12/74

Converting To Monophonic Sound

Gerard Rejskind

THE PAST FEW MONTHS have seen the dawn of what will undoubtedly be a new age in the world of audio: the opening of the monophonic era. Though at this writing both hardware and software remain scarce, the die appears to be cast, and mono* is without a doubt here to stay.

Of course, to the audiophile who has followed only the endless lineup of new conventional stereo equipment, the new world of mono may seem strange and confusing. Here then are some answers to the most often asked questions about mono.

What is Monophonic Sound?

Monophonics concerns the reproduction of sound through a single audio chain. Whereas conventional stereo divides musical performers among two or more channels, mono integrates all instruments within a *single discrete channel.* Gone is the often tricky problem of localizing instruments. With the monophonic system, "wandering soloists" caused by the vagaries of acoustics are a thing of the past. Localization is perfect, each instrument remaining locked in to its correct location (the speaker), with no confusing false images.

How Much Monophonic Equipment is on the Market?

At the moment, very little. However, many conventional stereo amplifiers can be converted for monophonic use by simply paralleling their outputs. Some solid-state amplifiers will be damaged by this procedure, and you should check with your dealer before going ahead.

Don't be put off, incidentally, if your dealer seems cool to monophonic sound. Many audio salesmen are reluctant to demonstrate monophonic equipment because they claim that mono's advantages are not evident under showroom conditions.

Will Mono Make it Harder to Fit a Sound System to My Living Room?

No, on the contrary. A mono system will make installation easier than ever. Of course, the dissymmetry caused by the presence of only one speaker may draw some grumbles from the distaff side. On the other hand, mono's superb instrument localization means that the listener can sit anywhere in the room and still hear a correct "mono image." That makes the placement of seats and other furniture less critical.

What's the Difference Between Discrete Mono and the So-Called "Matrix" Mono?

Matrixed monophonic sound (also known as "derived" mono) is created by "folding-in" two conventional stereo channels into a single monophonic sound source. Properly done, matrixed mono exhibits many of the directional characteristics of "discrete" or "true" mono.

A number of amplifiers are now available with a built-in monophonic synthesizer (known as a "mono switch") which can "decode" conventional stereo sources and extract the "hidden" mono information.

By contrast, "discrete" mono begins with a single sound source and keeps the source single through every step of the audio reproduction chain. "Discrete" fans charge that the matrix-mono effect depends upon a psycho-auditory illusion. They claim that random out of phase information is *cancelled* by the matrix method, and does not form part of the synthesized mono sound.

The major drawback to discrete mono is that it makes the many thousands of existing recordings obsolete. And it should be mentioned that a number of discrete mono releases appear to be simply re-mastered versions of recordings originally made in stereo.

Can the New Discrete Mono Discs Be Played with My Present Cartridge?

Conventional stereo pickups can give quite satisfactory results with mono discs. However, these pickups are sensitive to irrelevant vertical modulations, and their styli are too small for the larger mono groove. Your best bet is to install a pickup specially made for mono, such as the highly touted General Electric VRII. As a bonus, you'll find the VRII more rugged and less accident prone than the pickup you're likely using now.

Will the New Mono Pickup Play My Old Stereo Records?

Emphatically yes. In fact, you'll find that a mono pickup will lend to your stereo records much of mono's ultra-directional impact . . . especially after you've played them a few times.

Can Discrete Mono Be Broadcast on FM?

Yes. Few centers are yet served by mono FM, but a handful of smaller and educational stations are devoting some or all of their day to monocasting. You can check your local stations easily. Tune across the band until you find a station that doesn't light your stereo indicator. It's discrete mono.

Of course, "derived" mono can be enjoyed by decoding the stereo signals of conventional FM stations as well.

Is Mono Here to Stay, or is it Just a Gimmick?

Of course the dust of the monophonic revolution has yet to settle, but it seems that sooner or later all audio fans will want to convert to some sort of mono system. Whether this system will be "discrete" or "matrix-derived" remains to be seen. While we await the final emergence of one system or another, there's a lot of glorious mono sound to be enjoyed. And as manufacturers compete with new and better monophonic systems, the winner, as usual, is the audiophile.

Long considered one of the audio world's visionaries, Mr. Rejskind was among the first to predict sweeping success for such technical innovations as the Cook dual-pickup binaural disc (1951), the 16⅔ rpm record (1956), and stereo AM (1962). He caused some commotion at an IRE meeting in the late fifties when he explained stereo as being "treble in the left speaker and bass in the right." It was during his subsequent exile in Hungary that he met Professor I. Lirpa and they both became involved with the study of monophonic sound. They have since collaborated on a book about the Easter Island monoliths, because of their apparent notion that the carvings have something to do with sound reproduction.

***It should be noted that the word "mono" has been claimed as a registered trademark by a small Austro-Hungarian firm, *Monotone Records*, which has threatened usurpers with legal action. Despite their name, *Monotone* discs are stereo.**