

grain structure of the image are *at least* 10 db lower in level than this noise due to dirt accumulated during processing. If it were considered necessary, therefore, to produce photographic tracks very nearly as quiet as magnetic records, this could be done merely by doing an unusually careful job of filtering the developer, fixing bath, wash water, and air used in the film laboratory.

March 27, 1958

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From George Lewin

I greatly appreciate Mr. Guy's comments and welcome the opportunity to acknowledge his contribution to the preparation of the stereophonic demonstration film which accompanied Col. Ranger's and my own presentation at the 82d Convention on October 8, 1957. The credit was recorded on the film but I regret that I neglected to include it in the published version in the December 1957 issue of the *Journal*.

Mr. Guy is certainly correct when he states that it is feasible today to obtain excellent frequency response and low distortion on 16mm prints with optical soundtracks. The regrettable thing is that so many producers do not consider it worth the added expense for equipment and personnel to achieve and maintain optimum quality. The great need is for better printers and constant vigilance to keep exposure, processing

and projection within the necessary narrow tolerances. If the proposal to make stereophonic recordings by combined optical and magnetic tracks stimulates the need for better control of optical sound quality in order to match magnetic sound quality, that alone should make it worth while.

The advantage which Mr. Guy points out regarding the compatibility of the optical-magnetic combination is a very good one. Still another advantage derives from the complete absence of crosstalk between the two channels. This is something which will be impossible to achieve in an all-magnetic system because of the necessary close spacing of the heads if both tracks are to lie within the area now occupied by the optical track. Because of the fact that the magnetic halftracks would probably have to be considerably less than 50 mils wide, it is likely that their signal-to-noise ratio would be inferior to that of a good optical track even when completely covered by a magnetic track and reproduced with a good lead sulfide cell.

Incidentally, I should like to acknowledge the assistance which is being given me by the Bell & Howell Co. and the McKay Research Laboratories in my quest for improved photocells which will still further improve the infrared transparency of magnetic tracks.

March 31, 1958

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Editorial Note

Mr. Guy has requested that comments, suggestions and questions be referred to any of the following:

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Errata

William S. Halstead, "The NARCOM Plan for Transatlantic Television and Other Wideband Telecommunication Services," *Jour. SMPTE*, 67: 134-138, Mar. 1958.

On page 134, column 3, line 6 of paragraph 2, *read*: 1951 for 1950.

On page 135, column 3, 5th line from the bottom, *read*: . . . at about 22 dba at zero level for . . . at about 22 db, etc.

For Reference 6 on page 138, *read*: K. Bullington, "Radio transmission beyond-the-horizon in the 40- to 4000-mc band," *Proc. IRE*, 41: 132-135, Jan. 1953.

Due to the author's isolation by snowstorms on a field trip, the final manuscript and proofs regrettably could not be reviewed before publication of the group of papers on international television.