

cd review

By Gary Galo,
Regular Contributor

A Matter of Coincidence. Recorded by Brian Preston. (1 CD, 71:51). Old Colony Sound Lab, Peterborough, NH 03458. \$14.95. Part # CDBP1.

Boston Audio Society Test CD—1. Recorded by members of the BAS. (1 CD, 71:40) Boston Audio Society, PO Box 211, Boston, MA 02126; 603-899-5121; <http://bostonaudio.home.att.net>, E-mail: dbsystems@attglobal.net. \$30. Part # CDBAS1.

Both CDs available from Old Colony Sound Lab, PO Box 876, Peterborough, NH 03458-0876; 603-924-9464; 603-924-9467 (FAX); www.audioXpress.com; E-mail: custserv@audioXpress.com.

These two CDs offer a wide variety of "purist" recordings that depart radically from most of those made by the large commercial record labels. *A Matter of Coincidence* (Photo 1) was recorded in the UK by Brian Preston, and offers 23

tracks of recordings made, almost entirely, with two microphones in coincident or quasi-coincident pairs. For those unfamiliar with this terminology, there are basically two methods for making stereophonic recordings with the fewest number of microphones, both dating back to the earliest days of experimental stereophonic recordings.

PURE COINCIDENT TECHNIQUES

Coincident recording involves using two directional microphones with the capsules aligned vertically, but angled in the horizontal plane (usually 90°). The stereophonic information is derived entirely from amplitude differences between the left and right microphones. Vertical alignment of the microphones

ensures that there are no phase differences between the two channels. Coincident recording originated with the experiments of the British engineer Alan Blumlein in the late 1920s and early 1930s, and many Europeans pursued variations on the coincident theme as stereophonic recording evolved and eventually became a commercial reality. Blumlein's coincident method consisted of a pair of crossed figure-8 microphones at 90° angles.

Beginning with the stereophonic ex-

PHOTO 1: A MATTER OF COINCIDENCE.



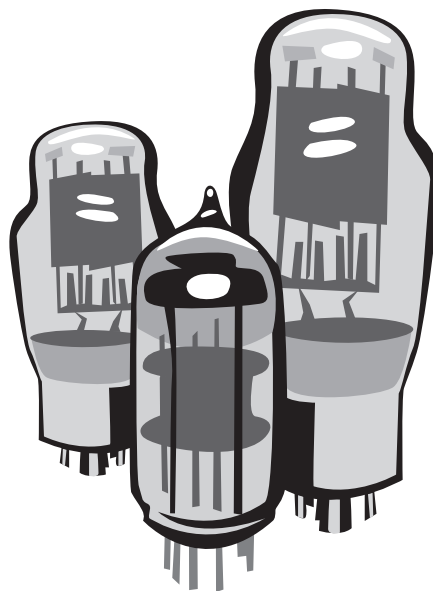
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periments conducted by Bell Labs in the early 1930s, the majority of American recording engineers have opted for the spaced microphone approach to stereophonic recordings. At its simplest, this technique involves two spaced microphones, usually omnidirectional. The spacing means that the stereophonic information is derived from both amplitude and phase difference between the two channels. With two spaced microphones, it is often difficult to attain a precise image in the center of the soundstage.

To overcome this problem, the omnidirectional microphone array is often expanded to 3, with the center microphone fed to both the left and the right channels. The "3-spaced-omni" approach was made famous by Mercury in the 1950s and early 1960s. In the late 1970s Telarc adopted this same approach.

Recording with two microphones, regardless of the configuration, means a simpler signal path, since a simple 2-channel microphone preamp is all that is needed between the microphones and the recorder. Expanding the number of microphones to three means that

you must use some type of microphone mixer.

The subtitle to *A Matter of Coincidence* tells us that the CD contains "A wonderful collection of selections recorded using a variety of two-microphone coincident methods." The disc contains a variety of fine recordings made using various coincident methods. Schoeps microphones crossed at 90°, both hypercardioid and cardioid, were used for most of these recordings.

SELECTIONS

Most of the recordings are classical, and Preston was fortunate to have a number of very fine musicians at his disposal. The first selection on the disc is a performance of Handel's Suite in D Major (with material from the familiar *Water Music*), with Crispian Steele-Perkins' stylish Baroque trumpet accompanied by organist Gerald Gifford. The recording is actually what should be called "near-coincident," made with spread Schoeps hypercardioids at 90°.

There are several recordings on the disc made with the spread microphones, all angled at 90°. This one is ex-

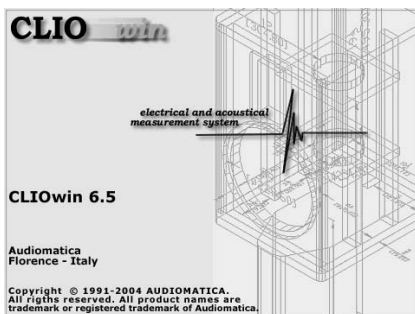
tremely clear and detailed with a solidly placed stereo image. Unfortunately, there is no information on just how far the microphones were spread. There are no examples of the ORTF method, which is two cardioids spaced 17cm, and angled at 110°.

Preston seems to favor a close perspective on his pure coincident recordings. Many of these are too close for my taste. As an example, in a movement from Beethoven's Piano Trio in C-minor, Op. 1, no. 3, each instrument sounds as though it is in its own acoustic cubicle. The recording doesn't allow the instruments to blend into the acoustic space before being captured by the microphones. This recording was made with spread Schoeps hypercardioids.

An all-acoustic Irish specialty group called The Shortwaveband is featured on several selections, most made with Schoeps hypercardioid microphones crossed at 90°. Most engineers would, by force of habit, put a microphone on every player in the group—Preston's purist recordings show how unnecessary multi-miking often is with acoustic instruments. A couple of the selections

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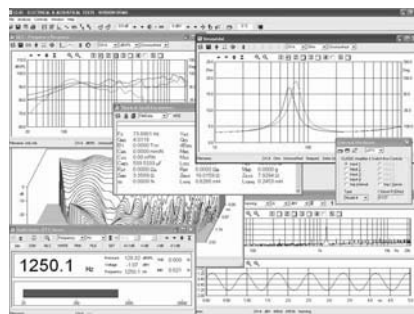
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are overdubbed, but the overdubbing was done in the same venue, with the same microphones, so the sense of the original space is preserved.

Despite the reference to Blumlein, only two out of the 23 recordings were made with crossed figure-8 microphones (Schoeps). These, in my opinion, are the best recordings on the disc. Two recordings made in the Church of Saint Mary de Lode, Gloucester, feature organist Gerald Gifford, and offer a very realistic perspective on the organ (and the anonymous flute soloist on one of the tracks). They are not too close, and capture a palpable sense of the recording venue.

Beyond the microphones, no details are offered on the rest of the recording equipment, which is unfortunate. Preston doesn't offer any orchestral recordings on the disc, but finding an orchestra to record is not always easy. *A Matter of Coincidence* does offer a number of insights into the possibilities available to the recording engineer using only two microphones. (Note: A portion of the royalty paid on this recording goes to the Royal Society of Musicians of Great Britain Reg. Charity No. 208819.)

BAS RECORDINGS

The Boston Audio Society's *Test CD—1* contains 11 musical recordings made by members of the society, many of them well-known in the audio field. This disc is particularly interesting since it features recordings made using a variety of purist techniques, with both near-coincident and spaced microphones. None of the BAS recordings were made with pure coincident techniques.

A choral recording by David Hadaway, the long-time proprietor of db Systems, features "Jabberwocky" by Sam Pottle performed by University of Massachusetts Chamber Choir conducted by E. Wayne Abercrombie. This recording was made with a pair of spaced Shure SM80 omnis. The recording is noteworthy for the extremely wide soundstage.

After the undoctored recording is heard, the next track features the conclusion of the same recording with Lexicon digital reverberation added. The "enhanced" recording is not nearly as good as the original—the precision of soundstage localization and the sense of air and space in the recording disap-

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pear, and the natural sound of the recording venue is replaced by a strangely "dry"-sounding digital reverb.

A more successful Lexicon enhancement is a movement from Soler's Sonata in G-minor, performed by harpsichordist Irma Rogell. The recording was made in a living room with a pair of spaced Schoeps CMC-56 omnis. The recording is clean and detailed, without obvious side effects from the digital reverb.

Engineer Micha Shattner offers an excerpt from the 2nd movement of the Saint-Saëns *Organ Symphony*, with the Boston Civic Symphony conducted by Max Hobart and organist James David Christie, recorded in Jordan Hall. This recording was made with the ORTF method, using a pair of AKG C-414 microphones in the cardioid position. The stereo image is very precise, and the low end of the organ is most impressive. The booklet warns the listener not to play the recording too loud with vented or planar loudspeakers.

Shattner also recorded the excerpt from Mahler's *Das Lied von der Erde*, in a chamber arrangement. This recording, made with two Schoeps CMC-56

omnis, is both spacious and detailed, with a good center image.

Two other orchestral recordings are included on the BAS disc. David Hadaway has been recording the New Hampshire Symphony Orchestra since 1977. The recording featured here is the conclusion of Bruckner's Symphony No. 4 in the original version, conducted by James Bolle, the orchestra's founder. The recording was made with analog equipment and Dolby-A noise reduction, using a pair of Nakamichi CM-1000 cardioid microphones. Although the booklet doesn't specify, the recording sounds as though the microphones were spaced.

The NH Symphony is a respectable provincial orchestral but their hall—the Palace Theatre in Manchester—is very dry. The recording is much like listening to a large orchestra in a recording studio, but Hadaway's recording offers a seemingly realistic picture of the ensemble in that acoustic space. I disagree with his comment that "one hardly notices (the dry venue) since the music never stops."

As a tribute to the late Peter Mitchell, founder of the BAS, *Test CD—1* includes

the "Dies Irae" and "Mors stupebit" from the Verdi *Requiem*, with the Boston Philharmonic Orchestra conducted by Benjamin Zander. The recording was made by Mitchell and E. Brad Meyer in 1981 using four Nakamichi 700-series microphones: two omnis for overall pickup and two cardioids at lower levels to accent the chorus. The recorder was Sony's PCM-1, a 14-bit digital encoder that used videotape as the storage medium. To overcome the low-level linearity problems inherent in 14-bit recording, they used a custom-built dbx I noise reduction unit with a mild 5:1 companding ratio.

The recording is impressive for the uncompressed dynamics and the impact of the bass drum. Otherwise, the recording shows its age. It is much drier than I would expect from Symphony Hall, with no air in the treble. I suspect that these problems were exacerbated when the original was transferred to a 16-bit PCM-F1, which required a 14-bit D/A conversion, dbx decoding, and 16-bit A/D conversion in the F1.

One choral selection, "At Christmas All Be Merry," was recorded using Lex-

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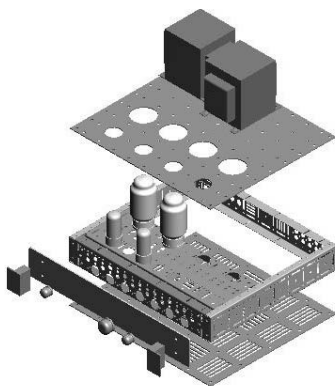
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icon's Logic 7 system, which allows a 5-channel recording to be mixed down to two while retaining the original balances. No details on microphones are given for this recording made by David Griesinger, but the balances and the image are very successful in the 2-channel mix down. The recording has a bit of treble hardness.

DOCUMENTATION

E. Brad Meyer is the engineer on a wonderful organ recording, an arrangement of Bach's Concerto in A-minor (after Vivaldi), performed by James Johnson at the Busch-Reisinger organ at Harvard University. This recording was made with four Nakamichi CMC-700 microphones: two cardioids in the center, in an ORTF configuration, and two omnidirectional outriggers. Meyer notes that the recording was made during warm and humid weather, which increased the high-frequency reverberation time in the hall. I find the perspective just right, an excellent mix of detail and natural hall acoustic. The BAS booklet does not give details of the microphone array—I needed to consult the *Stereophile Test CD* (STPH-002-2) for this information (Meyer and Peter Mitchell also made the recording on the *Stereophile* CD, with the same microphone setup as Meyer mentions in the notes to the BAS CD).

There are some other problems with the documentation supplied with the BAS CD. Track 10 is billed as Mahler's *Das Lied von Der Erde* arranged by Arnold Schoenberg. It would be difficult to perform this work in the 4½ minutes included on this disc. In fact, we are given the conclusion of the last movement, "Der Abschied." Schoenberg abandoned his chamber arrangement in 1921 and never returned to it. The scoring was completed in the early 1980s by Reinier Riehn, who should have been credited by the BAS. They probably should have also credited Universal-Edition, Wien, the copyright holder of this arrangement.

Track 12 is a 10-minute excerpt from the program "Shop Talk," which originated from WBUR-FM in 1984, featuring E. Brad Meyer, Peter Mitchell, and Richard Goldwater. The booklet tells us that the program begins with a 1932

stereo recording, and Meyer tells us that it was made by Bell Labs on March 12 of that year. No mention is made anywhere of the work performed, or the musicians involved. It is, in fact, an excerpt from Scriabin's *Prometheus—The Poem of Fire*, a live performance by the Philadelphia Orchestra conducted by Leopold Stokowski, issued on LP in 1979 by Bell Laboratories, BTL-7901.

This record, and its companion BTL-8001, contain experimental high fidelity and stereophonic recordings made by Bell Labs in 1931 and 1932, all with Stokowski and the Philadelphians, and are well worth seeking out on the used market. The excellent transfers put Ward Marston on the map as one of the world's foremost engineers in the field of historical recordings (Marston is also uncredited).

The chorus and bass soloist for the Verdi *Requiem* excerpt are not identified. None of the performers, or the recording venue, are given for "At Christmas All Be Merry."

My other quibble with the notes is admittedly a matter of personal opinion. The booklet states that the conclusion of Bruckner's Fourth Symphony was performed in the original version, "before the revisions by well-meaning friends." In the case of the Fourth Symphony, the extensive revisions were done by Bruckner himself, including replacement of the Scherzo and two wholesale rewrites of the last movement.

In its original version, this work has substantial structural problems, with long stretches that meander rather aimlessly. The composer's final thoughts resulted in a far more coherent work than the original, earning it a place in the standard repertoire. Bruckner's final version is not to be confused with the first published version of 1889, edited by Loewe, that admittedly wreaked havoc on the work and has long been discredited.

TEST TRACKS

The rest of the *Boston Audio Society Test CD-1* consists of test tracks for equipment and system evaluation. Most seem to be intended for ear-only evaluation, such as stereo and mono wideband pink noise tracks (one "out-of-phase"), and 1/3-octave mono pink

noise. Sweep tracks are included for subjectively evaluating your system/room response and/or your hearing. The "Low-Level Crackle Tests" consist of a background noise, like someone fiddling with their program at a concert, repeated five times, each time 10dB lower than the previous. The notes say that if you can hear the fifth repetition, which is at the lowest level that can be recorded on a CD, you may need more dynamic range than a 16-bit system provides.

Two of the tests are liable to confuse the user. A "picket fence test" contains "A sum of sine waves at all $\frac{1}{3}$ -octave centers from 20Hz to 20kHz, except for omitted 1.25kHz and 3.15kHz. It is a severe test for bit-reduced systems (like MP3) since it contains energy spread across the spectrum." There's no hint of how to use it or what to listen for.

The "Multitone Test," suggested by Robert Cordell, has three tones of equal amplitude, 20.00, 10.05, and 9.00kHz. The distortion components are difference tones at 950 and 1050Hz. The booklet says that these tones "allow easy measurement of both even- and odd-order distortion without the use of a spectrum analyzer. The suggested test fixture comprises two 3rd-order low-pass filters at 2kHz followed by a 4th-order bandpass filter centered at 1kHz, with gain in between each pair." Beyond that, there is no information on how the test is to be used, and what might constitute acceptable results.

The musical recordings on the Boston Audio Society *Test CD-1* complement those on *A Matter of Coincidence*. Audiophiles interested in some of the results possible with purist stereo recordings are likely to find both of these discs interesting and informative, and a refreshing change from the excessive number of microphones used on many commercial recordings. Both discs are CD-Rs, rather than manufactured CDs.

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TEST TRACKS

What music selections do you use to test your audio setup? Simply describe your seven favorite pieces (not to exceed 1,000 words): include the names of the music, composer, and manufacturer (and number), and send to TEST TRACKS, audioXpress, Box 876, Peterborough, NH 03458, e-mail editorial@audioXpress.com.

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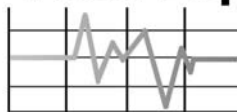
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