

careful to use only the cleaning agent recommended by the manufacturer of the equipment. This is extremely important in cleaning the heads, as some agents will damage those precise assemblies.

CONCLUSION

In this discussion, we have tried to present the principles of magnetic recording in a way that will aid the persons who operate and maintain the equipment. Most aspects of the process have been merely introduced, but if we have succeeded in imparting some realization of what is taking place in our alignment and maintenance procedures the discussion

will have been worthwhile.

This industry has been just born in the commercial sense, but it is already expanding. Today we are using magnetic recording not only in audio, but also in digital and analog instrumentation applications. And recently we entered the age of magnetic photography when we started putting the television picture on tape. The principles involved are the same, whether it is VIDEOTAPE* recorder, a theater sound system, a computer application, or a home installation. We hope this discussion has aided you in understanding those principles.

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BIBLIOGRAPHY

- E. D. Daniel and P. E. Axon: The Standardization of Magnetic Tape Recording Systems; The B.B.C. Quarterly, Vol. VIII, No. 4, Winter 1953-54.
- E. D. Daniel and P. E. Axon: The Reproduction of Signals Recorded on Magnetic Tape; The Proceedings of the Institute of Electrical Engineers, Vol. 100, Part III, No. 65, May 1953.
- E. D. Daniels: The Influence of Some Head and Tape Constants on the Signal Recorded on a Magnetic Tape; The Proceedings of the Institution of Electrical Engineers, Vol. 100, Part III, No. 65, May 1953.
- E. D. Daniel, P. E. Axon, and W. T. Frost: A Survey of Factors Limiting the Performance of Magnetic Recording Systems; Journal of the Audio Engineering Society, Vol. 5, No. 1, January 1957.
- J. G. McKnight: The Frequency Response of Magnetic Recorders for Audio; Journal of the Audio Engineering Society, Vol. 8, No. 3, July 1960.
- J. G. McKnight: Signal-to-Noise Problems and a New Equalization for Magnetic Recording of Music; Journal of the Audio Engineering Society, Vol. 7, No. 1, January 1959.
- F. G. Lennert: Equalization of Magnetic Tape Recorders for Audio and Instrumentation Applications; Trans. IRE-PGA, AU-1, No. 2, March 1953.
- R. J. Tinkham: Solution to Some Problems in Making Master Tapes; Journal of the Audio Engineering Society, Vol. 5, No. 2, April 1957.
- G. B. Goodall: The Videotape Recorder; International Projectionist, April to August 1959 issues.
- R. J. Tinkham: Magnetic Recording Media Considerations for Improving Masters and Dubs; Journal of the SMPTE, Vol. 67, October 1958.
- John G. McKnight: The Distribution of Peak Energy in Recorded Music, and Its Relation to Magnetic Recording Systems; Journal of the Audio Engineering Society, Vol. 7, No. 2, April 1959.
- R. A. Isberg: The 120-ips Tape Duplicator for Four-Track Commercial Stereo Tapes; Journal of the Audio Engineering Society, Vol. 8, No. 2, April 1960.
- C. B. Stanley: How Magnetic Tape Characteristics Affect System Performance and Determining Optimum Bias; Ampex Publication, Technical Information Brochure No. 4.
- C. B. Stanley: An Approach to Quantative Methods for Evaluation of Magnetic Recording Performance; Ampex Publication, Technical Information Brochure No. 1.
- W. M. Fujii, G. Rehklau, J. McKnight, W. Miltenberg: Multi-Channel Recording for Mastering Purposes; Journal of the Audio Engineering Society, Vol. 8, No. 4, October 1960.
- W. Earl Stewart: Magnetic Recording Techniques; McGraw-Hill Book Co., Inc; 1958.
- S. J. Begun: Magnetic Recording; Rinehart Books, Inc; 1949.
- W. K. Westmijze: Studies on Magnetic Recording; Phillips Research Laboratories, Reprinted from Research Reports 8, Reprint R213, R214, R217, R222.