

Highlights

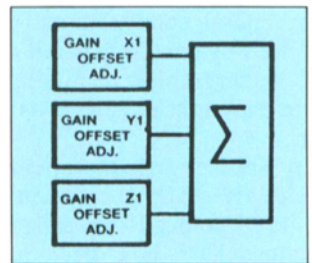
- 868 Some European Perspectives on HDTV** • *G. J. Tonge and J. R. Forrest* • The introduction of HDTV in Europe is being considered primarily for new services using the MAC transmission standard. The MAC system offers significant advantages over present composite systems for compatible HDTV, especially in its inherent dual aspect ratio specification. The Eureka HDTV project is developing an HDTV production and transmission system based on a 50-Hz field rate and on MAC. The launching of European HDTV is planned for 1992. However, widescreen services may be available to the public before that date using an enhanced television (ETV) approach.



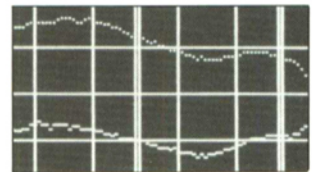
- 873 A Compatible High-Definition Television System Using the Noise-Margin Method of Hiding Enhancement Information** • *W. F. Schreiber, E. H. Adelson, A. B. Lippman, Gong Rongshu, P. Monta, A. Popat, H. Sallic, P. Shen, A. Tom, K. Zangi, and A. N. Netravali* • This article discusses a receiver-compatible (EDTV) system using a new method of hiding extra information in a normal video signal. It is found that when video signals are transmitted in the usual over-the-air channels, if the signal-to-noise ratio (SNR) is satisfactory at the receiver, it is actually higher than required in some spatial-frequency bands, creating a "noise margin" in which extra information can be inserted, appearing on the NTSC receiver as a very small amount of high-frequency noise. On a special EDTV receiver, the second signal is detected independently, combined with the first signal, and displayed at high resolution.



- 880 Monitoring Video Pictures in Different Formats and Standards** • *J. Verbrugge* • Monitoring video pictures has become more critical with the use of different standards and formats in the same video facility. Composite, analog component, and digital video signals each have standards and deviations from these standards. After reviewing critical issues such as signal amplitudes and use of black-level setup, an input module that converts any component format to RGB is introduced. This module, combined with composite decoders and digital input modules, allows a picture monitor to reproduce all existing standards with correct black-level and luminance levels.



- 884 Audio Performance of Professional VTRs** • *C. P. Repka* • The introduction of stereo TV has caused greater attention to be paid to the audio signal chain within the TV broadcast industry. This article presents audio test data on two commonly used videotape formats, 1-in. Type-C format and 3/4-in. U-matic format, as well as the new 1/2-in. MII format. The discussion will include a comparison of all three formats and their application in the production of stereo programs for TV.



- 890 Adjacent Satellite and Ground Station Interference** • *G. Hrycenko and S. Dulac* • An overview of adjacent satellite interference is presented, including a discussion of national and international regulatory activity, methods of coordinating systems, and the four basic ways of reducing interference. A typical link assessment shows how this interference is included along with other interference and noise sources. A comparative evaluation of systems operating in different frequency bands and within different satellite spacing environments is given as an example of the potential effect of adjacent satellite interference on satellite and ground station design.



- 896 HMI Lighting for High-Speed Photographic Applications** • *P. Kiankhooy* • High-speed photography requires high levels of illumination for good color quality and color retention. As the frames/sec increases, so does the intensity of light required. The HMI is a medium-arc, high-efficiency, cool, high-intensity discharge lamp capable of maintaining a 5600-K color temperature at high levels of illumination, with a dramatically reduced level of emitted infrared (IR) radiation. A new ballast is described that takes full advantage of the HMI lamp and eliminates problems, particularly flicker, associated with magnetic ballasts.

