

A High-Definition Still-Frame Television System

G. R. Southworth

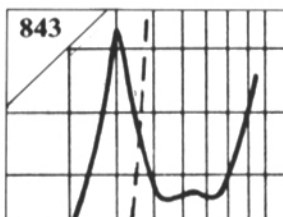
Television systems with 1000 lines or greater resolution have been available for several decades, but the relatively wide bandwidths required have precluded their use except for short distances. One solution is the generation of narrow bandwidth, single frame video signals for transmission purposes, with scan conversion by means of digital memory at the receiver. The system described in this article incorporates two methods for transmission of high-resolution "slow-scan" TV signals: the first using a conventional 1000+ CCT camera in conjunction with an unusual sampling/digitizing scan converter; and the second consisting of a solid state linear array with 35-mm optics and horizontal axis scanning produced by a rotating mirror. The receiving part of the system consists of analog signal processing, digitizing, and addressing of a memory by which the signal is converted to an analog video signal, with the resultant image on a standard TV monitor.



Today's Photographic Imaging Technology for Tomorrow's HDTV System

M. A. Kriss and J. Liang

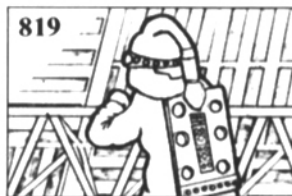
Film and television have been partners for more than 35 years. During this time great improvements have been made in both media, with the public receiving most of the benefits. With high-definition television (HDTV) now possible, film as an originating medium is more important than ever. Eastman color negative film 5247, the 35-mm motion-picture format, will support HDTV systems up to 1400 lines at 50 MHz and may support up to a 2000-line HDTV system; it will provide an input signal with a signal-to-noise ratio >50 dB (unweighted).



A Triphonic Sound System for Television Broadcasting

E. Torick

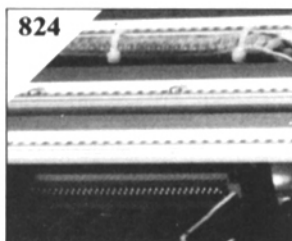
A new three-channel audio matrix for use in multichannel sound television broadcasting is described. The proposed transmissions can be received by either a triphonic, biphonic, or monophonic receiver. The system utilizes two conventional stereophonic channels, plus a third channel which drives a center loudspeaker and which is used to subtract the center signal components from the left and right channels in a three-channel receiver. This eliminates the necessity for listeners to be positioned precisely halfway between the loudspeakers for optimum hearing conditions.



Film Stocks Used for Optical Special Effects

R. Field and T. Iles

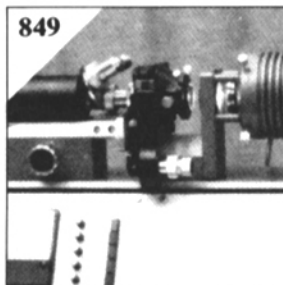
This article describes the wide range of film stocks used for optical special effects work in motion pictures. The use of traveling mattes and painted mattes is discussed, as well as the problems of matching contemporary work with that from archival sources. The properties of the various films used are described, together with reasons for their selection and application.



Evolution of Computer Support System for Television Operation

M. S. Tooms and J. W. Anderson

This article describes the development of a cost-effective computer-based management information and operations support system (MIOSS) for a television operation. Selection of the hardware and software required to meet design objectives, as well as the programming language used, are discussed. The article describes why the final choice was principally OMSI Pascal with critical routines being written in M68000 Assembler.



EBU Activity in the Standardization of Films for Television and Television Film-Scanners

M. Rotthaler

This article reports on the work being done by the European Broadcasting Union (EBU) to promote optimum technical standards for television programs exchanged in the form of films between broadcasting organizations in different countries. It discusses the characteristics of the films used in the programs, and recommends practices for the technical operation, alignment, and measurement of television film-scanners.