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★ **PARADIGM'S ELITE LEVEL BUDGET SPEAKERS P62** ★ **STUNNING DESIGN-FOCUSED THEATER P36**

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Test Bench

BY Thomas J. Norton

B&W CM9 Speaker System

PRICE: \$7,250 **AT A GLANCE:** Clean highs, neutral mids • Mid- and upper-bass prominent • Small but potent subwoofer

Well Centered

These days, most major speaker manufacturers know how to produce a good speaker. But only a few manage to hit all the marks simultaneously: great engineering, great sound, and fair pricing. British speaker manufacturer Bowers & Wilkins has long been a leader in that hunt.

While the research, development, and design for B&W speakers remains firmly entrenched in Worthing, England, the company has now followed most speaker manufacturers by moving much of its production to China. Only the flagship 800 Series speakers are still manufactured in the U.K.

While I have mixed feelings about the industry-wide stampede to Far East production, I can't deny that it has significantly increased the value quotient of audio (and video) gear. In 2008, I reviewed a system that featured the B&W 683 floorstanding speakers for UltimateAVmag.com. Despite the fact that this speaker is the top model in the company's least expensive line of freestanding designs, and it turned in a set of middling measurements, the 683's sound blew me away. I used them in my reference system for months after I'd completed that review. I only moved them when a new speaker system under review demanded the space.

B&W's CM9, the newest model in its CM line, continues many of the 683's basic design elements, including a similar midrange and tweeter. It also adds superior fit and finish. The complete surround package is enhanced by a new, better-integrated center channel design than the 600 series offers.

Top Tech

The speaker system here, which B&W dubs the CM9 Theatre, includes the CM9 floorstanders for the left and right front, the CM Centre 2, a pair of CM5s for the surrounds, and the ASW 10CM subwoofer.

Beginning at the bass end, the ASW 10CM sub's 10-inch paper/Kevlar-coned driver takes up almost the entire front baffle of the compact cabinet. A 500-watt Class D amp provides the needed horsepower, and at 42 pounds, the sub is relatively easy to schlep around in order to find the optimum placement.

It includes the usual subwoofer inputs and controls: line- and speaker-level in, low-pass adjustment from 25 to 140 hertz, low-pass filter defeat, and 0- and 180-degree phase settings. A three-step Bass Extension control sets the low-frequency limit (the rated -6-decibel point) to 18 Hz, 23 Hz, or 28 Hz. Why would you

choose less than maximum extension? You'd do this to increase perceived maximum volume before reaching an unacceptable level of distortion, in most cases. When reproducing content with truly deep bass, with less bottom-end extension, less driver excursion is needed for a given level, and the less you demand of a speaker, the easier its job. However, I bit the bullet and risked a little extra distortion (playing loud enough wasn't an issue in my room). I did all of my listening in the max extension setting. In addition, a two-position EQ switch contours the response for either in-corner or out-of-corner placement. I used the ASW 10CM near the front wall and away from the room corners.

Normally, B&W would recommend the new ASW 12CM sub for this top-drawer CM system, but that larger CM sub was released too late in the review period to be included here. B&W says that although the two speakers' specs are roughly the same, the slightly larger ASW 12CM is claimed to be capable of 2 to 3 dB more clean output at low frequencies.

B&W CM9 SPEAKER SYSTEM

PERFORMANCE ★★★★★

VALUE ★★★★★

BUILD QUALITY ★★★★★

The full-range CM9 speakers have a number of common features. They all employ B&W's woven Kevlar cones, which the company has been using and continually refining since it first introduced them in the DM6 in 1976. The 6.5-inch woofers in the CM9 employ composite paper and Kevlar cones. The cones in the CM9, the midrange driver in the CM Centre 2, and the woofer cone in the CM5 are all Kevlar.

If you're familiar with B&W's recent speakers, you'll recognize the CM9's 6-inch FST midrange driver. It's the direct descendant of the midrange that B&W first developed for its flagship 800 Series speakers. It's still used in that line and in a number of other B&W models—all the way down to the 683. Since midrange frequencies don't require much cone excursion, the FST cone has no surround. Instead, a ring of foam simply terminates it and keeps it centered. The foam ring is



• The rear of the tweeter is loaded into a tube to dampen the rear wave.



• The ASW 10CM subwoofer has a three-step bass extension control.

Features

SPEAKER:	CM9	CM CENTRE 2	CM5
TYPE:	Three-way, tower	Three-way, center	Two-way, surround
TWEETER (SIZE IN INCHES, TYPE):	1, aluminum dome	1, aluminum dome	1, aluminum dome
MIDRANGE (SIZE IN INCHES, TYPE):	6, FST woven Kevlar	4, FST woven Kevlar	N/A
WOOFER (SIZE IN INCHES, TYPE):	6.5, paper/Kevlar (2)	6.5, paper/Kevlar (2)	6.5, woven Kevlar
NOMINAL IMPEDANCE (OHMS):	8	8	8
RECOMMENDED AMP POWER (WATTS):	30-200	30-200	30-120
AVAILABLE FINISHES:	Rosenut, Wengé, Gloss Black	Rosenut, Wengé, Gloss Black	Rosenut, Wengé, Gloss Black
DIMENSIONS (W X H X D, INCHES):	7.9 x 40.4 x 14.6	23.2 x 8.6 x 11.9	7.8 x 13.4 x 11.9
WEIGHT (POUNDS):	58.5	41.1	19.6
PRICE:	\$3,000/pair	\$1,250	\$1,500/pair

said to match the mechanical impedance of the cone better than a conventional surround. The intent is that the foam largely absorbs any bending waves that travel up the cone. This ostensibly prevents the waves from reflecting back down the cone where they can produce distortion.

The new kid in town here is a smaller, 4-inch FST driver in the CM Centre 2. This smaller midrange facilitates a domestically acceptable center speaker designed the way I like it—as a true three-way design.

While the optimum center-channel speaker is always identical to the front left and right models, this isn't always practical. The next best approach employs a vertically oriented midrange and tweeter that are flanked by one or more woofers. This usually, but not always, results in a more uniform response as the listener moves to the left or right and away from the center axis.

The tweeter that B&W uses in all of the CM speakers is another trickle-down descendant of the 800 Series designs. No, it doesn't have the diamond dome that graces several 800 Series models (you wish!), but the rear of its aluminum dome is loaded into a tube to better dampen the rear wave and keep it from reflecting back and reradiating through the diaphragm.

The crossovers in the CM models are said to be the simplest B&W has

ever used. This is made possible by the drive units' inherently linear mechanical design. For example, the high-pass filter to the tweeter is just a single high-quality capacitor.

A First Listen: Music

I began my evaluation, as I usually do, with two-channel music and just the CM9s driven full range. The speakers were located a minimum of 3 feet from any nearby walls. I listened for hours without fatigue. Still, I was less than satisfied in a couple of respects. First, while the top end was by no means soft or obviously rolled off, it lacked the open airiness that can help recorded music come fully to life. Also, the mid and upper bass region was too prominent. This resulted in a balance that was pleasing and easy to listen to, but it didn't tickle my audiophile fancy nearly as much as the less expensive B&W 683s did.

Further down the review road, I blocked the CM9s' ports with the foam plugs that B&W provides. This somewhat reduced the speakers' extreme bottom-end reach, and it tightened up the bass to the point where the high end came back into perspective. The speaker no longer sounded too polite and forgiving. I still missed that last bit of sparkle that enhanced the 683's overall balance, but I'd returned them by that time, so they weren't available for a direct comparison. Nevertheless, the CM9s sounded considerably more alive and real than before. What

happened here? Balance. Just as a rolled-off bottom end can make even a flat top end sound bright, an uptick in the bottom end, particularly through the midbass and upper bass, can make the top end sound recessed—even if it's reasonably flat with respect to the midrange.

The CM9s' top end was now clean and delicately detailed, and the FST midrange was exceptionally natural and uncolored. Imaging was precise, but I'm fortunate since most speakers image well in my setup. It provided as much depth as the program material required. The bass was also surprisingly extended. On music, I only felt the need for a subwoofer on the most difficult material that features an organ or synthesizer. However, through the midbass, the CM9 was a bit richer than life for my taste.

But when I added the B&W ASW 10CM subwoofer to the mix, with the main speakers now rolled off below 80 Hz, that sealed the deal. The sound was now firmly in the "wow" range. While I still couldn't completely eliminate a bit of excessive upper bass (often as much the fault of the room as the speaker), and I would have liked just a bit more air at the very top end, those criticisms became minor. In any case, they may be unique to either my expectations or my room.

Movies

If a speaker can do right by music, it almost invariably does the business on movies too. Of course, this is provided that the added pieces (subwoofer, center channel, and surrounds) handle their jobs without mucking up the total sound. And it also assumes that the system has enough inherent grunt (a technical term for clean output capability) to handle many soundtracks' high dynamic range demands.

True, the ASW 10CM subwoofer doesn't go as low and loud as larger designs on challenging, bass-heavy passages. If you must rock a big room with powerful, high-intensity bass, I'd recommend a larger sub. It's in refinement and clarity that the B&W sub excels.

I'm not suggesting that it isn't convincing on high-demand material. The cannon fire on *Master and Commander: The Far*



• The CM9 floorstander shares its 6.5-inch paper/Kevlar cone woofers with those in the CM Centre 2.

HT Labs Measures

B&W CM9 SPEAKER SYSTEM

L/R Sensitivity:
92.5 dB from 500 Hz to 2 kHz

Center Sensitivity:
92 dB from 500 Hz to 2 kHz

Surround Sensitivity:
91.5 dB from 500 Hz to 2 kHz

Visit our Website for a detailed explanation of our testing regimen, plus a list of our reference gear.

on the web

This graph shows the quasi-anechoic (employing close-miking of all woofers) frequency response of the CM9 L/R (purple trace), ASW 10CM subwoofer (blue trace), CM Centre 2 center channel (green trace), and CM5 surround (red trace). All passive loudspeakers were measured with grilles at a distance of 1 meter with a 2.83-volt input and scaled for display purposes.

The CM9's listening-window response (a five-point average of axial and +/-15-degree horizontal and vertical responses) measures +0.83/-5.12 decibels from 200 hertz to 10 kilohertz. The -3-dB point is at 60

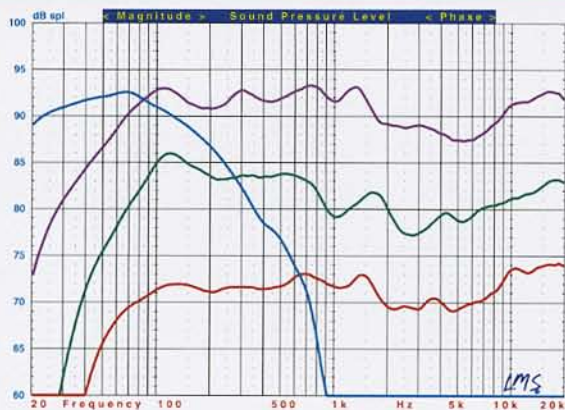
Hz, and the -6-dB point is at 49 Hz. Impedance reaches a minimum of 3.41 ohms at 116 Hz and a phase angle of -68.80 degrees at 66 Hz.

The CM Centre 2's listening-window response measures +1.64/-4.66 dB from 200 Hz to 10 kHz. An average of axial and +/-15-degree horizontal responses measures +1.96/-4.85 dB from 200 Hz to 10 kHz. The -3-dB point is at 63 Hz, and the -6-dB point is at 52 Hz. Impedance reaches a minimum of 3.44 ohms at 131 Hz and a phase angle of -68.36 degrees at 85 Hz.

The CM5's listening-window response measures +1.07/-3.32 dB from 200 Hz to 10 kHz. The -3-dB point is at 70 Hz, and the -6-dB point is at 54 Hz. Impedance reaches a minimum of 4.39 ohms at 17.2 kHz and a phase angle of -49.17 degrees at 98 Hz.

The ASW 10CM's close-miked response with the Bass Extension and EQ switches set to position A, normalized to the level at 80 Hz, indicates that the lower -3-dB point is at 20 Hz and the -6-dB point is at 16 Hz. The upper -3-dB point is at 146 Hz with the Low-Pass Filter switch set to Off.—MJP

B&W CM9 SPEAKER SYSTEM



Side of the World is definitely jump-worthy on the B&W sub, and the big sandstorm plane crash scene from *Flight of the Phoenix* (2004) will curl your eyelashes.

The CM Centre 2 also does its work seamlessly. Dialogue is clear, and it doesn't degrade appreciably at sensible off-axis listening positions. Midrange coloration is low. If the center can be said to have a character, it would again be a bit too much warmth in the

upper bass. (This clearly isn't helped by the center's woofers being positioned 17 inches off the floor, as required by the location of my projection screen). The CM Centre 2 also has a rather laid-back quality through the mid-range. But these shortcomings were swamped by program material variations. The surrounds didn't call attention to themselves unless the source demanded it.



Connections

ASW 10CM SUBWOOFER ENCLOSURE TYPE: Sealed
WOOFER (SIZE IN INCHES, TYPE): 10, paper/Kevlar cone
RATED POWER (WATTS): 500
CONNECTIONS: Speaker-level in, line in, 12-volt trigger
CROSSOVER BYPASS: In/Out
AVAILABLE FINISHES: Rosenut, Wengé, Gloss Black
DIMENSIONS (W X H X D, INCHES): 12.8 x 12.8 x 14.3
WEIGHT (POUNDS): 42.3
PRICE: \$1,500

The B&Ws provided me with a consistent, enjoyable performance. They never disappointed me, whether the source was two-channel music, action-heavy films, or multichannel music from video sources, such as *Legends of Jazz* (LRS Media), Mozart's *The Magic Flute* (Opus Arte), or the musical *Company*. But if they have a special strength, it's in how they handle multichannel orchestral soundtrack scores.

Their inherent warmth and uniformity across the front soundstage, plus their well-matched timbral balance, never failed to impress me on this type of material. I can tolerate wide variations in how a speaker system handles a movie's sound effects (not that I had to with the B&Ws!). After all, how many of us really know what the shattering of a plate-glass window or an exploding gasoline truck sounds like? But if a speaker system doesn't get the music right, it takes me right out of the film. The B&Ws got it right.

As good as the CM9 system sounded without help, it benefited even further in my room from carefully applied DSP equalization. I hasten to add that I made all of the above observations—music and movies—without EQ. But when I applied the Audyssey MultEQ system in my Integra surround processor, the bass tightened up. I was no longer occasionally distracted by too much warmth, the dynamics had additional drive and impact, and the top end had more detail and air—all without trading off any of the system's inherent strengths.

Conclusions

Some home theater speaker packages strive for maximum output at the expense of naturalness. Others add a biting edge to everything for excitement that's not in the program material. They produce boom instead of bass, or they sacrifice natural music reproduction on the altar of

overhyped, explosive sound effects.

None of these things describe this B&W system. The key word for the CM9 Theatre is balance. It's not the highest-end system B&W makes—otherwise why would there be the 800 Series? But it does offer a balance of strengths on both music and movies, at a price that isn't outrageous. And it's a pleasure to live with over the long haul. ☞

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