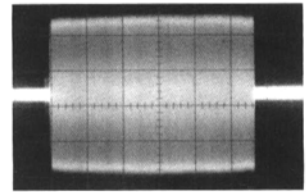
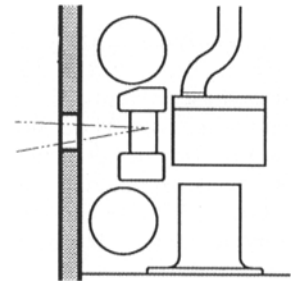


# Highlights

- 596 A New Drum and Heads for the D-2 Digital VTR** • *H. Ono, T. Okamoto, N. Kaku, K. Ogiro, S. Ozaki, and F. Scott* • A new drum system for the D-2 digital VTR has been developed at Hitachi. The new drum, with a specially shaped drum surface and head windows to control air film, assures stable tape contact, and a new multilayered amorphous thin film metal recording head increases recorded level 3 dB over ferrite heads. These two new features improve data reliability and increase the margin of error rates.



- 601 The Design of a Very High Performance Motion-Picture Screening Room** • *R. E. Wetmore, G. Nash, and G. Berggren* • This article describes the design of a new screening room for Twentieth Century-Fox Corp. in New York City. Extensive engineering analysis was used to design a small screening room for use by up to 22 persons, utilizing system design principles to obtain exceptional picture and sound performance. The traditional approach to theatrical projection and sound was thoroughly reexamined. In many cases engineering analysis showed that the traditional methods were not appropriate, and much information was gained that can be used to provide substantial improvement to projection and sound practices worldwide.



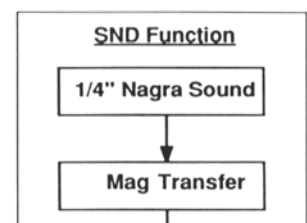
- 606 101 Years of Television Technology • SMPTE Classic Reprint, Originally Published 1976** • *R. S. O'Brien and R. B. Monroe; with contributions by C. E. Anderson and S. C. Runyon* • The worldwide television systems of 1976 evolved from a laboratory demonstration of crude but recognizable images just 50 years earlier. Ideas and concepts for television date back another 51 years. The development of television progressed through an early experimental stage in which mechanical-scanning schemes were soon overtaken and turned aside by electronic systems. This led into a period of experimental broadcasting and to the establishment of broadcasting standards. After an interruption by World War II, expansion took place rapidly.



- 630 Coming Together (Point of View)** • *M. J. Sherlock* • The Advanced Television Systems Committee (ATSC) and the Institute of Electrical and Electronic Engineers (IEEE) held a joint Digital Systems Information Exchange in Washington, D.C., March 12–13, 1991. The purpose of the exchange was to bring together those parties in the computer and motion-picture and television industries who are actively engaged in HDTV and HRS (High Resolution Systems) related activities. Michael J. Sherlock, president of NBC Operations and Technical Services, was invited to give the opening keynote address. Sherlock's address charged those in attendance with coming together and finding a common ground.

Those of us who have to implement the visions of HDTV cannot ignore that message. We need to find practical solutions. We need agreement on how information can be used to reconstruct images in a form which fits the requirements of the different businesses we are in. In *real* terms that translates into: "Who are our customers and what do they want." Among ourselves, we need communication and understanding.

- 633 Approaches to Videodisc-Based Editing** • *S. D. Becker and L. S. Spangler* • Optical videodiscs offer many benefits for editing applications. Their interactive capability provides nearly instant access to 30-minute segments of video with two channels of audio. Videodisc players deliver frame accurate freeze-frame, slow motion, and reverse motion and are cost-effective and reliable. In addition, recent advances in both DRAW disc development and edit system hardware have made the utilization of videodiscs for editing purposes more practical than ever before. This article describes two approaches currently in use.



- 637 Report From the Ad Hoc Group on Video-to-Film Transfer Characteristics** • *G. Schutz* • This Ad Hoc Group (AHG) was created by the Working Group on High Definition Electronic Production and charged with determining the conditions for producing film images from a video source that would match those from a film source. While the experimental work of the AHG has utilized an electron beam recording (EBR) transfer system, the fundamental concepts should apply to other video-to-film transfer technologies.

