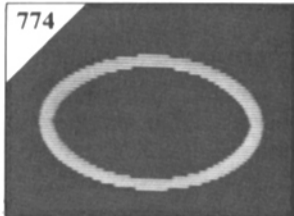




774

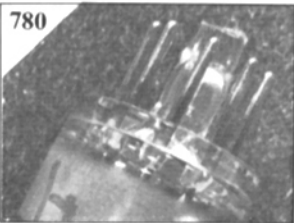


A New Dimension in Broadcast Graphics

A. A. Smith, A. Rahman, R. H. McMann

A new design for a character generation system incorporating multiple microprocessors and a digital frame store is described. By storing an entire frame in digital form the system can position characters anywhere within the viewing area, even partially or completely overlaying other characters. By providing multiple intensity levels for each pixel in the frame store, positional resolution equivalent to 12 nanoseconds horizontally and to one-quarter of the interline spacing vertically is obtained while maintaining a 48-nanosecond clock cycle.

780

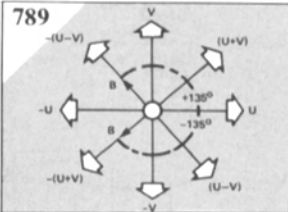


A 13-mm Saticon Tube for Recording Type Cameras

L. D. Miller, A. Month

A short 13-mm diameter magnetically focused and deflected Saticon camera tube has been developed specifically for use in the RCA Hawkeye Recording camera. The tube is highly suitable for other ultra-compact high-performance ENG and EFP color television cameras. The tube features a unique glass envelope to assure accurate alignment of the tube with the coil assembly and an improved electron-gun design.

789

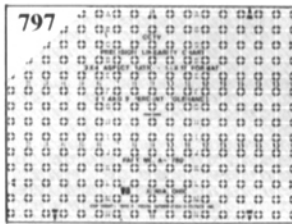


Digital Component Versus Digital Composite Recording

E. Fraser Morrison

Digital composite signals for NTSC and PAL and a single digital component signal are described. User data rates and channel codes rates for a digital videotape recorder are developed for the three types of signals. Methods of error correction for the types of signals are shown and performance results are compared. Continuous standard signals for stop motion and slow motion operation of the tape transport are derived and the anticipated performance results are compared.

797



Standardization of the Television Raster

J. H. Harshbarger

The raster format appears as the preferred method of cathode ray tube display. However, confusion abounds in scanning rates and pulse parameters, especially in computer applications, leading to inefficient and costly designs as well as equipment which is not interchangeable. While certain EIA Standards have been developed, they have not been adhered to in the design of much present-day equipment.

808

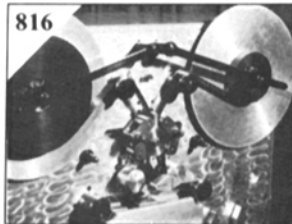


Television Zoom Lens with Three Integrated Zoom Ranges

Karl Macher

After discussion of the demand for a lightweight zoom lens for color television, the design and mode of operation of an optical system with variable focal length incorporating three integrated zoom ranges is described and solutions to the optical problems of cameras using microprocessors with automatic adjustment of contrast, geometry, linearity, and color registration are shown.

816



A New Design in Magnetic Film Transport

Gunter Kiess

The author describes the MB 51 magnetic film transport system and its development. The unique feature of this new unit-generation is the development of a microprocessor-controlled capstan drive which does not need any of the mechanical filter systems previously in use. Because the system contains no flywheels, its acceleration and braking characteristics are extremely good.

821



Main Design Aspects of YLE's Film Laboratory in Helsinki

O. E. Mikkela S. Bergholm

A new film laboratory began operating in 1979 in YLE's (Finnish Broadcasting Co.) Helsinki Radio and Television Center. Because of the stringent labor protection legislation in Finland, special care was taken to ensure good working conditions. Daylight has, if possible, been provided for all working rooms, noise levels of the working areas has been kept as low as possible, and hazards caused by toxic chemicals have been minimized.