CORRESPONDENCE

I was delighted to see [David Hall's] NMQR discography in the ARSC Journal (XVI:1/2). It has long been needed. Now if someone will only make an LP reissue of all the recordings!

Perhaps I can add something to it. The "GM" in the matrix series is my old friend, Gordon Mercer. He was a recording engineer for Musicraft in the late 1930s and has told me of doing some of the NMQR records.

Peter Morse

J. F. Weber's Vaughan Williams Discography (Journal 16:1/2, pp. 28-32) notes that both the original and revised versions of the Sixth Symphony's scherzo have been recorded, but he has omitted some other significant facts about editions.

The two Dan Godfrey sets and the Eugene Goossens recording of A London Symphony use the 1920 revision of that score, not the 1933 which is used in all other recorded performances. The 1920 version differs markedly at the close of the slow movement and in the epilogue of the finale; for details see Michael Kennedy, The Works of Ralph Vaughan Williams (London: Oxford University Press, 1964). In the Fourth Symphony, Vaughan Williams changed the slow movement's last flute note from F to E in 1950; the original RVW-directed recording of 1937 ends the slow movement on F, of course, and all the later recordings use the revision.

David Hall

Just a small addition to Tim Brooks' "A Survey of Record Collectors' Societies" [16:3 (1984), p. 17):

Canada:

VANCOUVER RECORD COLLECTORS ASSOCIATION
Vancouver, British Columbia

So far as I know, the principal focus of this association is swap meets. A unique activity, to judge from the summaries of the other groups, is that the VRCA has published two marvelous one-disc compilation albums titled The History of Vancouver Rock and Roll. Volume 3, covering 1967-1971, was issued in 1983, and volume 2, 1964-1966, in 1985. Each album includes a booklet by Vancouver rock and roll historian Michael Willmore.

David Mattison

We would appreciate publication of the following comments in regard to Tom Owen's reply to our critique of his article, "Fifty Questions on Audio Restoration and Transfer Technology" [article: ARSC Journal 15:2-3 (1983):38-45; critique and reply: ARSC Journal 16:3 (1984):5-11].

Q/A 19. Equalization of acoustic recordings.

Since acoustic recordings have no electrical equalization, it is assumed by some that they are constant velocity recordings without any inherent equalization. However, the mechanical damping and hysteresis of acoustic recording systems create a bass response that falls off sharply as the frequency decreases: every listener to acoustic recordings knows this. This progressive fall-off of bass with decreasing frequencies is exactly what happens with electrical recordings below the turnover frequency. It can be thought of as "mechanical equalization." With electrical recordings, the equalization is intentional, controlled, and relatively smooth. With acoustical recordings, the "mechanical equalization" is fortuitous, relatively uncontrolled, and peaky.

We presume that most people seriously concerned with listening to old records reproduced electrically have by now acquired at least an octave equalizer (there being acceptable ones now available for less than $100) or, better yet, a one-third octave equalizer (there being at least one acceptable unit available for less than $300), so that the inherent equalization curve that one may select with one's preamplifier is not crucial but just a matter of convenience, the final tonal balance and rumble reduction being achieved with the equalizer and the employment of one's aural judgment.

Finally, we hope that Mr. Owen's reply to our critique of this question does not create the impression that we recommend the constant amplitude curve for electrical reproduction of acoustic records. We recommend the constant velocity curve for the treble and the constant amplitude curve for the bass with 250 Hz turnover as a good place to start from.

Q/A 31.

The AES equalization curve was an ingenious first attempt to define a playback curve, rather than a recording curve. It was disclosed in the January 1951 issue of Audio Engineering. A turnover frequency of 400 Hz was chosen "to fall somewhere in the middle of the numerous low-frequency curves now in use," the article stated. The rolloff at 10 kHz was specified as 12 db (with reference to 1 kHz), and there was no low frequency shelf, the 6 db/octave rise being specified down to 30 Hz. Since this was intended as a specification for playback equalization of consumer as well as professional equipment, the specified tolerances were very generous by today's standards: plus or minus 2 db. With such a tolerance, "it will be seen that all turnovers between 325 and 500 cps will fall in the area covered."

The AES curve had a short life, as it was superseded by the RIAA curve, which was adopted by the disc recording industry in June 1953. The RIAA specification neatly defines the playback curve in terms of three time constants: 3180, 318, and 75 microseconds, corresponding to a low frequency shelf of 50 Hz, a turnover frequency of 500 Hz, and a rolloff of 13.7 db at 10 kHz.

Q/A 41.

Mr. Owen's description of the operation of "all dynamic filters" fails to describe with any semblance of accuracy the operation of the Packburn Continuous Noise Suppressor.

In the first place, the filtering action of any dynamic noise suppressor that we are aware of does not "cut in" and "cut out" at preset dynamic levels. It's a continuous process, with the passband width fluctuating in response to whatever dynamic control criteria the designer has chosen. Of course, on some transients the action has to be as sudden as a "cut in," but that's the only exception.

In the case of the Packburn Continuous Noise Suppressor, which is disclosed in U.S. Patent No. 4,322,641, the operation of the filter is controlled as follows:

1. The signal amplitude in the frequency range from 1.7 kHz to 3.4 kHz is employed as an index of the high fre-quency content of the signal in the audible range.
2. The time rate of change of the total signal-plus-noise is employed as an index of the audible surface noise.
3. A voltage derived from the ratios of the measurements 1 and 2 is employed to control the passband width.
4. Separate user-adjustable controls are provided to select the minimum cutoff frequency in quiet passages and the maximum cutoff frequency in loud passages.
5. User-adjustable means are provided for a rapid increase of the passband width at the onset of signal transients.

It is also not true that "One of the things that makes one unit better than another is how fast it does this." On the contrary, proper selection of the time constants that control the expansion and contraction of the passband is essential for successful acoustical masking of the operation of the unit. Either of the undersigned will be glad to demonstrate the successful functioning of the Packburn circuit on a wide range of recorded materials and recording media.

Q/A 42:

If Mr. Owen contends that there are no rumble components above 100 Hz, how does he propose to explain the frequency response of the filter network for measuring relative rumble loudness level, developed by Baurer, which has its peak at about 400 Hz? [See Tremaine, Audio Cyclopedia, second edition (Indianapolis: Howard W. Sams, 1969), p. 1481.]

Michael R. Lane
Richard C. Burns

Mr. Owen replies:

Here are my comments on the above.

Q/A 19. Messrs. Lane and Burns seem off the track here, especially in view of what they prescribe for the making of archival transfers, and what they say about not applying wrong equalization curves.

Inherent equalization, as I understand it, is defined as electronic preemphasis that is consciously and precisely applied during the electrical recording process, and playback equalization is what is used to correct for it. What Messrs. Lane and Burns call "mechanical equalization" isn't equalization at all but the unplanned, uncontrollable result of the acoustic recording process, something like the effects of hall acoustics and microphone placement in electrical recording. For example, one might find many 1960s recordings made in Philharmonic Hall (now Avery Fisher Hall) to be unnaturally deficient in bass, and "correct" for this by using a bass tone control or octave equalizer, but surely not by using more bass-heavy equalization than the RIAA curve used in cutting the disc. Yet that's just the kind of thing that Messrs. Lane and Burns seem to be recommending for the playback of acoustic records.

Q/A 31: No comment.

Q/A 41: Of course Messrs. Lane and Burns know best how their equalizer does what it does. The test of whether it or any other equalizer "pumps" is a practical rather than a theoretical one, and I welcome the demonstration that Messrs. Lane and Burns offer.

Q/A 42: I have not found any proper definition of rumble that states its frequency range, and neither apparently have Messrs. Lane and Burns. It's not really relevant (or surprising) that Baurer's device tests up to such a high frequency; most of today's professional test gear can read many times the expected frequency. I have never measured or heard low-frequency mechanical noise (i.e., rumble) that goes almost up to the oboe's tuning A--which is hardly low-frequency anyway. But if Messrs. Lane and Burns have done so, or know of an authoritative definition of rumble that gives its frequency range, that would settle the question.

Tom Owen