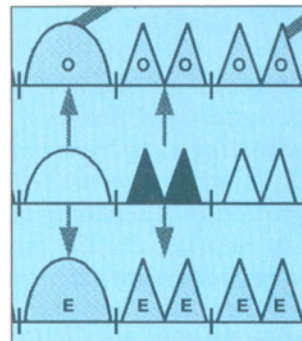
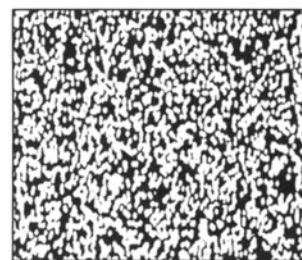


Highlights

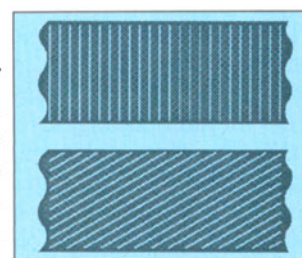
- 124 An HDTV Downconverter for Post-Production** • *L. Thorpe, K. Matsumoto, and T. Kubota* • The goal of a unified worldwide standard for HDTV studio origination and international program exchange was recommended by the World Broadcasting Conference in 1983 and remains the ultimate goal of the CCIR. Its achievement is difficult because inherent to its success is full recognition that scanning standards conversion, for all regions, is integral to relating HDTV master programs to existing (and to future) world broadcasting standards. The 1125/60 HDTV proposal is a pragmatic set of scanning parameters upon which such unity can be achieved. Program production for 1125/60 HDTV is now under way in the U.S., Canada, and Japan, and the producers of these programs have an immediate need to deliver their software via the current 525/59.94 broadcast standard.



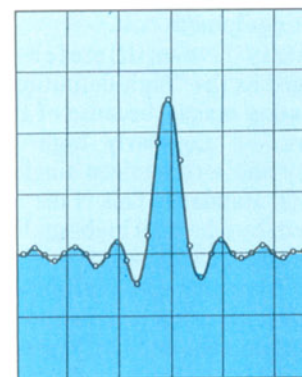
- 136 Flicker-Free Field-Sequential Stereoscopic TV System and Measurement of Human Depth Perception** • *H. Isono and M. Yasuda* • Significant picture-quality improvements to the field-sequential stereoscopic TV system can be achieved by using an alternative time-multiplexed stereoscopic display technique. This article describes a new system of presenting television programs in 3-D using ferroelectric liquid crystal shutter (LCS) glasses, and some findings of psychovisual experiments relating to human depth perception provided by this system. The advantages of the system include no reduction in vertical resolution, complete freedom from flicker, full color, and reduced visual fatigue.



- 142 Digital Paper — Flexible Optical Data Storage Media** • *S. J. Abbott* • Motion-picture recording and editing requires large amounts of data storage media. Magnetic media will continue to play a major role, but there has been much talk of optical disks providing new capabilities for the motion-picture industry. The cost, capacities, and performance of optical disks have, however, limited their application in some areas. Flexible optical media, or Digital Paper, in disk and tape format, offers a new mix of cost, capacity, and performance capabilities that can make optical media more attractive. This article will explain the technology and its benefits for the motion-picture industry.



- 145 International Transmission of HDTV Signals** • *K. Kubota, Y. Iwadate, K. Seo, and M. Matsumoto* • International transmission experiments from Japan to Australia and from Korea to Japan using the multiple sub-Nyquist subsampling encoding (MUSE) signal were successfully carried out in 1988. The first transmission was conducted on a three-hop basis using CS-2, INTELSAT, and AUSSAT. The second was a live broadcast of the Seoul Olympic Games in combination with INTELSAT and BS-2. Both transmissions obtained a carrier-to-noise ratio (CNR) of about 17.5 dB, which corresponds to the limit of perception of noise impairment. Excellent waveform transmission characteristics were also obtained by employing intermediate-frequency (IF) and baseband equalizers. It was concluded that international and domestic transmission of HDTV can be performed by existing satellites and earth stations without modifications, as long as modulators and earth stations are connected by an IF signal.



- 151 The UTECS System for Controlling Television Equipment Analog Functions** • *M. Graham* • The Unified Television Equipment Control System (UTECS) was born out of a need to control many different devices from a central point. UTECS is a fully integrated system that allows over 200 different pieces of television transmission equipment to be remotely controlled from one or more central control panels. The system, using a universal control panel, can be adapted to handle various types of equipment by using "smart" device interfaces tailored to each device. It can also support up to four control panels and an interface to a routing switcher by including a central system controller. Each device may have up to eight analog and eight switchable functions.

