

## Listener Reaction

What does a nonprofessional, but seriously interested, stereo owner have to say about matrixed quadraphonic sound? I found out recently when I offered, on my program "Meat of Hi Fi" (WNYC-FM, New York), to send instructions for the simple Dynaco added-speakers hookup. I received over one thousand requests for this information, and later over two hundred enthusiastic letters telling me what a tremendous improvement was achieved with this simple hookup, and of their gratification at being able to "mine" their current stereo record collections. The most commonly used phrase was "100 per cent improvement." Many have gone on to more sophisticated decoders in the tradition of the audiophile, who is continually upgrading his equipment. Here is part of an informed and unusually restrained letter I received:

"1. I almost always prefer to leave the Quadaptor on.

2. Most records I have listened to, classical and popular, decode to some extent. A few decode with startlingly superb results.

3. Some recordings decode with strange effects—a vocalist or instrument from one or both of the rear channels. Occasionally an instrument is split between the front and rear channels with highs of that instrument apparently coming from the front or the rear. This gives a rather vague and confusing image, at which time I feel that the normal stereo mode is a preferable playback.

4. During casual listening I find that I listen to the four-channel sound a slug louder (about 3 to 4 dB) than if I were to listen in the normal stereo mode.

5. With most recordings I find that the rear level is best adjusted full up. The average rear-channel output at this setting is about two slugs (approximately 6 dB) below the front-channel output.

6. I am never cognizant of the rear speakers per se, except when specific instruments or vocalists are being decoded there or when I am within four feet of a rear speaker."

This listener sums up what hundreds of other letter writers have told me. The audio sophisticate may scoff at these reactions, but one of the biggest virtues of matrixed four-channel sound (perhaps all subsumed under that word "compatibility") is that the consumer can determine his own level of commitment to the four-channel medium.

quadraphonic system has an infinite number of signal combinations which cancel out when the matrix is encoded and cannot be recovered."

The defenders of four-channel sound say this is partially true; true of even the compatible portion of a discrete disc—but also that it is irrelevant. Every medium has its do's and don'ts which, if one is aware of them, can be used to enhance the strengths and avoid the weaknesses. For example, the SQ system does not allow for a soloist to be put in the center-back position while recording because, while he would be reproduced in the quad-

raphonic mode, he could not be transmitted via AM radio. "So what," say the SQ proponents, "let him be placed in one of the rear-side channels. Besides, he can be put in the center back, if required, later in the mixing process."

Bauer admits that current techniques of recording SQ records do not allow "as much license to the electronic music synthesizer specialist" as a discrete system of recording. But everything in the recording business is a trade-off, and he knows of no topnotch record producer "who couldn't work around any matrix problem."

The fact is that both systems, matrixed and discrete, are not ideal. Both have some trade-offs. Matrixed four-channel recordings are currently leading the software market with approximately 200 records presently on the market. There are many so-called "universal" decoders that do not include the most sophisticated logic circuitry, but which still can adequately decode all matrixed records, and which also lend considerable enhancement to two-channel records. In contrast, the discrete demodulators—which combine the left-front and left-back, and the right-front and right-back to give a sum signal—do not enhance a two-channel stereo record as well as a matrix decoder which is closer in the "evolutionary line" for the reasons previously mentioned.

When this point is raised with JVC or Panasonic, currently the major hardware proponents of the CD-4 discrete disc system, they claim that their four-channel rigs will have very good matrixing-decoding ability.

Nevertheless, the biggest problem of four-channel's acceptance is that artist, engineer, and record producer have not yet learned how to take full advantage of the potentialities of four-channel as a medium. It seems obvious that we all need time to learn how to exploit our binaural capabilities and develop more sophisticated ambiphonic recording and playback techniques. Even so, there are fewer critics of four-channel stereo than there were at the same stage in the growth of stereo, and the converts to four-channel sound increase steadily. As one critic told me: "Going back to two-channel listening after experiencing quadraphonics is like going back to mono after hearing stereo. Four-channel generates a sense of involvement with sound that is so easy to accept that after a while one may be unaware of its existence. Often I switch off the rear speakers and the contrast is striking. It can be compared to turning off most of the lights in a well-lit room after you've become adjusted to a high ambient light level."