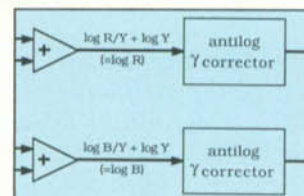


# Highlights

- 812 Signal Processing for Compatible HDTV • W. E. Glenn and K. G. Glenn •** High-definition television (HDTV) systems are designed to be free of many of the artifacts that appear in NTSC transmissions. HDTV and enhanced-definition television (EDTV) systems that are compatible with NTSC can also be designed to be free of these artifacts. Signal processing used to maintain constant luminance and to eliminate cross color, cross luminance, interline flicker, and objectionable line structure is discussed.



- 817 A Progress Report on Improved NTSC • Y. C. Faroudja and J. Roizen •** This article describes a variety of recent developments that extend the usefulness of the NTSC signal format into the advanced television arena that is now of great interest to television futurists. It will attempt to give an overview of the various areas of NTSC image generation, processing, distribution, and display, which can be improved substantially by the application of a variety of recently developed techniques. The demonstrable result is that a fully expanded NTSC system can indeed be used for many years to come as a fully compatible advanced television system while the ultimate all-digital television broadcast system is under study and development.

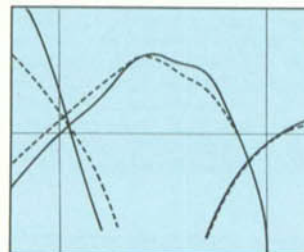


- 823 Reducing Financial Aliasing in HDTV Production • C. A. Pantuso •** The acceptance of high-definition technology by program producers and broadcasters will depend on financial viability as much as on specific technical parameters. This article proposes a method for operating HDTV equipment that reduces the cost, complexity, and image degradation inherent in conversion to PAL, NTSC, and 35mm film. The operating modes proposed allow simple frame-rate conversion to the local television standard without requiring temporal interpolation, and provide a single high-definition tape format that can be easily interchanged throughout the world. This offers the possibility of international hardware standardization now and enhanced-capability HDTV-only distribution in the future.

#### Digital Image Processor

- Transition (Mix, Wipe, Cut)
- Size/Position/Shape
- Transfer Characteristic
- Color Balance & Matrix
- Luminance Key
- Blue-Screen Matte
- 2-3 Sequence Processing
- System Routing
- Monitor Control
- Interface Transcoding

- 830 Fujicolor Negative Films — F-Series • K. Noguchi, Y. Urata, and K. Murai •** Since the development of the award-winning high-speed Fujicolor negative film A250 in 1980, much further research has been done to broaden cinematographic horizons. In recent years such efforts have been not only in filming and lighting-related problem areas, but also in combined cinema/video media systems. Much research effort has been committed to meeting a wider variety of cinematographic needs, especially in higher image quality. As a result, Fuji Film has recently announced the Fujicolor negative film F-series of motion-picture films, which provide a wider range of available speeds.



- 835 Workstation Development: A Plan for the Future at NBC • R. K. Strader •** Planning for the reconstruction of NBC headquarters has begun around the concept of workstations. One goal of this method of development of the technical plant is to improve the ability of creative people to control the increasingly technical equipment they are required to use. Another goal is the creation of a broadcast plant that can adapt to future equipment technology and accommodate changes in business strategy and operating procedures. Development of the workstation concept and the technologies that will be required for its implementation are explored.



- 840 Naturalistic Camera Moves in Image Compositing • R. Patterson •** The absence of any camera movement in composited images often undermines the credibility of the composite or gives the images an awkward quality. To overcome this limitation, a portable, computerized pan/tilt head has been developed capable of repeating pans, tilts, zooms, and focus pulls with the accuracy required for image compositing. It can be operated in the same way as a conventional fluid head tripod, or it can be remotely controlled by a variety of means.

