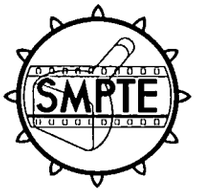
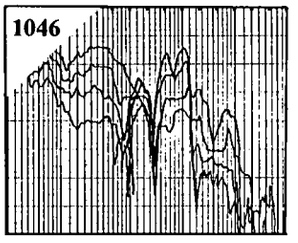
HIGHLIGHTS

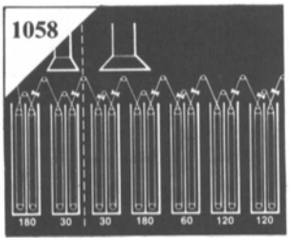




Cinema Sound Reproduction Systems

M. Engebretson, J. Eargle

Today's state-of-the-art criteria for motion-picture sound reproduction may fall far short of meeting the demands of motion-picture audiences in five to ten years. Present-day A-chain capabilities far exceed the capabilities of motion-picture theater playback equipment, and the gap widens at an ever-increasing rate. The authors propose a quantum improvement in film-sound playback systems as a necessary means to gain significant improvements in sound quality in the motion-picture theater.



Kodak Persulfate Bleach for Process ECN-2

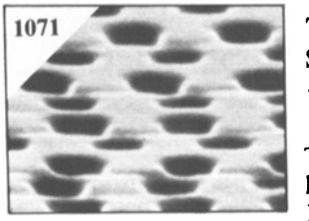
J. E. Crisante, W. A. Szafranski

This paper describes the use of a sodium persulfate bleach in Process ECN-2. This bleaching system provides an alternative for those motion-picture laboratories seeking means to assure compliance with local sewer codes governing the amount of ferricyanide in their effluent. A review of the persulfate bleaching mechanism, a dicussion of the advantages of persulfate bleach, and a detailed explanation of changes in process specifications are included.

The Marconi B3410 Line Array Telecine

R. Matchell

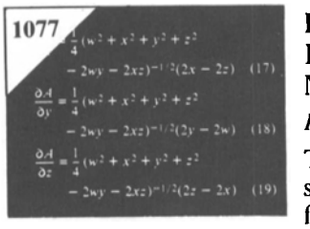
This paper details the design philosophy and some of the systems used in the B3410 line array telecine. It lists the design aims, and gives details on the picture-sensing system, the film-transport system, the optical system, the video systems, and the servo systems. The servo systems include a capstan servo, spooling servos, and a light control servo.



The VHD Videodisc System

T. Inoue, T. Hidaka, V. Roberts

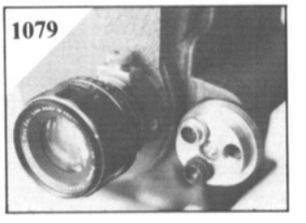
The VHD (Video High Density) system plays a 10.2-inch grooveless conductive plastic disc. Each disc contains one hour per side of high quality, color-video programming with stereo sound. The VHD system will also play a digitally recorded, ultra high-fidelity pulse-coded modulated Audio High-Density Disc (AHD).



Effects on Differential Phase and Gain Measurements

F. A. Williams, R. K. Olsen

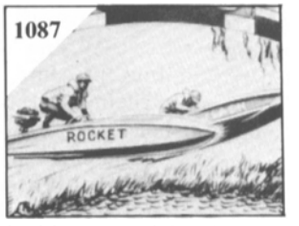
This article discusses absolute standards of performance as a means of characterizing television systems. Absolute standards are based on the best theoretically obtainable performance as defined by DP and DG limits. Until now, however, there has been no published means of the best way to arrive at these limits. This article provides a set of equations used to provide theoretically obtainable DP and DG limits for use in the evaluation and diagnosis of television equipment.



Cameras and Systems: A History of Contributions from B&H

L. J. Roberts

Part I of this paper appeared in the October 1982 *Journal* and covered the basic history of the Bell & Howell Co. and its contributions to the design and manufacture of the professional 35-mm motion picture camera and other equipment. While the first section concentrated mainly on the Standard Cinematograph Camera Design 2709, this second part will focus on the Eyemo Design 71 Standard Automatic Portable Camera.



The Development of Stereo Magnetic Recording for Film

H. E. Reeves

Part I of this paper appeared in the October 1982 *Journal* and covered the history and development of stereo magnetic recording, together with the introduction of Cinerama and its early years. This second part will continue the story of Cinerama and discuss applications of sound technology for the future.