

# JOURNAL OF THE

# SMPTE



ENGINEERING • SCIENCE • TECHNOLOGY  
FOR MOTION PICTURES • TELEVISION • INSTRUMENTATION • HIGH-SPEED PHOTOGRAPHY

- 81 The Energy Crisis: Reflection and Perspective — Part I, Reflection • *Wilton R. Holm*
- 83 A Signal Effort by the SMPTE: Ancillary Signals in Television Broadcasting • *Gerald G. Graham*
- 83 Coded Information Within the Picture Area • *Wilton R. Holm*
- A New Segmented-Scan Helical Broadcast Video Recorder**
- 94 The Recorder's Design and Economic Factors • *B. E. Guisinger*
- 100 A Unique Timing-Reference System for Broadcast Videotape Recorders • *Bert H. Dann*
- 105 The Servo System for a Helical Broadcast Recorder • *Donald E. Morgan*
- 109 An Analysis of Quadruplex and Helical-Scan Video Recording • *Jerome L. Grever*
- 114 The Story of Optical Sound Recording With 8mm — Type S (Super-8) Film • *Keiji Tanaka*
- 117 Improving 8mm — Type S (Super-8) Optical Sound by Design of Film and  
Recording System • *Katsuji Muramatsu*
- 125 American and International Standards  
Draft American National Standards: C98.12, Time and Control Code for Video and Audio Tape for 525 Line/60  
Field Television Systems; C98.13, Cartridge Spools for 2-in Quadruplex Video Magnetic Tape; International Stan-  
dards: ISO 2968-1973(E) Cinematography — Recording Characteristics for Magnetic Sound Record on 8mm Type S  
Motion-Picture Prints — Specifications
- 129 115th SMPTE Conference and Exhibit
- 130 Denver Winter Television Conference Report
- 134 International Standardization • *Alex E. Alden*
- 129-160 Contents on inside back cover

115th SMPTE Technical Conference and Equipment Exhibit • April 21-26 • Los Angeles