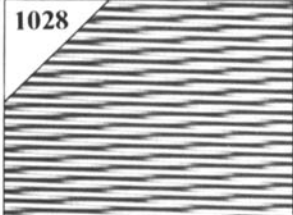


**EBU-SMPTE Serial Data Control of TV Equipment**

*R. McAll and M. Stickler*

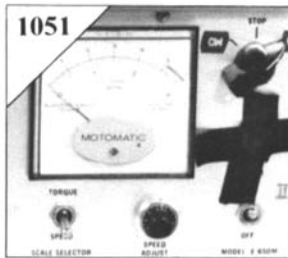
Committees of the SMPTE and EBU began collaborating in 1981 to develop a standard software-based remote control system for television and radio production equipment. This progress report describes the system, which is based on the concept of distributed intelligence and uses a layered technique.



**Extended Definition Television with High Picture Quality**

*B. Wendland*

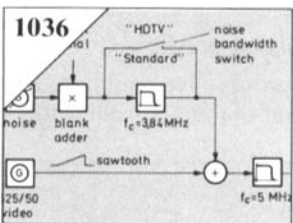
Present-day television systems do not offer optimum picture quality, particularly in new applications such as interactive videotex and still picture transmission, and where larger and brighter screens are used. There is a growing demand for improved resolution of details and absence of line crawl and flicker. This article proposes concepts for compatible improvements in picture quality, using the line numbers of present standards, by means of digital signal processing.



**Lubrication of 35-mm Release Prints for Extended Projection Print-Life**

*E. Mino and R. S. Perry*

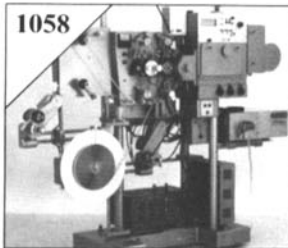
Current investigations continue to demonstrate the necessity of proper edge-waxing of 35-mm release prints to significantly extend projection life over that of unlubricated prints. This article reviews previous work and presents the results of a recent trade lubrication survey.



**Resolution and Noise—Considerations for an HDTV Camera**

*Ulrich H. Reimers*

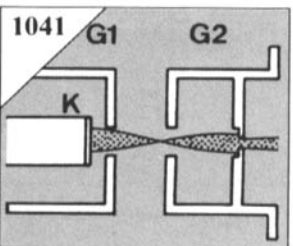
In the development of a color camera for HDTV applications, achievement of better resolution and reduction of noise have been major considerations. This article describes the resolution performance that can be achieved with a state-of-the-art camera lens and a 1-in. Saticon pickup tube. Experiments with signal-to-noise ratios and their subjective reviewer evaluation — until now, largely unresearched for HDTV — are also discussed.



**Seventy-Five Years of Motion-Picture Standards: Contributions of B&H**

*J. Ehrenberg and L. Roberts*

A salute to Bell & Howell Co. on its 75th anniversary, giving a brief history of the company and its origins. The article covers the introduction of B&H early cameras and the development of 8-mm equipment. The B&H system addressed two of the major problems of the fledgling movie industry: flickering images and lack of standardization of equipment. Early B&H standards for 35-mm film and equipment were the basis for many standards issued in the formative years of the SMPTE, now the SMPTE.



**Improved Pickup Tube: New Diode Gun Saticon®**

*S. Kato, Y. Nonaka, M. Maruyama, and C. Ogusu*

This article reports on the new 2/3-in. diode gun Saticon-III pickup tube (H9386B), which utilizes a new type of diode electron gun that delivers significant improvement in performance over previous metals. A new photoconductive layer has also been developed for use in Saticon-III, which reduces the lag effect, produces better highlight characteristics and amplitude response, and reduces image burn.



**Filming from the Shuttle Spacecraft**

*K. Maas*

Photographic materials have been aboard every U.S. manned space mission since the first suborbital flight in May, 1961. Much of the responsibility for the cameras, film selection, and film processing for these flights has rested with NASA. With the arrival of the operational shuttle program, making cargo space available to a wide variety of users, a new level of interest is being shown in filming from space.