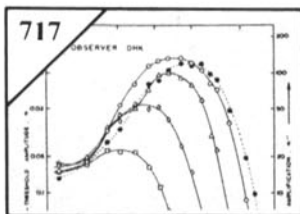




## HIGHLIGHTS



### Psychophysics and the Improvement of Television Image Quality

*W. F. Schreiber*

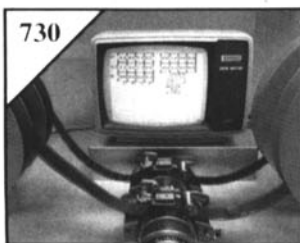
Worthwhile improvement in television image quality is obtainable by signal processing at the receiver. However, improvement to the level demonstrated by NHK requires a large bandwidth expansion if only straightforward means are used, such as increasing the line and frame rates. This paper discusses a number of methods for obtaining maximum quality for a given bandwidth. Some of these methods take advantage of visual psychophysics, which is reviewed. Others deal with the special characteristics of TV cameras, displays, and scanning patterns.



### Signal Processing for Wide-Screen Television: The Smart Receiver

*J. S. Nadan and R. N. Jackson*

The television receiver is no longer a simple single-input-medium unit. Input from tape, disk, home computers, terrestrial broadcast, and cable must now be accommodated. Soon direct broadcast by satellite and the questions of extended definition and wide-screen presentation will have to be faced. This article defines some practical goals for enhanced television systems and discusses how they may be achieved using VLSI technology in home receivers.

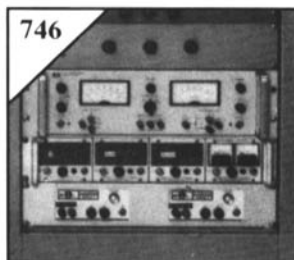


### Technical Experience with Datakode™ Magnetic Control Surface

*R. E. Uhlig*

In the past year, new and modified equipment has been built to record and reproduce time code using the Datakode™ magnetic control surface. This article discusses mechanisms to

record time code in 16 and 35mm motion-picture cameras, modifications to editing tables and synchronizers to play back time code, and a new device for synchronizing sound and pictures during editing. Experience gained in development of this equipment may assist others working on similar devices.



### An Experimental Trinoscope for Improved Video-to-Film Recording

*H. A. Barrett, R. Collette, K. G. Lisk, J. Sager, and R. J. Sypula*

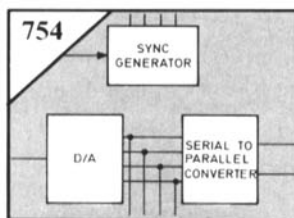
The trinoscope or tri-optical recorder is a highly successful device for transcribing video images to film. This technique is used throughout the world to make high-quality recordings, primarily onto Eastman color negative II film 7247 (16mm) or 5247 (35mm). A new trinoscope has been constructed that takes advantage of new CRT geometry-correction technology and uses a new method of raster line compensation. A unique feature is its ability to expose relatively insensitive Eastman color internegative II film 7272.

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	108	107	106	105
	108	107	106	105
	108	107	106	105

### A Microcomputer Program for Determining Loudspeaker Coverage in Motion-Picture Theaters

*J. M. Eargle and R. E. Means*

A microcomputer program has been developed to analyze motion-picture theater sound reproduction system design and coverage. The program can be used by sound system designers and installers to achieve even coverage with respect to frequency. A field survey is under way to determine needs for improved motion-picture sound coverage, and a family of high-frequency devices offering skewed coverage in one plane is being developed.



### Automation for Audio Production and Post-Production

*S. J. Price*

This article examines the application of time code to the automation of audio mixing and control, highlights some of its applications, and takes a brief look into the potential of such systems. Following a brief history of some of the systems used in the mixing process, the problems and consequences of automation are discussed, as well as the technical aspects of the systems and the various approaches taken by different companies in the field.