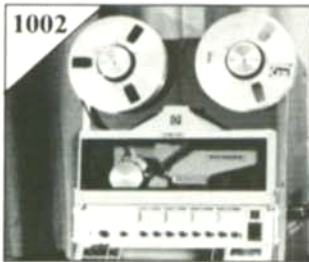


Highlights

1002



Picture Processing for the 4:2:2 Digital Videotape Recorder

T. Eguchi, K. Tatsuzawa, J. G. S. Ives, and J. H. Wilkinson

Digital videotape recording has been researched for more than ten years.

This article analyzes the results from more than five generations of experimental hardware in terms of the fundamental tape format parameters and the signal processing required to achieve optimum performance from those parameters. Most researchers agree on the major elements of the track dimensions.

1007

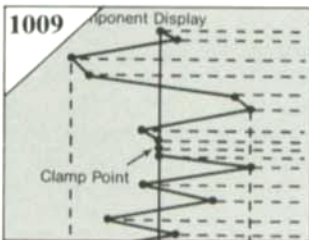
$$\begin{aligned} R &= 0.299R + 0.587G + 0.114B \\ R &= 0.713(R-Y) + 0.500R \\ &\quad - 0.418G - 0.082B \\ C_B &= 0.564(B-Y) + 0.500B \\ &\quad - 0.169R - 0.331G \end{aligned}$$

Digital Video Standards: A Progress Report

S. Baron

This article provides a snapshot of the current status of SMPTE efforts in the area of digital video component interface standards for use in studio applications. Electrical and mechanical interface requirements and considerations are given. The technical bases and performance level requirements of CCIR Rec. 601, SMPTE RP 125, and the current efforts toward a serial digital standard (T14.18-X1) are provided.

1009



A New and Unique Method for Measuring Video Analog Component Signal Parameters

D. Baker

Research has been conducted to provide an X/Y display capable of simultaneously monitoring three video component signals. Since relative amplitude and delay inequality are important parameters to adjust and quantify in the component environment, such a display should provide a clear and accurate illustration of these errors. This article reports on the progress of the evaluation of an X/Y display that approaches these goals.

1015



Hybrid Circuit Construction for Routing Switchers

F. Zimmerman

This article describes the objectives and advantages of the use of hybrid elec-

tronic circuits in the manufacture of electronic routing switcher equipment for video applications. Original design objectives are reviewed, and a description of hybrid circuitry is included, with comparisons between hybrid and conventional circuit construction. Hybrid construction provides for modular design, leading to economies of manufacture, maintenance, and expansion.

1020

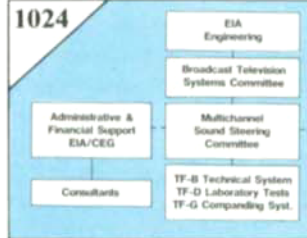


Digital Stereo Sound with Terrestrial Television

A. H. Jones

The BBC is developing a digital system that will carry two high-quality sound signals with existing System I UHF television transmissions. The system uses a second sound carrier that is spaced at about 6.5 MHz above the vision carrier and four-phase differential phase-shift keying (DPSK) modulated at a bit rate of about 700 kbit/sec. Over-air and laboratory tests proved the ruggedness and compatibility of the system and led to a detailed specification which is now under discussion.

1024



Stereo Audio in Television: The BTSC Multichannel Sound System

T. B. Keller

This article describes the work done in the industry on multichannel television sound standards for the reproduction of high-fidelity sound in TV receivers. The objectives for this improved television service are discussed, along with a short review of related laboratory tests and reports. The system devised by the EIA Broadcast Television Systems Committee (BTSC) is described in detail. In addition, some of the new FCC rules are explained which govern the use of subcarriers on TV for several purposes including stereophonic sound.

1028

How sophisticated system is in a video understand the content and in a tone capture exposure to flesh tones in reference between a high

A Proven Method of Establishing Exposure Indexes for Video Cameras

H. Mathias

This article discusses a production-tested method for determining exposure control methods, camera sensitivity, waveform monitors, lighting, and other factors. The importance of this procedure in practical production situations is described.