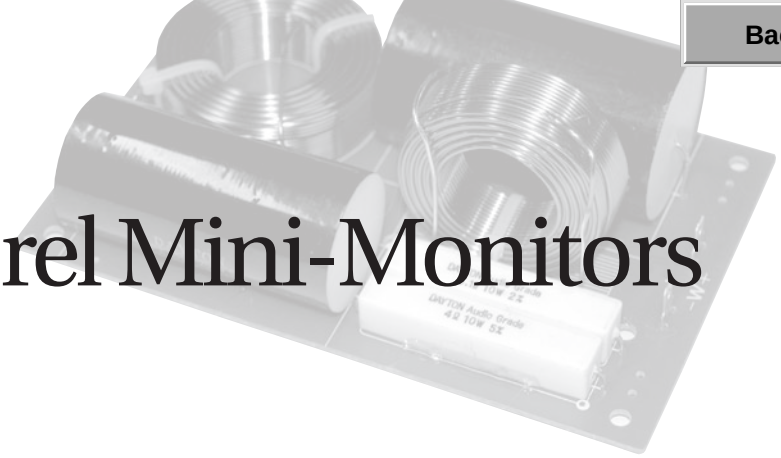


Peerless/Morel Mini-Monitors

By John and Sandra Schubel

The Peerless/Morel Mini-Monitors proved to be a musically superior monitor speaker system that can be purchased in kit form and easily assembled (**Photo 1**).

The kit was delivered in two boxes, the first containing the two speaker enclosures, and the second the drivers and components for building the crossover networks. The speaker enclosures were securely packed in Styrofoam. The second box, containing the components, was actually a box within a box, again providing protection from shipping damage. **Photo 2** shows the packed speaker enclosures.

ASSEMBLY

Photo 3 shows the speaker enclosures before the addition of any components. **Photo 4** shows the components that were included in the second box.

The instructions for assembling the kit were provided in the form of a stapled set of 8½ × 11″ sheets. It is advisable to read these instructions before assembling the kit.

The first steps are to install a port tube and mount the speaker terminals to the rear of the enclosures. This requires driving the terminals into pre-drilled holes in the enclosure. This is an interference fit, and the terminals must be set with a hammer (I used a rubber mallet). **Photo 5** shows the rear of a speaker enclosure with these components installed. The inside ends of the terminals are threaded, and you install a series of nuts, washers, and wiring tabs on the terminals from the inside of the cabinet.

I did this, and all work on the enclosures, on a soft surface to prevent scratching the finish. Later, during listening tests, the finish proved to be soft, because scratches appeared where I had placed the speakers on wood speaker stands. As a point of reference, I have used these stands with my NHT speakers without experiencing any scratches. So special care is required!

The next step is to cut the foam provided in the kit to size, and then glue

PHOTO 1: Assembled mini-monitors.

PHOTO 2: Packed speakers.

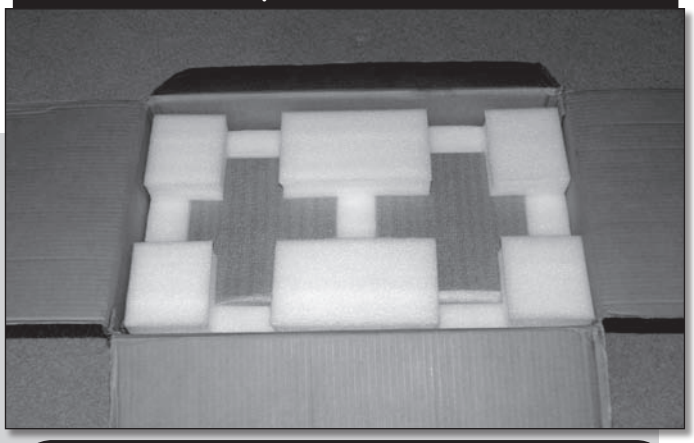


PHOTO 3: Before assembly.

the foam to the inside of the speaker cabinet. Dimensions for cutting the foam are not provided in the instructions, so you should measure the interior of the speaker enclosures before cutting. I chose a carpenter's square and a box knife to cut the material to size. The instructions offer the option of using the adhesive provided (Loctite clear household silicone adhesive/sealant, part no 30808) or hot glue. I chose the adhesive, which gave me more working time to carefully position the foam.

DRIVER INSTALLATION

The next step involves installing the drivers in the baffles. The Peerless 850108 5½″ woofer was provided with a gasket, so mounting this speaker was no more difficult than driving four screws into the baffle. The Morel MDT-20 1-1/8″ tweeter required the installation of gasket material, which was provided in the form of a roll of caulk. The instructions require you to roll the caulk into a bead ¼″ thick. The illustration in the instructions showed this bead molded to the driver frame very close to the magnet.

I placed the tweeter in the mounting hole provided in the baffle and found that there was a fair amount of clearance between the mounting hole and the magnet; if I placed the bead where the instructions suggested, it would not contact the mounting surface. Also, the caulk provided was a flat bead, already ¼″ thick. I therefore chose to apply the caulk as provided to the tweeter frame at a radius just inside that of the driver's screwholes.

The first time I tried this approach, the caulk still did not seal against the mounting surface in the baffle in some spots. I moved the caulk further out on the driver frame to be sure contact was made all the way around. **Photo 6** shows the caulk applied to the driver frame. I installed the tweeter and tightened the screws lightly until the face of the speaker was just flush with the surface of the baffle.

The assembly instructions suggest that it is usual for the drivers to be positioned so that the electrical connections are pointing downward. As I proceeded with the installation, it became obvious that the electrical cables to connect the drivers to the crossover networks were sufficiently short that the assembly was much easier if the driver's electrical connections were positioned toward the center of the baffle. I assembled one of the speakers in this manner.

PHOTO 4: Kit parts.

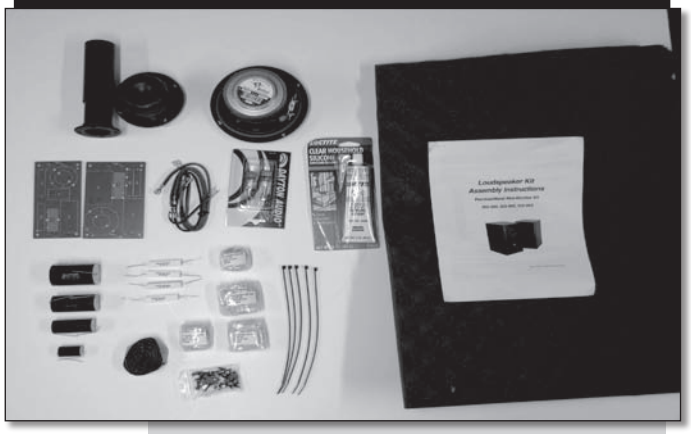


PHOTO 5: Rear of enclosure with components installed.

CROSSOVERS

The next step was to assemble the crossover networks. There are two circuit boards for each speaker—one each for the woofer and for the tweeter. It is best to lay out the components for each board prior to assembly.

Each printed circuit board is marked with the component identifier (R1, C1, L1, and so on), but the components themselves are marked with their electrical characteristic (10Ω, and so on). You must refer to either the schematic or to the photograph that appears later in the instructions in order to associate the components with their respective positions on the circuit boards. **Photos 7** and **8** show the two assembled crossover networks.

The instructions suggest that you glue the electrical components to the circuit boards using either the adhesive provided or hot glue. I chose hot glue in this case in order to speed the assembly process.

Once the boards are assembled, the instructions wisely suggest that you connect the drivers and the crossover networks together outside of the enclosure—using the cables provided—to assure that the speaker systems work. I found a missing solder connection, and making the repair after the speaker had been assembled would have been very difficult with the circuit boards glued into place.

The next step in the assembly is to glue the two circuit boards into the rear compartment of the speaker enclosure. **Photo 9** shows the crossover networks installed in the enclosure. I recommend that you practice getting the circuit boards into the rear of the enclosure, because the port tube makes this awkward. The instructions again offer the alternative of using hot glue. I chose to use the adhesive provided, as it takes time to get the circuit boards into the rear of the enclosure. I would have preferred a different installation method, so that future maintenance of the boards could be performed.

Once you have glued the crossover networks into place, you can attach the cables from the crossover networks to the speaker terminals and from the crossover networks to the drivers, and screw the baffle into place. **Photo 10** shows the speakers connected to the crossover networks and ready for final assembly.

PHOTO 6: Caulk applied to driver frame.

Assembly is completed by carefully setting the baffle into the speaker enclosure and fastening it with the screws provided. I recommend testing the speakers again before installing the speaker grilles, which are provided with four sockets that you must press into the screw holes in the baffle. Once the sockets are in place, it will be difficult to remove them.

LISTENING IMPRESSIONS

We played the speakers for a while using Kenny Daverne's *One Hour Tonight*, Music Masters 5003-2-C, on a HHB Compact Disk Recorder model CDR800, feeding a NAD Model 214 power amplifier via a passive control amplifier. We noted during this break-in period that the clarinet seemed more strident than that experienced with our NHT speakers, and the bass seemed subdued. Our impressions of the Peerless/Morel Mini-Monitors would soon change, perhaps indicating the importance of a break-in period. As is our custom, we listened to all program material on both the Peerless/Morel Mini-Monitors and on a pair of NHT Model 1.3s.

Our music source was *Hi-Fi News and Record Review*'s *CD Test Disk III*, in addition to selections from our private collection. Our initial observations, following the break-in period, were that the Peerless/Morels are very transparent; that is, there is not a sense that the sound is coming from the direction of the speakers. We also noted that treble response did not diminish when listening to these speakers off-axis. The soundstage did appear more distant than we would prefer, and the bass response was diminished both in level and in low-frequency response, compared to that perceived with the NHT speakers.

Because this can easily be compensated for through the use of a control amplifier or pairing with a subwoofer, we consider this a minor observation. The speakers reward you instead with very smooth and clear mid- and high-frequency response and the ability to handle loud and complex passages with great clarity. We never thought these speakers were harsh or strained in their reproduction of sound.

We listened to *Peter and the Wolf*. The voice of the narrator was clear, without the coloration to which we are accustomed. The oboe was clean and expressive, with great variety of tone. We found the flute to be more "edgy" than we were accustomed to with our NHTs. Similarly, the clarinet was less "sweet."

Horns were more exciting on the NHTs, but we concluded that it was probably coloration by the NHTs, and the Peerless/Morels were likely more accurate. Tympani and drums are not exciting, but probably more accurate with the Peerless/

PHOTO 7: Woofer crossover.

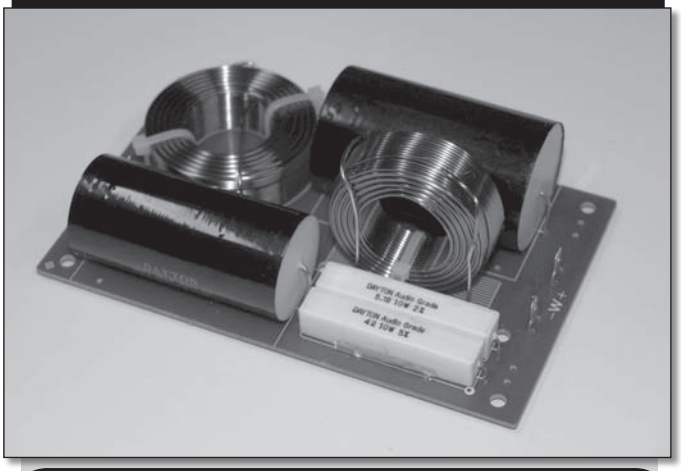
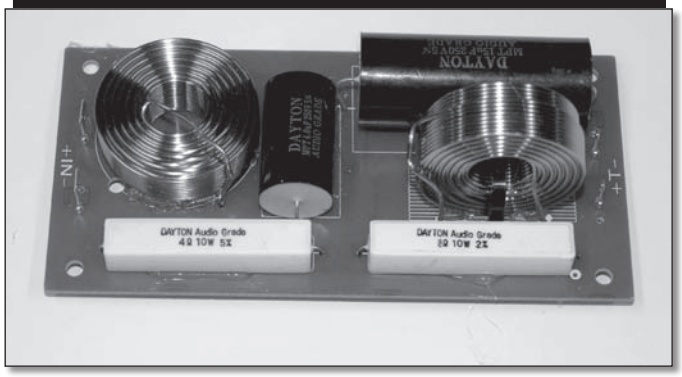


PHOTO 8: Tweeter crossover.



Morels. This impression again may be due to the perceived weaker response of the Peerless/Morels at lower frequencies. In general the soundstage seemed distant. The Peerless/Morels seem to emphasize percussion instruments.

We were divided on the assessment of the Peerless/Morels regarding the musicality of the brass. John thought that the brass stood out more clearly on the Peerless/Morels and were well balanced with the other instruments, as compared to the NHTs. Sandra preferred the balance obtained with the NHTs.

As we moved on to the last part of *Peter and the Wolf* (track 6), we both agreed that the Peerless/Morels were less strident and handled loud passages beautifully. We did find, however, that there was an emphasis on higher frequencies, such as those produced by triangles. Sandra believed that there were more "layers" in the sound on the Peerless/Morels than we had experienced with other speakers, and we both agreed that the instrumentation seemed well balanced with these speakers.

Purcell's *Welcome Welcome* was reproduced beautifully. The harpsichord was well reproduced, and the bass and tenor voices were clear and in perfect balance. Perhaps the bass voices are reproduced at a slightly lower level than the tenors. The female voices seemed closer to the

PHOTO 9: Crossovers installed in enclosure.

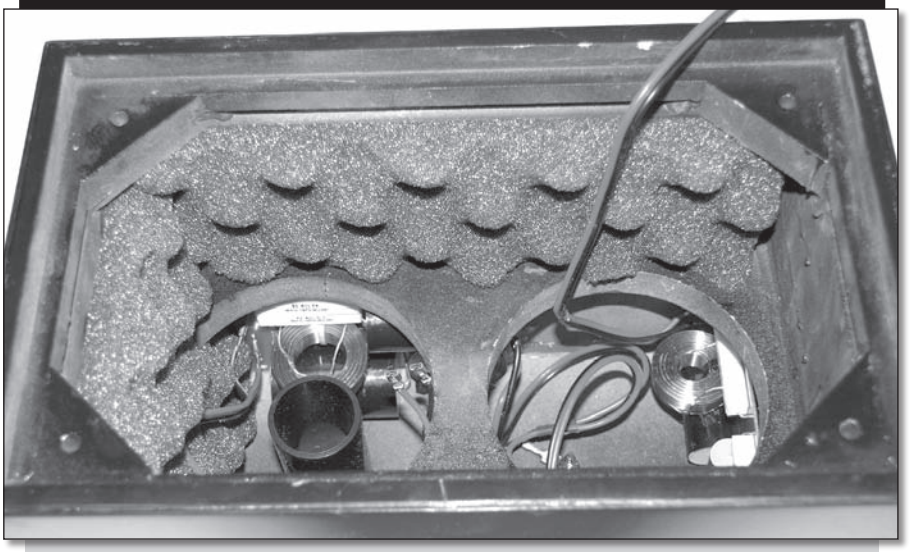
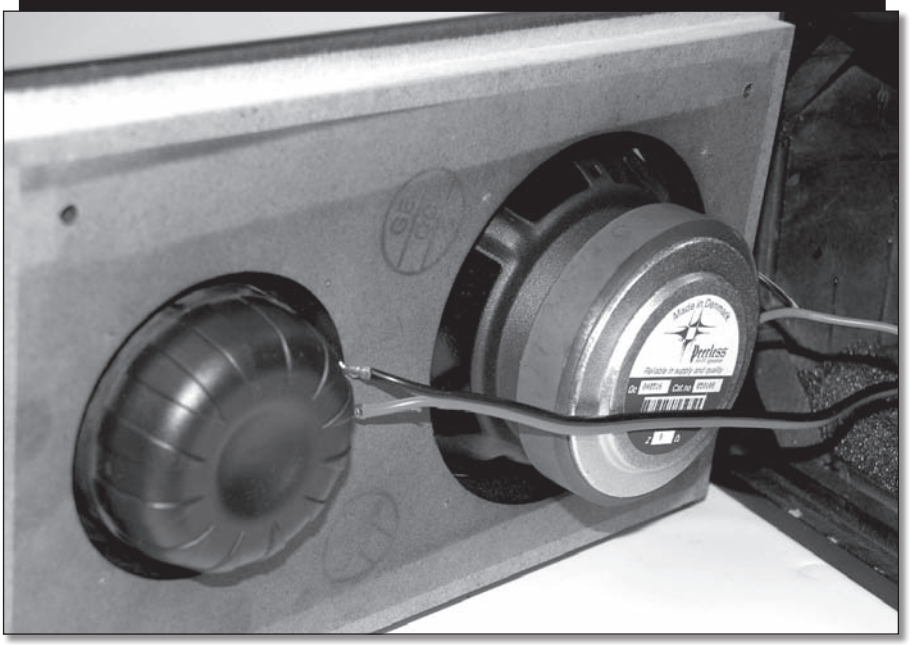


PHOTO 10: Cables connected.



soundstage, as might be expected with the typical arrangement of voices in a choir. John believed they were a little too bright, but Sandra was happy with the balance.

We both appreciated that we could hear each vocal part clearly. Sandra, who is not a fan of the harpsichord, commented that the instrument had a light sound that was less incessant than on other speakers.

Our final selection from the *CD Test Disk III* was Korkhill's *Five Short Pieces/ Prince Consort Percussion*. Sandra found that there was an ethereal quality to these pieces on the Peerless/Morels, with more separation between the silences and the very unusual percussion sounds. John particularly liked the clarity of the cymbal crashes.

We moved on to our private collection. We returned to Kenny Daverne's *One Hour Tonight*, and played the second track, *Pretty Baby*. Now that the drivers were well broken in, we preferred the sound of the Peerless/Morels. Cymbals were clearer, with less coloration of the guitar. The sound of the clarinet was sweet.

We continued to the next track, *Comes Love*, and found the sound of the Peerless/Morels to be more sterile, but we have come to perceive that the sound is actually more accurate. When Kenny does his runs on the clarinet, the Peerless/Morels handle them cleanly.

We moved on to an Empire Brass album, *Braggin' in Brass*, Telarc CD-80249. We selected *Bugle Boy from Company D* for this audition. This album is rich in low frequencies, and a subwoofer is essential for maximum enjoyment. The Peerless/Morels seemed weak in bass compared to our NHT 1.3s, but the Peerless/Morels sounded more natural and controlled.

The bass did not satisfy John, who wondered whether a graphic equalizer with a mild boost below 250Hz might not improve the experience. So, in what is clearly not an apple-to-apples test, John took the CD to a SONY DVP-S7700 DVD player connected to a SONY STR-DA555-ES receiver, reset the level using a Realistic sound pressure level meter, and kicked up the bass by 5dB. He was pleased with the result.

Returning to the original test configuration, we played Erik Satie's *Gymnopedie No.1* as recorded by Leonard Slatkin and the Saint Louis Symphony Orchestra, Telarc CD-80059. We found the oboe and flute to be delightfully reproduced, and the bass natural, although diminished. We continued on to *Gymnopedie No. 3*, and were again pleased. The sound of the harp is clear and natural, the violins well reproduced, and the oboe and gong pleasing.

Finally we played Bach's *Brandenburg Concerto No. 1* as recorded by the Academy of St. Martin-in-the Fields, conducted by Neville Marriner, Philips 400-076-2. We found the sound to be transparent, although we thought the soundstage was distant. The violins and harp are cleanly reproduced, and appear to be in the foreground of the orchestra. There is less emphasis on the wind instruments than with the NHT 1.3s, but that may be the nature of the recording, given the common placement of wind instruments in an orchestra. The more delicate passages of the *Concerto* were particularly pleasing to listen to. The violins soared on the high passages.

CONCLUSION

The Peerless/Morel Mini-Monitor Kit 302-900 is easily assembled from the high-quality components provided. Care is required in its assembly not to damage the tweeter's soft dome, which extends forward of the frame. John also found the gloss black coating on the speaker enclosure to be very soft and subject to scratching when placed on a wooden speaker stand. Our only reservation is with the method for mounting the crossover networks.

The sound quality of the speaker is outstanding, with excellent imaging, transparent sound, and good off-axis performance. The soundstage seemed to be a little farther back than with other speakers, but the placement of instruments on the soundstage was excellent. We would love to hear these speakers coupled with a good subwoofer.

The Peerless/Morel Mini-Monitor kit (which comes in black, cherry, or beech) is available from Parts Express (725 Pleasant Valley Drive, Springboro, OH 45066, 513-743-3000, Fax 513-743-1677, e-mail *sales@partsexpress.com*) aX