

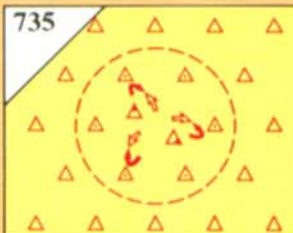
# HIGHLIGHTS



## 724 Choosing Eastman Color Negative Film 5247 or Eastman Color High-Speed Negative Film 5294

*R. C. Sehlin, G. L. Kennel, E. F. Ortman, and F. R. Reinking*

Since the introduction of high-speed color negative films, the cinematographer is frequently faced with selecting between shooting medium-speed (EI-125) Eastman color negative film 5247 or high-speed (EI-400) Eastman color high-speed negative film 5294. As an aid in making this decision, several objective parameters are examined as a function of exposure. In addition, general guidelines are presented for choosing the most appropriate film for different exposing conditions. The guidelines generally suggest that 5294 film should be used in low-to-moderate exposure conditions and 5247 film in moderate-to-high exposure conditions. The choice in the moderate-exposure condition must be made on the basis of the specific look the cinematographer desires.

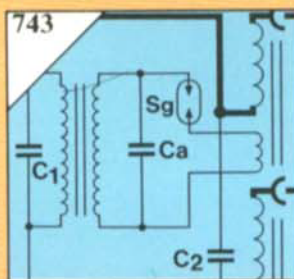


## 735 New Fujicolor High-Speed Negative Film and Fujicolor Positive Film

*S. Yamaryo, S. Ishimaru, and K. Takemura*

This article describes two new motion-picture films recently introduced by

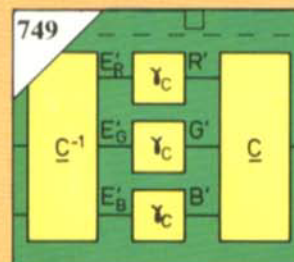
Fuji Photo Film Co., Ltd.: the ultra-high-speed Fujicolor High-Speed Negative Film AX 8514/8524, with an exposure index of 500; and Fujicolor Positive Film LP 8816/8826. The key features of each of the new films are discussed, together with the techniques used to obtain higher speed and improved picture quality. The new films are compared with earlier versions, and the advantages explained. The 8514 film is faster than the 8512, yet yields a better quality image. The LP provides longer color-image life, better color reproduction, and many other improvements of benefit to the motion-picture and television industries.



## 743 An Overview of Ballast and Igniter Systems for Metal Halide Lamps in Film and Television Applications

*R. Croce*

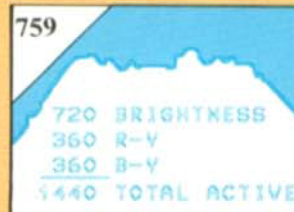
Metal halide lamps are now widely used in the motion-picture and television fields because of the quantity of light produced in relation to the energy consumption, as compared with tungsten lamps. This article attempts to clarify the ignition and powering problems encountered with these lamps. The design of igniters and ballasts required with the metal halide lamps is discussed from the technical point of view in terms of lamp requirements and market needs. The design of these appliances demands not only a good knowledge of lamp requirements and an up-to-date understanding of the technology, but also an awareness of the users' needs in the field of TV and motion-picture shooting.



## 749 High-Definition Television Production Standard — An Opportunity for Optimal Color Processing

*R. Schäfer*

To justify the enormous investments necessary to establish a new HDTV system, the gain in quality over high-quality TV, based on the digital standard for studios (CCIR Rec. 601), must be substantial. The conventional method of generation and processing of color components causes deficiencies: loss of sharpness and resolution; reduced contrast ratio and color gamut; and changes in hue, saturation, and brightness. Five constant-luminance systems were investigated and subjectively compared using artificial test patterns. All these systems exhibit considerable gain in quality over conventional processing. A new coding system that uses the 1976 CIE  $L^*a^*b^*$  formulas and avoids all the above deficiencies, is presented. The use of this kind of processing for HDTV would meet the demands of the future, in which we will have a variety of different displays.



## 759 Digital Component Television Made Simple

*E. S. Busby*

This tutorial article is intended to leave a vivid and memorable recollection of the essentials of digitization and the ramifications of the spatial loci of the samples taken. No stand is taken on any sampling method. Any arguments are those made previously by others, and are couched in the very simplest of analogs. The intent is to create an understanding where none exists, rather than expand upon an incomplete understanding.