



Fig. 5. The punched-card system with typewriter.

ing hence the reason for intermediate memories.

Punching Repeater

In order to make the operator's job easier and also in order to overcome any

difficulty which might crop up in case of trouble with the automatic system it is clearly an important requirement to obtain in clear language a duplicate of the lighting program. The repeater typewriter (Fig. 2) transcribes on a special

form the condition of each individual lighting state giving the serial number of the circuits and the value of the light intensity for each state, thus enabling the operator to intervene at any moment if required. This clear program can be used if it becomes necessary to go back to hand operation.

Conclusions

This system, built with fairly simple components, is no more expensive than other modern control equipment. In our opinion it anticipates future needs because it substantially reduces both the time required for rehearsals and the number of operators normally required. These two points are of considerable importance in terms of economy.

It is really good fun to keep in a pocket a bunch of cards which can duplicate at any later date the result of exhaustive rehearsals.

Discussion

K. Blair Benson (Columbia Broadcasting System): Can you tell us where this equipment is in use at the present time?

Mr. Cooley: My impression is that it has been built and is in the check-out stage.

Written reply by Mr. De Backer: "... it will be in use in December, 1961, at the Théâtre National de Belgique in Brussels."

Letter to the Editor: Infrared Transparency of Magnetic Tracks

In reference John A. Maurer's excellent paper on "Photographic Sound for 8mm Film" (*Jour. SMPTE*, 70: 618-624 Aug. 1961), I made a comment at the end of the published discussion to the effect that I was going to demonstrate on the next day a method for putting both optical and magnetic tracks on the same film.

I have received several inquiries from people asking what I was referring to and whether the demonstration actually took place, since it was not published as a paper. By way of explanation I would like to point out that the demonstration did take place — with 16mm film — but I did not think a formal paper was justified, since I had presented two papers on the subject in 1957, and these were published in the September and December issues of the *Journal* for that year under the title "The Infrared Transparency of Magnetic Tracks."

Briefly, these articles describe how, by utilizing the infrared sensitivity of the lead-sulfide photocell, it is possible to cover an optical soundtrack completely with a magnetic stripe and then reproduce both soundtracks independently and simultaneously for bilingual and stereophonic purposes.

The reasons for putting on a new demonstration at Toronto were to show that:

(a) The new germanium photodiode which has been introduced as a superior substitute for the lead-sulfide cell in many projectors was equally effective for the infrared transparency of magnetic tracks.

(b) The new Eastman magnetic stripe could be used just as effectively as the Reeves stripe and the Minnesota Mining laminate which were previously used.

(c) The occasion was also taken to demonstrate a wide variety of stereophonic recordings and the effectiveness of all-transistor power amplifiers.

In view of Mr. Maurer's article which mentions the possibility of providing stereophonic sound for 8mm pictures by changing the perforation standard, I would like to point out that with my method it should be possible to obtain stereophonic or bilingual sound even if the proposed change is not adopted. Moreover, my method inherently provides complete freedom from crosstalk between channels, which would be impossible with two magnetic tracks, and difficult with two optical tracks in such limited space.

On the other hand, I do agree with Mr. Maurer that his proposed change of standard would be very desirable for either magnetic or optical sound — as well as a combination of both.

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GEORGE LEWIN
U.S. Army Pictorial Center
35-11 35th Ave.,
Long Island City 1, N.Y.