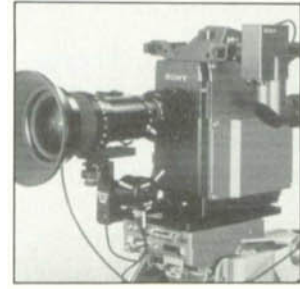
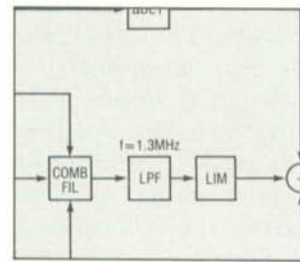


# Highlights

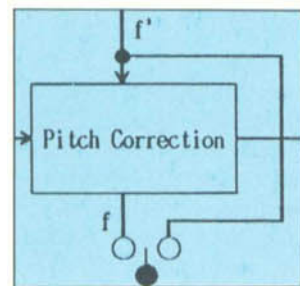
- 364 The HDC-300 — A Second-Generation HDTV Camera • L. J. Thorpe •** Considerable experience was gained by a widespread international deployment of the first-generation HDC-100 cameras with a diverse spectrum of HDTV program origination. Throughout, a close dialogue was maintained between these many end users and our HDTV camera design engineering group. A working alliance of the video and film communities was also developing the parameters for a complete rendering of an HDTV studio origination standard, which was finally completed by SMPTE in 1988 in the form of the now well-known SMPTE 240M. This emerging standard was to shape many of the technical decisions in the design of the new HDC-300 camera.



- 376 Recent Technical Developments in the S-VHS VCR for Broadcasting and Professional Applications • A. Hirota and N. Neubert •** S-VHS frequency spectrum allocations for luminance and chrominance signals on the video recording, resultant performance, and comparison with the U-SP format are reviewed briefly. Technical considerations leading to selection of oxide tape and ferrite heads for S-VHS recording are discussed, and Y/C video signal transmission and its benefits are described. Treated in more detail are some of the innovative video processing techniques recently developed to achieve significant picture performance improvements in professional S-VHS VCRs and peripheral products.



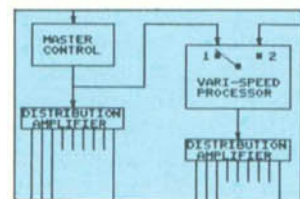
- 381 Time Compression/Expansion with D-2 Composite Digital Recording • P. Berger, K. Kaminaga, Y. Murakami, M. Suda, and S. Carr •** Time compression/expansion of program material is a common procedure in both the broadcast and post-production industries. VTRs built to all the popular analog formats allow some form of off-speed play operation. Time compression/expansion involves processing of the audio and video signals in such a way that information is either selectively removed or added. Here we will look at how off-speed play is currently accomplished using analog VTR formats, then examine how a D-2 digital VTR handles this function. Because of the way in which audio is recorded in the D-2 recording format, a new approach to off-speed play is required.



- 386 Sound Genie™ — An Automated Digital Sound Effects Library System • M. Jaslowitz, T. D'Silva, and E. Zwaneveld •** The National Film Board (NFB) of Canada's sound effects library currently includes 1200 hours of analog tape material, representing some 40,000 effects. The NFB's new automated digital library system, based upon rotary digital audio tape (R-DAT) technology, will allow editors to search for effects electronically, using local or remote terminals — any effects selected can be robotically retrieved, auditioned and/or digitally copied, under computer control. The system has a capacity of 2000 hours of digital stereo sound.



- 392 Applications of a Vari-Speed Processor for Film • J. C. Schmidt •** Vari-speed processors for motion-picture sound film equipment are now available. These processors allow audio film machines to run at a speed different than the system speed while maintaining a sync point. Besides the making of transfers at new frame rates, the new applications include mixed frame rates on the same session, and the slowing down or speeding up of ill-fitting tracks. This allows for the correction of numerous items in the mix and a whole new flexibility.



- 396 The History of Color Picture Tubes and Some Future Projections • S. H. Kaplan •** This article gives a brief history of the development of the shadow-mask color CRT from its monochrome roots. The reasons for the overwhelming superiority of this tube are presented. Other approaches to color television are also briefly referred to including the index type of color CRTs, projection color TV, and the current LCD color display. The many advancements since the color CRTs were introduced in 1952 are covered, including the numerous improvements past and still continuing. Some thoughts as to the future of color displays are also considered.

