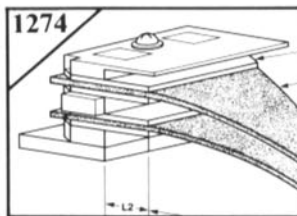


**1270**  
**Development of a 3-MOS Color Camera**

*N. Murata, C. Hirano, M. Ohoka, and S. Nagahara*

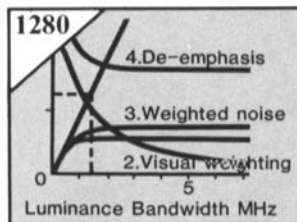
This article describes a 3-chip color camera using high-resolution MOS imaging devices. Fixed pattern noise and vertical smear, which were serious drawbacks of the MOS camera, have been reduced to a minimum by newly developed suppression circuits. By cementing three imaging devices onto the prism surfaces, registration accuracy of better than 0.05% is achieved permanently.



**1274**  
**A Second Generation Type-C One-Inch VTR**

*H. Tanimura, Y. Fujiwara, and T. E. Mehrens*

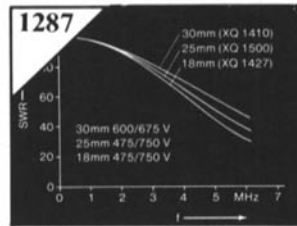
This article deals with the design of a second generation Type-C videotape recorder and the development of a new tape transport and movable tape-guiding system. Topics covered include the use of the NASTRAN structure analysis program to determine deck rigidity, and the development of new video and audio head technology, with a review of the composite single and polycrystal video head and the amorphous metal audio head.



**1280**  
**Analog, Multiplexed, and Digital Components — Friends or Foes?**

*J. L. E. Baldwin*

This article discusses the use of analog, digital, and time-multiplexed components in various applications. For microwave links and satellite broadcasting, where there is one signal path, it is necessary to time-multiplex the three signals together to provide one signal, referred to as multiplexed analog components (MAC). Such a signal would be compatible in principle with most studio equipment. If this compatibility is proved in practice, it would permit an orderly changeover from an analog composite to a digital component environment.



**Resolution Measurements on Camera Tubes**

*T. G. Schut*

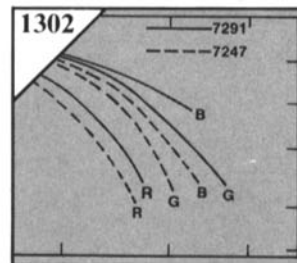
This article describes the present method of measuring camera tube resolution, concentrating on camera tubes with magnetic focusing and deflection. It discusses the repeatability of resolution measurements, with particular reference to beam selection, beam bending, and video amplifier influence. The mechanisms which determine horizontal and vertical resolution, as well as other resolution measurement methods including the narrow slit, small band-pass, and slant-line methods are also described.



**1294**  
**New Capabilities for a Line-Array CCD Telecine**

*I. Childs and J. R. Sanders*

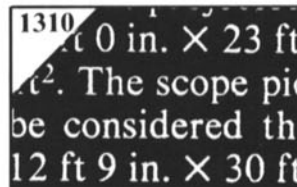
The use of digital picture storage at the output of a line-array telecine is necessary to convert the sequentially-scanned signals from the array into 625-line or 525-line interlaced form. At the same time this can provide additional capabilities such as variable-speed running of film, both forwards and backwards, good pictures for high-speed review, and the ability to detect dirt or scratches on color film.



**1302**  
**Eastman Color Negative Film 7291**

*R. Sehlin, F. Reinking, S. Spakowsky, D. Clifford, G. Whittier, and W. Szafranski*

Eastman Color Negative Film 7291 is a 16-mm film with an exposure index (EI) of 100. This new film replaces Eastman Color Negative II Film 7247 and features improved speed balance, image structure, color reproduction, processing characteristics, and dye stability. The 7291 film is designed to be completely compatible with its counterpart, Eastman Color High Speed Negative Film 7294.



**1310**  
**Screen Illumination of 35-mm Film Projection**

*J. Kelly and G. Berggren*

Since 1978, the U.S. standard for motion-picture screen illumination has been 16 fL, with appropriate tolerances, although most of the rest of the world is standardized at around 11 fL. This article traces the development of the 16-fL standard, first with carbon-arc equipment and later with xenon. The problems encountered in maintaining the standard by modern automated multiple theaters with reduced operating personnel are discussed.