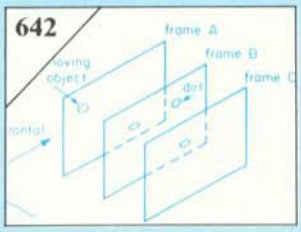
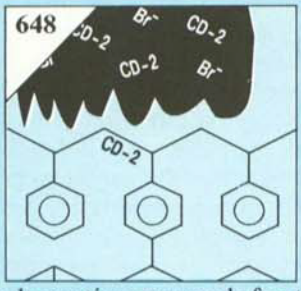
HIGHLIGHTS



Electronic Detection and Concealment of Film Dirt

R. Storey

Film, as an image source for television, has several inherent imperfections, all of which can, at least in theory, be minimized electronically. Specialized equipment is already available to minimize color errors and film grain. This article describes a method of detecting and concealing dirt. The equipment can detect the majority of dirt particles in typical 16mm film with negligible motion impairment, missing only the largest.



Recovery of Kodak Color Developing Agent CD-2 from Process ECP-2A Color Developer and Stop Bath

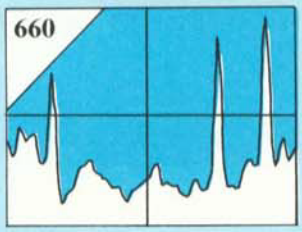
J. L. Burger, H. E. Fowler, B. A. McPhee, and J. E. Yager

This article presents an alternative approach for the recovery of Kodak color developing agent CD-2 from Process ECP-2A. This method can be used in conjunction with current reuse methods, or it can be used exclusively to recover the CD-2 from the combined overflows of the color developer and stop bath.

Resolution Requirements for HDTV Based Upon the Performance of 35mm Motion-Picture Films for Theatrical Viewing

A. Kaiser, H. W. Mahler, and R. H. McMann

In early attempts by the television engineering community to define "high-definition television," theatrically viewed 35mm motion-picture film served as the standard for determining resolution requirements. However, data on the amount of resolution in 35mm films for theater audiences was not readily available.



Performance Characteristics of HMI-Type Lamps

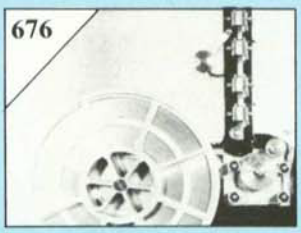
R. E. Levin

This article discusses the various characteristics of HMI lamps, in particular the BriteArc™ and BriteBeam™ versions. Among the items discussed are color temperature and its relationship to color quality, and the beam characteristics of the HMI-type lamps. The changes that take place are described and explained in terms of the arc tube characteristics.

The Academy's New State-of-the-Art Loudspeaker System

J. Eargle, J. Bonner, and D. Ross

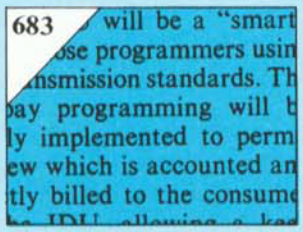
A new loudspeaker system has been installed in the Samuel Goldwyn Theater of the Academy of Motion Picture Arts and Sciences. Based on an analysis by the Central Array Design Program developed by JBL, the system produces excellent speech articulation and accurate reproduction of the intended multi-channel sound field. This article presents the specifications, comprehensive system measurements, and performance data of this state-of-the-art system.



The Use of Steel Tape Magnetic Recording Media in Broadcasting

W. Lafferty

The first practical, commercially viable, plastic-backed magnetic recording tape appeared 50 years ago. The overwhelming success of this medium, however, has tended to obscure a crucial step in the innovation of magnetic recording technology: the use of steel tape as a medium with early magnetic recording equipment within international broadcasting during the 1930s.



Direct Broadcast Home Terminals — A Status Report

R. D. Fraser

This article examines the rapidly emerging direct broadcast satellite (DBS) service as a medium which promises to deliver not only consumer satellite service but a host of new technologies as well. Various aspects of the new technology are discussed, including the development of antennae, the role of gallium arsenide in the low-noise converter for satellite reception, and the practical considerations of interfacing with a growing number of home video services.