ¼″ oak plywood. I've found ¼″ plywood is easier to work with than veneer, and screws in the basic box don't need to be filled in. We routed the front to back and all back edges to accept ⅜″ quarter-round, solid oak moldings (**Photo 3**).

RESULTS

We applied sanding sealer and two coats of semi-gloss polyurethane, sanding between each coat. We used 20 ounces of "Fiber Fil" as stuffing.

The 755s are connected in parallel and are not connected to the crossover, so they run full range. The tweeter is connected to the 0Ω tap on the crossover for protection, and then to the L-pad for level adjustment.

We used several test discs and pink noise to check the balance of the system. The pink noise revealed a very close match across the front three speakers, after the levels were matched. Once my friend became used to having a center (dialog) speaker, he wouldn't be without it. He now runs all the TV audio through the main system, because he complains that the TV speakers are almost unintelligible.

I have a feeling the ghosts of Altec Lansing would be proud of this center channel speaker, as we are proud of accomplishing our goals of using vintage parts and close matching. *aX*

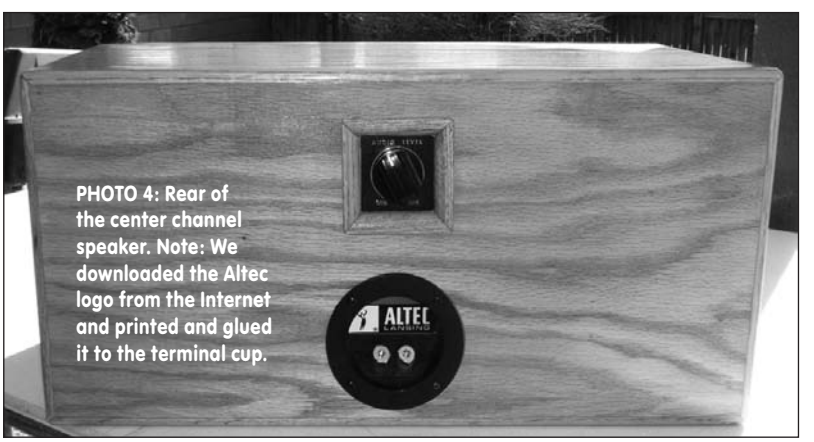

PHOTO 4: Rear of the center channel speaker. Note: We downloaded the Altec logo from the Internet and printed and glued it to the terminal cup.

PHOTO 5: Front of the center-channel speaker.