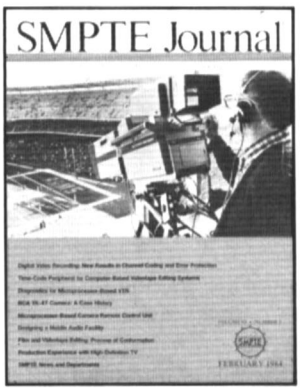
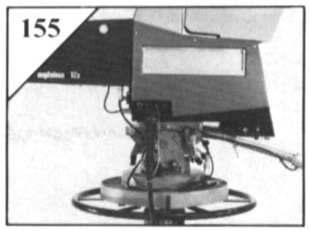


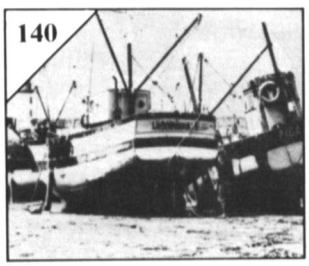
HIGHLIGHTS



Product Evolution Through Software: The RCA TK-47 Camera

B. Hurley

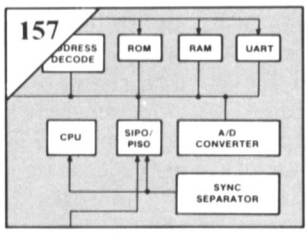
Using the RCA TK-47 studio camera as a case in point, this article describes how a microprocessor-based product can be expanded and enhanced by means of software. New features made possible by a redesign of software include lens correction, file expansion, and the addition of auto and check sequences. Recommendations for other applications are also included.



Digital Video Recording: New Results in Channel Coding and Error Protection

J. K. R. Heitmann

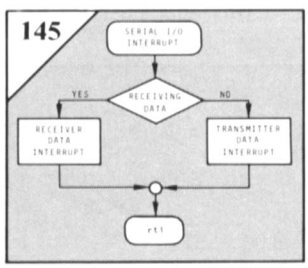
Standardization of a magnetic track pattern on videotape ensures mechanical compatability. To achieve electrical compatibility, it is necessary to specify the location of the video bits within the track, the channel code, and the type of error protection. This article discusses these parameters, including the number of recording channels, with the objective of achieving an economical digital videotape recorder.



A Microprocessor-Based Camera Remote Control Unit

J. A. Gray

In reponse to a survey of TK-47 automatic color camera users, RCA has developed a dual, self-contained "smart" remote control unit, called an SRCU. The unit relies heavily on software to meet varying user requirements. Some features are simultaneous, yet independent, control of two camera chains; file and recall of multiple banks of picture compositions; membrane-style switch panel; built-in self-diagnostics; and compatibility with the developing SMPTE/EBU serial control bus.



An Intelligent Time-Code Peripheral for Computer-Based Videotape Editing

M. Racelo

In 1981, the SMPTE proposed a new time-code format called vertical-interval time code (VITC). This article describes VITC and how it differs from longitudinal time code (LTC), and identifies what is required for a VITC peripheral to be compatible with computer-based videotape editing.

Designing a Mobile Audio Facility

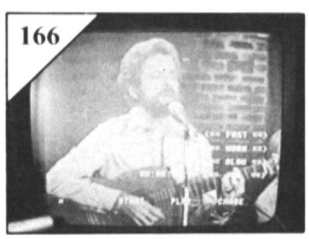
S. R. Colby

In May, 1982, WGBH Educational Foundation began operation of a mobile audio facility designed and built to its own specifications. This article discusses philosophical and design considerations, including selection of vehicle, functional versatility, speed and ease of setup and strike, trouble-free interface with ac power and sound reinforcement systems, and operator and client comfort.

Diagnostics for a Microprocessor-Based Videotape Recorder

M. G. Rose and G. Warren

With the evolutionary increase in complexity of control systems and servos used in VTRs, the need for self-diagnostics has been recognized. By adding feedback to a microcomputer-based system, it is now possible to constantly monitor many of the VTR's operating parameters. This article describes the fault-detection and isolation system of the Ampex VPR-80 that can aid engineers in troubleshooting faulty assemblies.



Film and Videotape Editing: The Process of Conformation

J. E. Rooney

Since videotape editing began in 1956 with the introduction of videotape recording, videomakers have tried to pattern their processes after filmmaking, where editing has become an art. Filmmakers, on the other hand, have looked obliquely toward the world of videotape, and have seen transistors, resistors, and invisible images. Now, however, the market place demands videotape and the editor must speak time code.