



A Symposium on 16mm Internegative/Positive Release Printing

ROBERT A. COLBURN, *Chairman*

This Symposium was first presented during the Chicago Section Regional Meeting held at Iowa State College, Ames, Iowa, November 8-9, 1957. At that time, the subject was comparatively new and many of the related problems still unsolved. The three competing 16mm laboratories in the Midwest then using the new medium welcomed the opportunity to get together and talk about their various problems and their methods of solving them. They were enthusiastic about the new products designed to meet a pressing need in the 16mm field. Since that time, much has been learned and several improvements have been made in the materials available and in the methods used.

It is still generally agreed that the finest quality 16mm release prints are obtained by printing directly from the 16mm originals on a color reversal print stock. But where a large number of release prints are required this method is a definite hazard to the original films, and is an expensive process.

For some years, especially since the introduction of Eastman Reversal Color Print Film, Type 5269, reasonably satisfactory release prints were obtainable through reversal color masters treated to reduce contrast. Although this method reduced the hazard to the original films and made the material

available for other uses, it did not materially reduce the cost of release prints. More important, the substantial degradation of color values made its use unsatisfactory where color brilliance was essential.

The new Eastman Color Internegative Film, Type 7270 made it possible to make release prints on Eastman Color Print stock with full color brilliance at a greatly reduced cost. It also made it economically practical for a laboratory to handle its own color processing with complete control from start to finish within the individual laboratory. Due to the characteristics of this new material, certain methods of more precise control had to be devised and new printing equipment designed and built in order to take full advantage of the capabilities of the new medium.

This Symposium deals first with problems encountered in the three major steps of print production — preparation of originals, printing procedures and controls, and processing procedures and controls — and then takes up equipment specially designed and built for 16mm internegative/positive use. The laboratories which participated in the Symposium were: Geo. W. Colburn Laboratory, Inc., Chicago; Lakeside Laboratory, Gary, Ind.; The Calvin Co., Kansas City, Mo.

Preparation of 16mm Color Reversal Originals for 16mm Internegative/Positive Release Printing

By ROBERT A. COLBURN

The Geo. W. Colburn Laboratory sets up originals in A & B rolls to incorporate fades, lap dissolves and invisible splices; timing is both for color balance and exposure balance; originals are cued for automatic printer operation; and originals are treated to minimize the formation of Newton's rings.

THE MAIN OBJECT in preparing an original 16mm film for color internegative/positive release printing is to introduce adequate color correction, exposure correction, and fade- and lap-dissolve effects directly in the internegative so that release prints can be made on a high-speed color positive printer using

a single uniform exposure and color filter pack throughout. Naturally, it is desirable to be able to do this on the first try, since remakes at this stage are costly to the laboratory.

The standard method of A & B roll setup as recommended by the Association of Cinema Laboratories can be followed by the client or by the laboratory editing department. This method has been reported in the *Journal* ("A report from the Association of Cinema Laboratories," pp. 383-386, July 1955). Several bulletins have been

issued by the Association on the subject. The Geo. W. Colburn Laboratory has prepared its own bulletin, combining and condensing information especially applicable to its operations.

When the A & B rolls are ready for timing, the utmost in care, experience and judgment is required to achieve the exact color compensating filter needed for each scene to keep a given sequence in color balance, and the exact exposure needed to keep each scene in density balance. These two operations are handled separately. The entire film is carefully examined over a light box with actual color compensating filters laid over adjoining scenes until a satisfactory balance is obtained. This operation can be done more rapidly

Presented on October 20, 1958, at the Society's Convention in Detroit by Robert A. Colburn, Geo. W. Colburn Laboratory, Inc., 164 North Wacker Dr., Chicago 6.
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