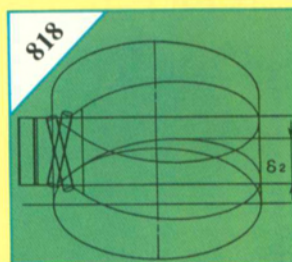




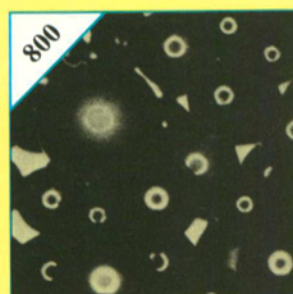
HIGHLIGHTS



Tape Selection and Mechanical Considerations for the 4:2:2 DVTR

Y. Fujiwara, T. Eguchi, and K. Ike

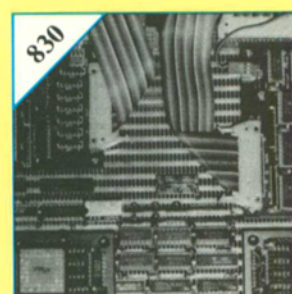
Some time has elapsed since digital video recording appeared to be a practical possibility. During this period much debate has taken place within the broadcast industry regarding the 4:2:2 DVTR format standardization. This article discusses one of the major issues affecting the realization of the DVTR in the near future, including proper tape materials, tape format and mechanical configuration. The current situation is analyzed from a technical viewpoint, and a practical solution is proposed based on the latest experiments.



In-Situ Precipitation as the Regeneration Step in Ion Exchange for Silver Recovery

P. R. Quiñones

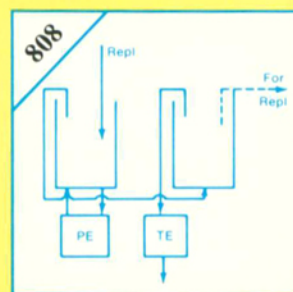
The feasibility of in-situ precipitation as the regeneration step in ion exchange for silver recovery is presented. In this step, the silver is precipitated inside the resin instead of eluted with a regenerant. The resin can be reused for many cycles with no decrease in capacity, and the accumulated silver can then be recovered by incinerating the resin. This procedure, like conventional ion exchange, is effective only for effluents containing low thiosulfate concentrations. Effluent silver levels below those of conventional ion-exchange methods have been achieved in our experiments, with the advantage of less supervision and better regeneration control.



A New Multiplier-Adder LSI for Digital Video Processing

S. Iwase, I. Kumata, and Y. Hashimoto

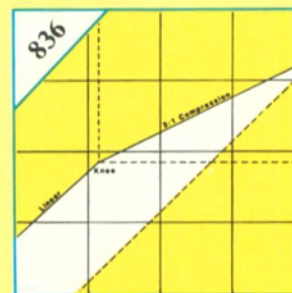
This article describes a new multi-purpose complementary metal oxide semiconductor (C-MOS) multiplier-adder large-scale integrated circuit (LSI), the CX-7997, developed for digital video processing. Employing pipeline structure and C-MOS technology, the LSI has an operating clock-rate sufficient for video processing, but has the advantage of low power consumption. The design concept, examples of application, and results of some experiments with the CX-7997 are discussed.



Silver Recovery Management for Motion-Picture Laboratories

P. J. Mutter and S. J. Powell

To aid in silver recovery from motion-picture film, several possible layouts have been studied as a means of estimating silver concentrations at various locations in a process. This article reviews several recovery methods, such as precipitation, steel-wool cartridges, electrolytic cells, and ion-exchange resins. Methods of chemical analysis are discussed, mathematical equations for estimating silver concentrations are given, and an analysis of the cost-effectiveness of the various silver-recovery methods is included.



A Sound Mixer's Guide to VideoDisc

C. P. Repka

The audio performance levels of the current generation of videodisc players and home audio equipment has increased the demand for video software with high-quality audio. The sound mixer must produce an optimum audio mix that will satisfy the sometimes conflicting requirements of the listening conditions and the needs of the producer and/or artists. This article discusses some of the problems and applications of the videodisc technology, with specific attention to audio mix problems. The basic operating principles of the optical Laserdisc and CED systems are presented, and the similarities and differences between the two formats are discussed in detail.