

# ENGINEER'S CHOICE

TOP RECORDING ENGINEER  
JOHN EARGLE PICKS HIS FAVORITE  
DEMO TRACKS



DE 3506

DE 3056  
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- 1 SHOSTAKOVICH: SYMPHONY NO. 10, Scherzo** • James DePreist, conductor • Helsinki Philharmonic (DE 3089) [4:23]
- 2 SCHIFF: GIMPEL THE FOOL, "Jester's Song and Mazel Tov" (excerpt)** • David Shifrin, clarinet, and members of Chamber Music Northwest (DE 3058) [3:19]
- 3 TAYLOR: THROUGH THE LOOKING GLASS, "Looking-Glass Insects"** • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3099) [2:50]
- 4 GROFÉ: GRAND CANYON SUITE, "Sunset"** • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3104) [5:08]
- 5 COPLAND: BILLY THE KID, "Gun Battle"** • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3104) [2:01]
- 6 HANSON: SYMPHONY NO. 6, Movements III and VI** • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3092) [III: 3:58; VI: 2:05]
- 7 GRIEG: PIANO CONCERTO, Adagio** • Bella Davidovich, piano • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3091) [6:43]
- 8 VAUGHAN WILLIAMS: WASSAIL SONG** • Roger Wagner, conductor • The Roger Wagner Chorale (DE 3072) [2:41]
- 9 POULENC: FLEURS** • Arleen Auger, soprano • Dalton Baldwin, piano (DE 3029) [2:37]
- 10 POPPER: MENUETTO** • Janos Starker, violoncello • Shigeo Neriki, piano (DE 3065) [2:33]
- 11 HAYDN: SYMPHONY NO. 51, Finale (Allegro)** • Gerard Schwarz, conductor • Scottish Chamber Orchestra (DE 3064) [3:12]
- 12 BENNETT: SUITE FOR SKIP AND SADIE, "Good Morning"** • Richard Rodney Bennett and Carol Rosenberger, piano duet (DE 6002) [1:20]
- 13 TCHAIKOVSKY: PIANO TRIO, Tema con Variazioni (Variations I and III)** • Mona Golabek, piano • Andres Cardenes, violin • Jeffrey Solow, violoncello (DE 3056) [1:50]
- 14 ALBERT: TREESTONE, "Tristopher Tristian"** • Lucy Shelton, soprano • David Gordon, tenor • Gerard Schwarz, conductor • New York Chamber Symphony (DE 3059) [1:44]
- 15 RACHMANINOFF: PRELUDE IN G MINOR** • John Browning, piano (DE 3044) [3:51]
- 16 ROREM: A QUAKER READER, Movements IV and VIII** • Catharine Crozier, organ (DE 3076) [IV: 1:47; VIII: 1:20]
- 17 PISTON: SYMPHONY NO. 6, Scherzo (Leggerissimo vivace)** • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3074) [3:32]

- [18] BARTÓK: THE MIRACULOUS MANDARIN** (excerpts) • Gerard Schwarz, conductor • Seattle Symphony Orchestra and Chorale (DE 3083) [2:09]
- [19] DIAMOND: SYMPHONY NO. 2, Finale** (Allegro vigoroso) (excerpt) • Gerard Schwarz, conductor • Seattle Symphony Orchestra (DE 3093) [3:32]
- [20] RESPIGHI: ROMAN FESTIVALS** (excerpts) • James DePreist, conductor • The Oregon Symphony (DE 3070) [2:37]
- [21] FALLA: NIGHTS IN THE GARDENS OF SPAIN** (excerpts) • Carol Rosenberger, piano • Gerard Schwarz, conductor • London Symphony Orchestra (DE 3060) [3:09]
- [22] RAVEL: DAPHNIS AND CHLOE** (excerpt) • Gerard Schwarz, conductor • Seattle Symphony Orchestra and Chorale (DE 3110) [4:14]

TOTAL PLAYING TIME: 75:08

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**NOTE: Tracks 5 (Copland) and 6.2 (Hanson) contain exceptionally loud bass drum passages. Please set playback levels carefully.**

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**Full equipment credits can be found in the program booklets of each title from which the tracks have been excerpted.**

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In the decade that I have been associated with Delos, many of my friends and colleagues in audio have asked me which of my recordings I especially liked and thought to be of demonstration potential. Since the number of CD's I have recorded for Delos now numbers in excess of eighty, I often lose track of what has been done. Recently, Amelia Haygood, President of Delos, and I were discussing the Delos catalog in pure sonic terms, and it was she who came up with the idea for **Engineer's Choice** as a demonstration CD intended primarily for audiophiles.

Recording is both science and art. Science gives us a set of workable options and clearly tells us what not to do. The aspect of art is where experience and judgment become important, and it fundamentally depends on local acoustics, the music, and certain performance requirements.

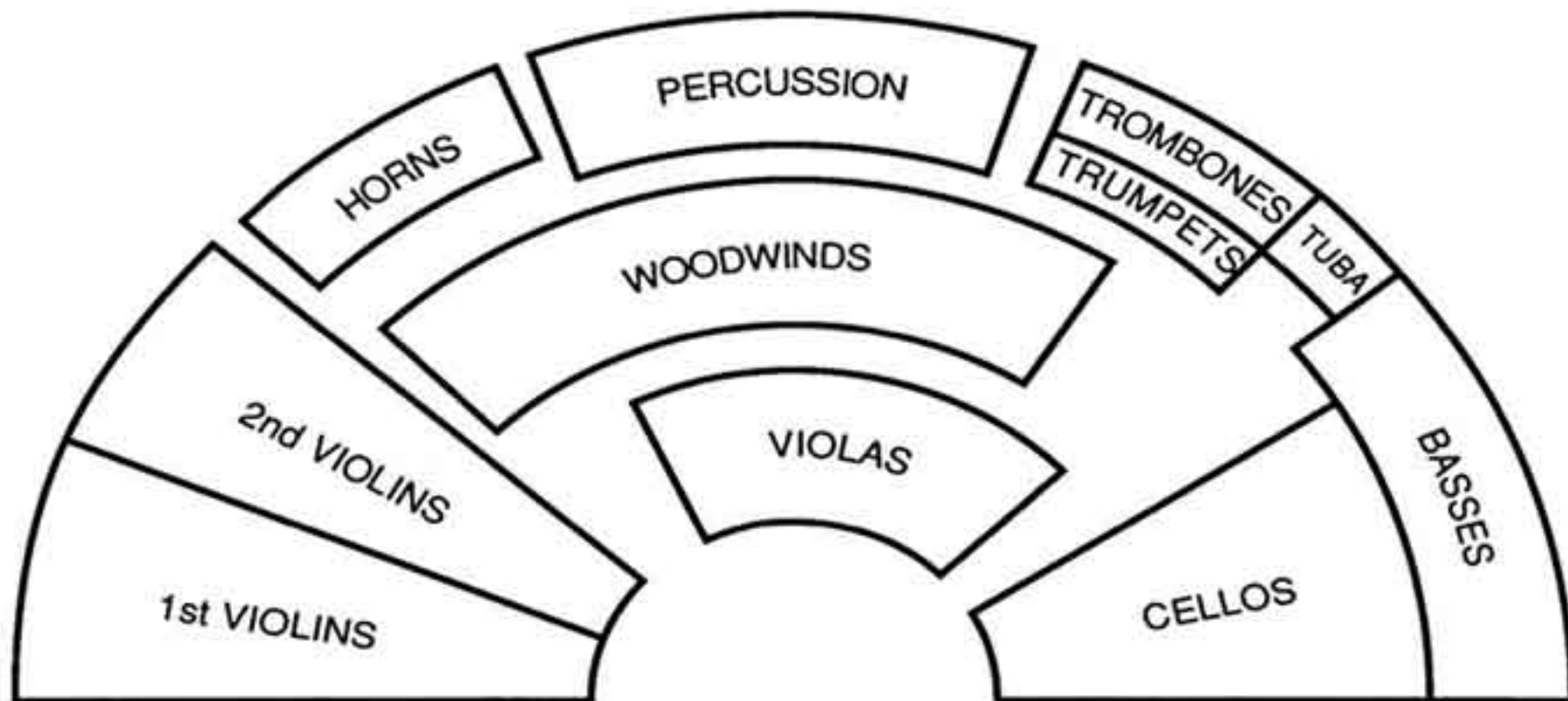
There are two basic dimensions in recording: structure and texture. Structure deals with stereo imaging and image specificity on the reproduced sound stage; texture deals with timbre and ambience. Some microphone techniques favor one or the other, and I prefer in most cases to use hybrid microphone setups so that both aspects can be balanced. For example, I normally record large ensembles with an ORTF "near-coincident" pair of cardioid microphones just behind the conductor and about nine feet high. Flanking these at a distance of about 6 to 10 feet from the main pair (depending on ensemble size) is a pair of omnidirectional microphones. All four microphones are in a line across the front of the ensemble. The ORTF pair provides excellent imaging, while the spaced omnis provide a sense of spaciousness through the introduction of delayed time cues which are unique to each stereo channel. Accent microphones, when used, are normally set at levels some 6 to 10dB below the main microphones.

To demonstrate these techniques, I have selected 22 examples covering musical styles from classical to modern and ensembles ranging from solo instruments to orchestra. I will explain in detail how and why each microphone setup was used. There are nine examples which feature the Seattle Symphony Orchestra directed by Gerard Schwarz. This should come as no surprise, inasmuch as that ensemble records more CD's today than any other U.S. orchestra! The Seattle Opera House has become a laboratory, so to speak, and has given me the opportunity to experiment and refine orchestral recording techniques.



## The Program:

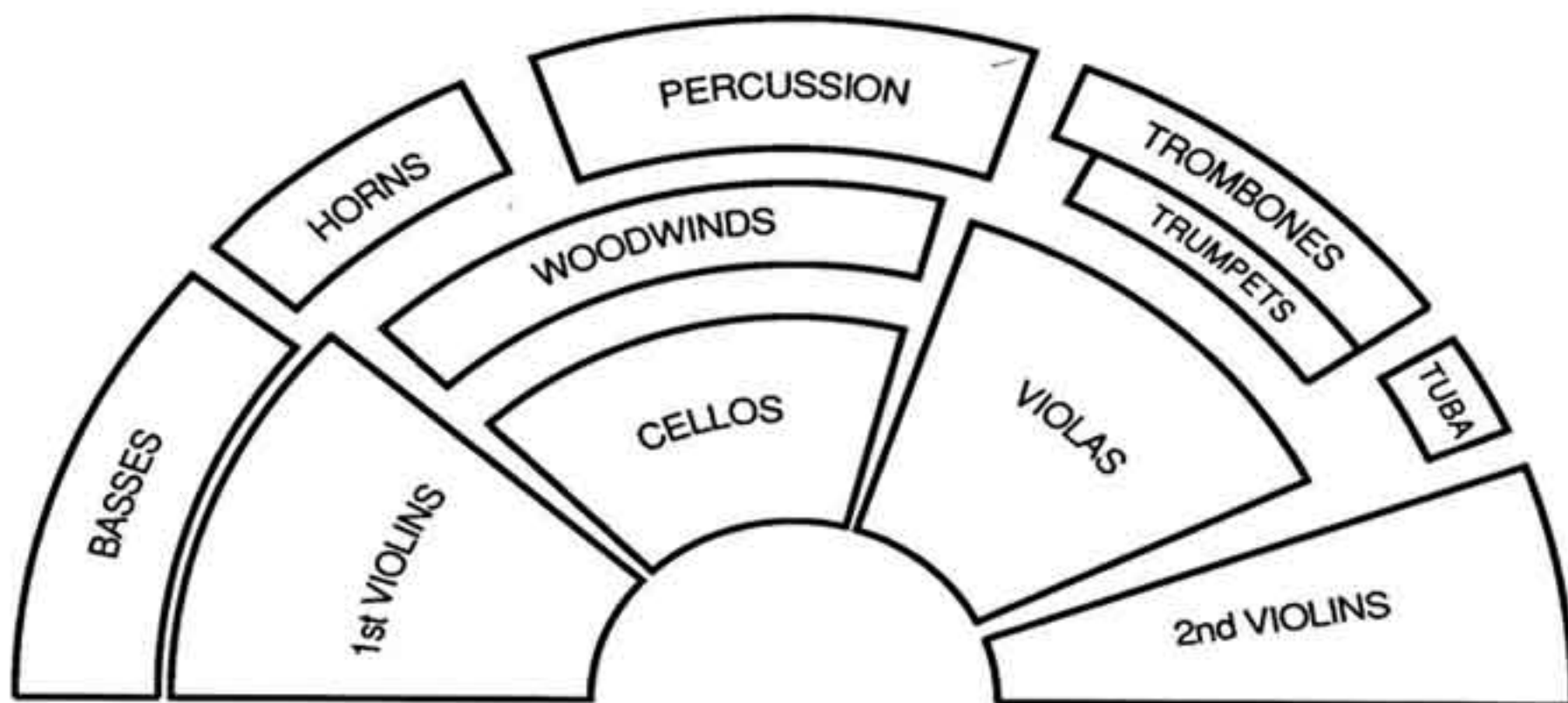
1. **Shostakovich: *Symphony No. 10, Scherzo*.** The Concert Hall in Hyvinkää, Finland, has lots of "bloom," which is to say that it is fairly live for its small size (1000 seats). The basic four-microphone array was used. In this case, a secondary stereo pair was placed above the woodwinds, and accent microphones were placed close to the first stand of basses and the timpani—not for loudness but rather for more delineation. The playing is electrifying, and every detail is in place.
2. **Schiff: Excerpt from *Gimpel the Fool*.** This chamber group consists of clarinet, piano, violin and cello. The "textbook" solution here is to place a coincident pair in front of the group. I opted to use spaced omnis in front (primarily picking up the violin on the left and the clarinet on the right), with accent microphones on the piano and cello to correct the balance. These latter two microphones were panned into the stereo array to match the instruments' actual locations on stage. There were two additional "house microphones" to add ambience. My main reason for miking the group in this manner was to be able to move in closer for a more intimate sound.
3. **Taylor: *Through the Looking Glass, "Looking Glass-Insects."*** When Delos records in the Seattle Opera House, seating is removed from the loge and large plexiglas "bubbles" are placed over all of the velour-covered exits from the hall. This substantially livens the room, producing a smooth reverberant decay without any trace of boominess. In addition to the standard four-across-the-front, accent microphones are normally used on the first stand of basses, the harp and celeste, a stereo pair over the woodwinds, and a house pair. In this recording, listen for woodwind detail—and for one of the most difficult orchestral piano parts in the literature!
4. **Grofé: *Grand Canyon Suite, "Sunset."*** Here I used the same basic setup as in the previous example, but with a little more contribution from the house microphones to add a greater sense of space. Listen for the "spread" and sheer opulence of string sound.
5. **Copland: *Billy the Kid, "Gun Battle."*** In modern works such as this, the engineer has to "tighten up" the texture to give more prominence to inner details of the score. This need not be done by adding microphones, but rather by using a little less of the house microphones and lowering the orchestral microphones slightly (often less than one foot) to provide slightly more immediacy. It is rare that I use accent microphones on the percussion, and none were used here. The conductor and players made the adjustments themselves.



This is the symphonic seating plan most frequently used by present day symphony orchestras. This generic plan is modified by Delos for the musical and sonic requirements of each recorded performance. Seating for instruments not shown, such as the harp, also varies with these requirements.



6. **Hanson: *Symphony No. 6, Movements III and VI***. Hanson's later style often combined the lushness of his earlier years with hard-edged driving motives. Again, a little less from the house microphones in an effort to keep the texture clear.
7. **Grieg: *Piano Concerto, Adagio***. The key element in the first part of this example is the texture of the muted strings, made all the more gorgeous through divided seating of the violins. (Is there anybody who really thinks that digital recording can't pick up strings better than analog?) Bella Davidovich's piano was accented with a pair of cardioid microphones placed within two feet of the instrument, but the level was kept low so that the perspective would not be skewed; just enough to keep the instrument from being overwhelmed by the reverberant field of the room.
8. **Vaughan Williams: *Wassail Song***. Roger Wagner's Chorale of sixteen singers qualifies as "large enough" to require the four-across-the-front microphone array. An additional house pair was used to adjust the direct-reverberant balance. Note that each section of the Chorale is unambiguously placed: basses and sopranos on the left; tenors and altos on the right. There is good spread, with substantial center fill.
9. **Poulenc: *Fleurs***. This recording was made in a small, live chapel. Departing from the usual concert setup, I miked the piano rather close-in with a pair of omnis and placed Arleen Auger about 8 feet away, facing the piano. She was picked up with a cardioid microphone at a distance of about two feet, placed slightly above. This way, she and pianist Dalton Baldwin had excellent eye contact—much better, in fact, than in a normal performance arrangement. An additional pair of house microphones provided the right balance between direct and reverberant sound. While all of this sounds like a description of a studio session, the results are quite natural.
10. **David Popper: *Menuetto***. A similar approach was used with Janos Starker, allowing him good eye contact with the accompanist. The recording was made in the Opera Theater at Indiana University. While the room is acoustically quite dry, the delay cues provided by a pair of house microphones nonetheless adds warmth to the texture.
11. **Haydn: Finale from *Symphony No. 51***. Queen's Hall in Edinburgh is a converted church, with lots of bloom when the pew cushions are removed. The standard four-across-the-front were used, along with a single accent microphone on the basses. This is a good case in point for choosing an "acoustical venue" to suit the music.



This alternate symphonic seating plan, frequently used by Delos to achieve independence of musical lines between first and second violins, is also modified for the musical and sonic requirements of each recorded performance. Seating for instruments not shown, such as the harp, also varies with these requirements. This seating is favored by conductor Gerard Schwarz, and can be heard in all of his Delos recordings.



12. **Bennett:** *Suite for Skip and Sadie, "Good Morning."* The aim here was to bring my piano—a Bösendorfer nine-foot grand, used for this recording—into your living room! The instrument was picked up at close quarters, with just a touch of the house pair for reverberation.
13. **Tchaikovsky:** *Piano Trio, Variations I and III.* Here, the piano fills the center, while the violin is on the left and cello on the right. Two omni microphones were used on the piano, and the string instruments each were picked up by cardioid microphones. A house pair was used for ambience. The lyric passages benefit from the close-in pickup, and the filigree piano passages in Variation III would tend to be lost with more distant microphone placement.
14. **Albert:** *TreeStone, "Tristopher Tristian."* Albert's song-cycle after James Joyce alternates vocal solos and duets. For this movement, tenor David Gordon and soprano Lucy Shelton were placed, respectively, left and right to emphasize the dialogue of the two washerwomen here enacted. The New York Chamber Symphony was recorded mid-perspective, to allow maximum distinction between the spiky percussive writing and the more liquid textures of piano and harp.
15. **Rachmaninoff:** *Prelude in G Minor.* The instrument played by John Browning is a "Horowitzian" Steinway, recorded here in a small but live recital hall. An ORTF array was placed about six-and-a-half-feet from the case of the instrument. The distance was adjusted to provide a good balance of direct and reverberant sound.
16. **Ned Rorem:** Two excerpts from *A Quaker Reader*. The pipe organ is always a special challenge for the recording engineer. The Marcussen organ in Wiedemann Hall at Wichita State University, Kansas is a very special instrument located in a hall with controlled temperature and humidity. While the hall seats less than 1000, the acoustical treatment in the room provides a reverberant backdrop which is characteristic of larger spaces. A single pair of spaced omnidirectional microphones spaced seven feet apart was located about twenty feet from the instrument. The lack of image specificity is intentional since the organ rarely has an "image" as such. The intent here was to relate the instrument to the acoustical setting rather than "position" it between the loudspeakers.
17. **Piston:** *Symphony No. 6, Scherzo.* The standard Seattle setup was used here, with a little less contribution from the house microphones. As a result, the striking detail of the performance is



precise, as regards both left-right and front-back imaging. This is virtuoso playing of the highest order.

18. **Bartók:** Excerpts from *The Miraculous Mandarin*. This rich score includes a chorus, which was positioned in the house behind the conductor. From this position, the chorus sang directly into the acoustical environment of the room, generating a good bit of reverberation which would have been lost had they been in their usual performance position on risers behind the orchestra. With Bartók, the aim is always to preserve the essential "Magyar mystique" while not occluding musical details. The recording is a delicate balance between close and distant perspectives.

19. **Diamond:** Excerpt from *Symphony No. 2, Allegro vigoroso*. Stylistically, this work brings to mind both the discipline of Copland and the harmonic language of Roy Harris. Yet Diamond speaks in his own strong voice. The basic Seattle setup was used, with just a little more contribution from the house microphones.

20. **Respighi:** Excerpts from *Roman Festivals*. In the short span of this example we hear three herald trumpets placed in the balcony, more trumpets in the orchestra, an organ, a vastly augmented percussion section, and *divisi* string writing of the most artful sort! The Arlene Schnitzer Concert Hall in Portland, Oregon, provides an immediate acoustical setting which balances all of these ingredients beautifully.

21. **Falla:** Excerpts from *Nights in the Gardens of Spain*. The Bösendorfer Imperial Grand piano played by Carol Rosenberger is presented in a role different from the traditional concerto function. The instrument is an important coloristic adjunct to one of the major pieces of Spanish impressionism. Recorded in the generous acoustical setting of St. John's at Smith Square in London, the piano is accented with a close-in stereo microphone pair to underscore its kinship with both instrumental and vocal Spanish ethnic elements.

22. **Ravel:** Final scene from *Daphnis and Chloe*. The challenge for the recording engineer in this major work is to strike the right balance between musical detail and expansiveness of sound. As with the earlier Bartók example, the chorus was placed in the house behind the conductor. In this final section of the work we hear all orchestral and choral resources unleashed, creating a virtual "riot" of sound.

*John Eargle, Director of Recording*



## JOHN EARGLE, DELOS DIRECTOR OF RECORDING

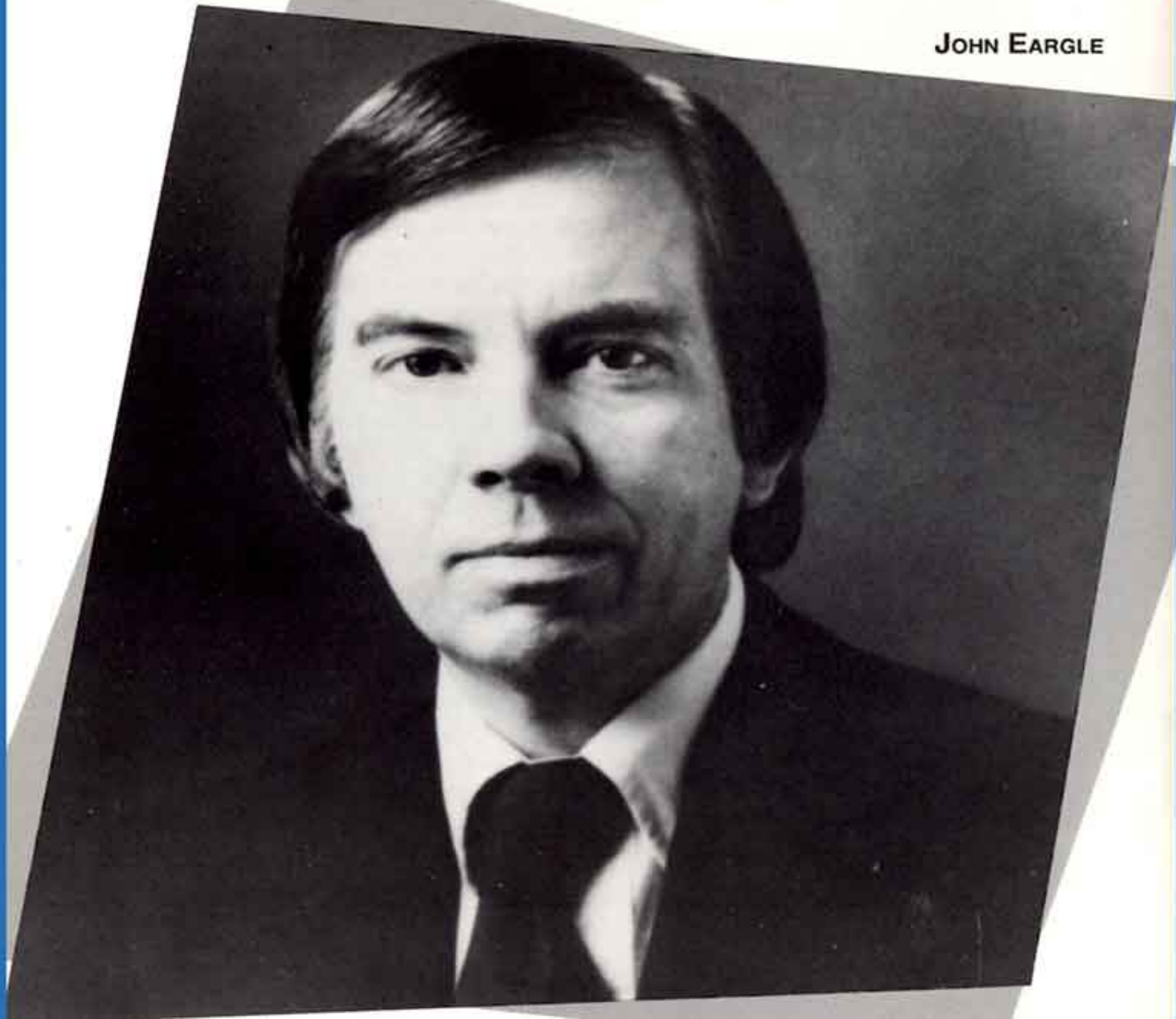
"The name **John Eargle** is familiar to anyone involved in professional audio," wrote George Peterson in a recent interview for *Mix Magazine*. During the past 25 years Mr. Eargle's distinguished career has included work with RCA and Mercury records, a 1974-75 term as president of the Audio Engineering Society, teaching positions on the faculties of the Aspen and Eastman Schools of Music, and extensive work as a consultant for leading audio manufacturers such as JBL. Mr. Eargle is an organist and a pianist.

Mr. Eargle's vast contributions to the field of audio engineering also comprise three books on sound recording which are "bibles" of the industry. The first edition of *Sound Recording* appeared in 1976 and was followed by a second edition in 1980 which *Audio* deemed "one of the definitive college-level texts in the field." In 1982 John Eargle wrote *The Microphone Handbook*, and most recently he completed his *Handbook of Recording Engineering* which he considers a logical outgrowth of his earlier work. "Mr. Eargle's chapter on stereo imaging should be required reading for all who can't see beyond the multi-track recorder," wrote *Audio*. In addition to his three books, John Eargle has written over 100 technical articles and papers.

Mr. Eargle has worked with Delos International since 1979. He has engineered many of the company's orchestral, vocal, piano, organ and jazz recordings, including Joe Williams' acclaimed *Nothin' But The Blues* which won a Grammy in 1985.

Currently Director of Recording for Delos International, Inc., John Eargle oversees every technical aspect of the company's classical and jazz projects and pursues the creation of a symphonic sound stage which has become a Delos hallmark.

JOHN EARGLE







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