



Dayton Euro Series Monitor

By Ken and Julie Ketler

PARTS EXPRESS

725 Pleasant Valley Drive
Springboro, OH 45066-1158
1-800-338-0531, Fax: 1-937-743-1677
www.partsexpress.com
Part # 302-920 (glossy black), 302-922 (cherry),
and 302-924 (beech)
Frequency Response: 45-25,000Hz
Impedance: 6Ω
Sensitivity: 85.5dB 2.83V/1m
Power Handling: 75W RMS
Dimensions: 14"H × 8.5"W × 12.5"D
Weight: 60 lbs.
Price: \$446.39

Available from Parts Express is a sleek and sexy two-way speaker kit, which is available in cherry, beech, or glossy black finishes (Photo 1). When the glossy black review model showed up at my door, I immediately spotted a potential image problem. You see, upon opening the three shipping containers (two each with a speaker enclosure and one with all remaining components), I realized that many guys might be forced to fight off the temptation to get a new tattoo, or perhaps an earring, or maybe trade in their partner for a younger version. These Euros are like sports cars for speaker builders: small, shiny, and fast.

The Dayton Euro Series two-way reflex-loaded system utilizes an excellent and well-matched set of loudspeaker drivers including a 7" paper composite woofer and "slightly horn-loaded" textile dome tweeter (Photo 1). This kit also allows you to construct a 24dB/octave crossover operating at 2kHz. The enclosures are each a compact 0.5ft³ and built like solid, well-braced ¾" medium-density fiberboard battleships!

Each driver is recessed into its enclosure, and all edges of the front baffles are rounded to help smooth out high-frequency diffraction effects, and lend the Dayton Euro Series every possible advantage for great imaging characteristics. The rather compact size of this system makes it perfect for front surround speakers, main stereo music speakers, or even multimedia use, although this may be pushing it a bit.

CONTENTS AND ASSEMBLY

The enclosures were packed very well in separate boxes with form-fitted foam pads. Because I witnessed the delivery

PHOTO 1: Assembled units shown with optional grille.

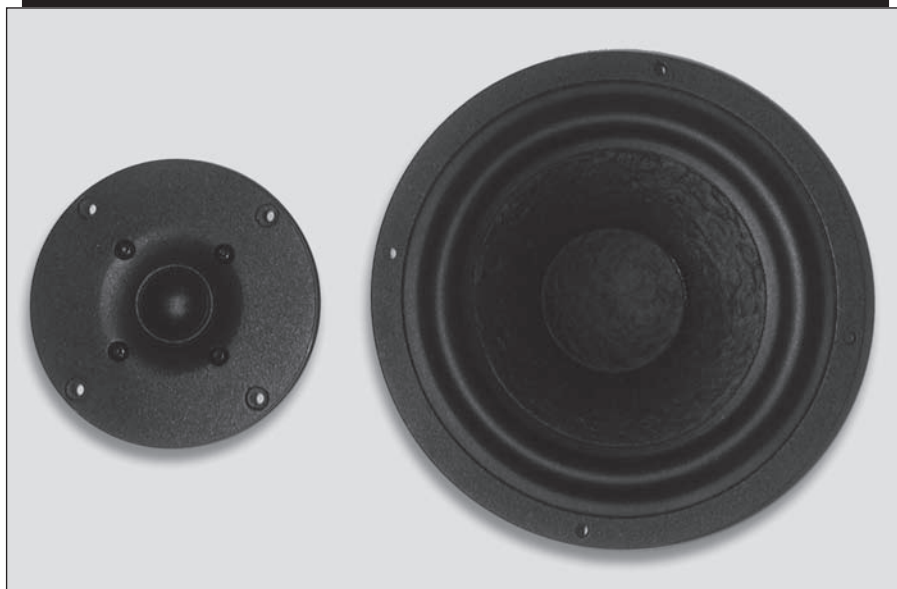


gentleman actually drop them down approximately 4' from his truck (*thwack!*) right onto my driveway, I can say with a high level of assurance that this package-

ing is effective; there were no signs of even a scratch when I opened the boxes.

All other parts including drivers, crossover boards and components, bind-

PHOTO 2: Euro Series textile tweeter and 7" woofer. Note the random "grain" of the woofer cone in order to break up vibration modes and keep the midrange frequencies controlled.



ing posts, “egg crate” sound damping foam, adjustable reflex ports, silicone adhesive, cable ties, screws, speaker sealing caulk, and an 11-page assembly manual were also housed in their own shipping container. All you need to supply is solder and your own basic tools.

The assembly manual is very complete including a nice parts inventory list and suggestions for workspace considerations to get you started. The length of each 2" port tube is adjustable, so you need to measure and glue them to length before you screw them into the cabinet. The binding posts are ready to be gently hammered into pre-drilled holes and are very clearly outlined in the manual. Any newcomers to speaker building will want to break any family traditions of *not* reading directions, or else!

The damping foam is packed as two separate sheets, and you will need to measure and slice it into appropriately sized pieces using scissors or a sharp

utility knife. To avoid over-damping the speakers with too much foam, Parts Express suggests alternating it between walls, or leaving opposite walls uncovered rather than lining the entire enclosure. A new kit builder may not have different types of adhesives around, but you can sparingly use some of the supplied silicone adhesive to mount the foam.

Crossover assembly is very straightforward. The boards are neatly laid out and easy to work with (**Photo 3**). All components are well marked and shown in a schematic; however, the photos in the manual are “generic” and are not representative of this particular model. For an absolute novice, this could cause some frustration, but with a little patience, most should be able to decode the schematic diagram quite readily.

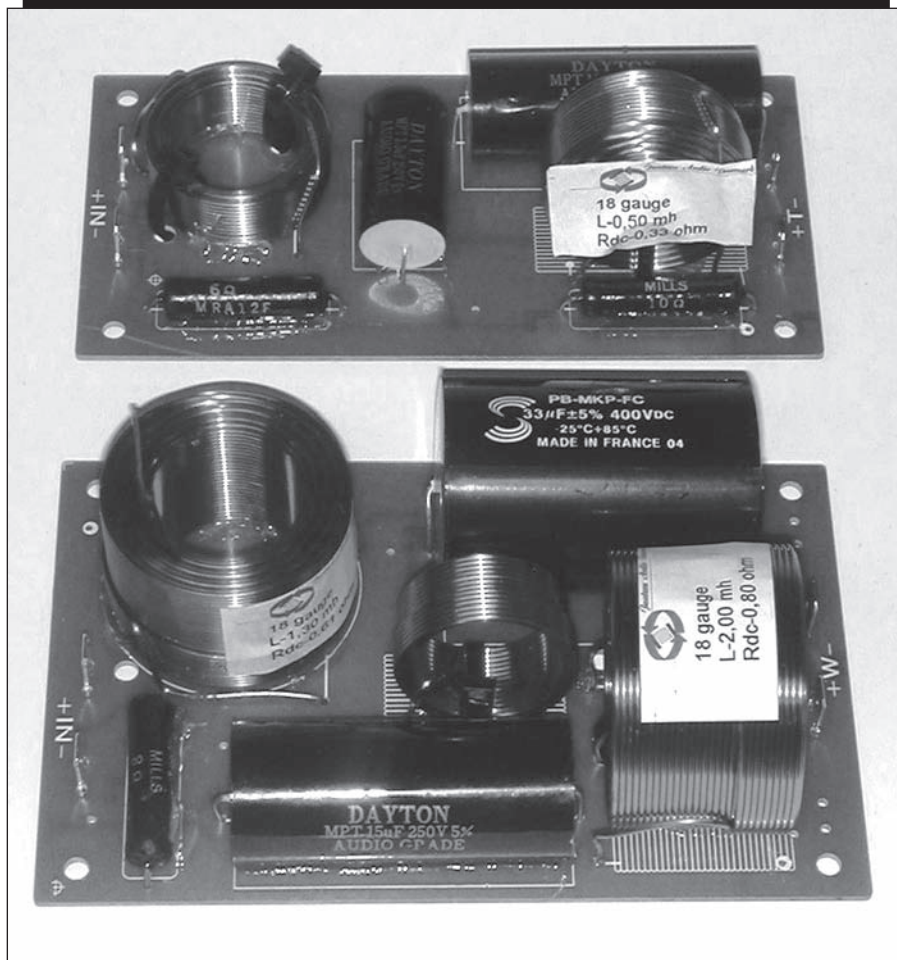
Builders are not only given a brief lesson in soldering, but also instructed to bind down all components using silicone and also cable ties for all induc-

tors—solid! After the crossover assembly section, the manual helps you through a quick check of your work before you permanently install them inside the cabinet. This is a particularly useful lesson for new builders.

The next step is to install the crossovers. Given the 14" × 8.5" × 12.5" dimensions of the box, including a vertical brace in the middle of the enclosure, this wasn't the easiest task. An easy detail to miss is that the front baffle must be removed before mounting anything to the inside of the enclosure. Without doing so, I imagine it might be nearly impossible to reach parts of the internal structure. Although the builder *is* briefly instructed in the manual to remove the baffle, I recommend that this detail be highlighted in the manual or a small insert card included inside the enclosure shipping boxes. For an excited new owner of the Dayton Euro Series Monitor, it's just too easy to miss this important instruction—making life somewhat difficult for the project builder.

All in all, the assembly was very organized and simple to follow. With the

PHOTO 3: A completed highpass board (top) with its lowpass counterpart (bottom). These boards leave plenty of room for you to work comfortably.



The CSS FR125S is a groundbreaking 5" (126mm) shielded fullrange driver using Adire XBL²™ motor topology, giving a solid foundation of prodigious bass, seamlessly transitioning through a liquid midrange into extended highs.



F _s	67.4	Q _{es}	0.68	X _{max}	6mm
V _{as}	5.58	Q _{ms}	3.10	BL	4.47
R _e	7.0	Q _{ts}	0.56	M _{ms}	4.6
L _e	0.39	S _d	57	SPL	85.9



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exception of the enclosure's somewhat tight quarters, this was a painless assembly.

LISTENING

Jack DeJohanne, *Free Above the Sea*, from *ONENESS*

This jazz album contains a great deal of very delicate, yet blindingly quick ride cymbal work. The resolution of the textile dome tweeters seems very good on this track, as every individual tap of the drumsticks is very focused and clear. Speakers with less definition seem to mush these together to sound more like a "rhythmic hiss."

The stereo image of the piano in this track is fairly stable, and I found it easy to locate the position of every string in the left-to-right panorama.

PHOTO 4: The enclosures arrive preassembled, including all driver recesses, screw holes, and wood finish. You add the foam, crossover filters, reflex port, and all wire.



Wayne Shorter, *Atlantis*, from *FOOTPRINTS LIVE*

This track begins with John Patitucci playing a bowed acoustic bass in its upper register. The Dayton Euro Series revealed the subtle scratching of the bow across each string. This is a detail that I do not hear as distinctly with many

other speakers I have sampled.

As Patitucci moves into the lower register, I find the bass to be fairly full; however, the best results occurred when I mounted the speakers 12" from the back wall. This system would certainly be at its best if aided with a subwoofer. Wayne Shorter's saxophone sounds very smooth with no signs of being honky or midrangy.

Ravi Shankar, *Get in Dhamar*, from *FULL CIRCLE—CARNEGIE HALL 2000*

Ravi and his young daughter Anoushka play together in this live recording from 2000. Two sitars may risk sounding "pingy" together, but are quite smooth both on quiet sections and hard string plucks. The drone strings of the sitars have beautiful midrange fundamental tones accompanied by upper frequency harmonics that come through very well. As with Patitucci's bowed bass, the sitars show how nicely focused the Dayton Euro Series tweeter performs.

John Fogerty, *Bad Bad Boy*, from *BLUE MOON SWAMP*

Fogerty's screaming lead guitar à la Creedence Clearwater sounds smooth, although it is somewhat reserved. This made me want to grab the volume knob to bring out the madness of this foot-stomping rocker a bit more, as it didn't have quite the right "feel." The bass guitar sounded fairly powerful, but again, the low end could benefit from a subtle subwoofer.

Counting Crows, *Mr. Jones*, from *AUGUST AND EVERYTHING AFTER*

A great rock & roll track from the early 1990s, "Mr. Jones" is represented with great authority. Bass guitar and bass drum together sound quick, thick, and punchy. Any weaknesses I may have noted in the previous track were *not* present here. After listening to this track for evaluation, I played it again, just to howl along like an "American Idol" reject; humiliating if anyone witnessed me. This song felt good!

Chris Norman, *Sleepy Waltz* and *Thousand Pipers*, from *MAN WITH THE WOODEN FLUTE*

Sleepy Waltz is a quiet lullaby-like piece in which Chris Norman's wood-

en flute sounds very nice and liquidy in lower registers, while intimate and breathy in the high range. Robin Bullock accompanies on mellow-sounding acoustic guitar. This piece is beautiful and sounds like one performance (as it should); not like two separate players. In *Thousand Pipers*, Robin Bullock is on the citern, a Celtic guitar-like instrument, sounding quite reserved, yet the attack of each picked note is finely detailed and uncompressed.

Orpheus Chamber Orchestra, *Alle-gro—Suite in D Major, HWV 349*, from *HANDEL: WATER MUSIC*

The oboes have a very sweet (not "honky") tone and sound slightly brighter than their French horn counterparts, as they should be. The strings are very well detailed and present a sharp, defined stereo image. Everything seems to be in the right place.

Overall, the Dayton Euro Series Monitor 302-920 (also the 302-922 and 302-924 versions) is a wonderful project for nearly anyone who is interested in speaker building. Because the crossover boards require assembly, this appears to be a great learning project which may be a bit more involved than a new hobbyist may care to tackle, but it's perfect for your next conquest after getting your feet wet. More important, the Dayton Euro Series Monitor is a very well-made system, which I believe you could call "high end" in terms of its high/mid frequency characteristics, not to mention its looks! The system would sound complete if mated with a subwoofer for the lowest frequencies, but this isn't a deal breaker by any means.

MANUFACTURER'S RESPONSE

While the speaker cabinets are delivered with the baffles installed, this is for shipping purposes only. The baffles should be removed by taking out the screws located in the grille socket holes. If this is done first, it will eliminate any difficulty installing the crossovers or damping materials.

Darren Kuzma
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Parts Express

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