ing the electron lens much larger than the diameter of the electron beam as it enters the lens.

The gun uses crossed cylindrical electrostatic electron lenses constructed as shown schematically in Fig. 9. This type of lens has several advantages. The same electrodes can be used for focus and deflection, which allows a longer deflection distance with a short focal length lens. Since the spot is deflected only in one direction it can be focused after deflection in the other direction. This results in a smaller spot height than width because of greater demagnification. This is a very desirable condition since in thermoplastic recording the raster lines must be clearly resolved to produce modulation.

Centering of the electron beam in the lens is accomplished entirely with electrostatic deflection plates upon installation of the tungsten hairpin cathode. The cathode structure is stable enough to require little or no adjustment throughout the life of the cathode.

The film is heated for developing the image before it is charged by infrared radiation from a small Nichrome filament.

Audio can be recorded along with the video either as an optical track beside the video image, or the back of the film can be coated with iron oxide for a magnetic audio track.

Although a visible image appears on the film, which can be used for monitoring or editing, this recorder was designed for applications where an electrical video signal is the primary output. Consequently the reading equipment consists of a transport similar to the one used in the recorder with a line-scan vidicon as the detector. A synchronizing track is recorded on the tape during the horizontal and vertical retrace interval which is used to control the transport drive motor and vidicon scanning position, so that the reading beam will track the recorded horizontal lines in synchronism with an external "house" synchronizing source.

References

1. W. E. Glenn, "Thermoplastic recording," *J. Appl. Phys., 30:* No. 12, 1870, Dec. 1959.
2. W. E. Glenn, "Thermoplastic recording," *Jour. SMPTE, 69:* 577–580, Sept. 1960
3. W. E. Glenn, "New color projection system," *J. Opt. Soc. Am., 48:* 841–843, Nov. 1958.

Business Meeting, October 22, Re: Society Membership Dues

MR. J. W. SERVIES, *President*, has announced that the Board of Governors has approved the calling of a business meeting of the voting members of the Society to be held on Monday, October 22, 1962, at The Drake, Chicago, Ill. This membership meeting will be held immediately following the completion of the Get-Together Luncheon at the 92nd Semi-annual Convention.

The principle item to be considered at this meeting will be a proposed amendment to the Bylaws changing the annual membership dues. This proposed amendment was recommended by the Financial Advisory Committee and was approved by the Executive Committee on July 6. In meeting on July 20, the Board of Governors approved the following:

> (19) RESOLVED, that a regular membership meeting of the Society be called for October 22, 1962, at the Drake Hotel, Chicago, Illinois, and that the following proposed amendment to Sec. 1, Subsec. A, Article VII of the Bylaws be approved for consideration for adoption at that meeting of the Society: "The annual dues shall be twenty dollars ($20) for Fellow and Active members, fifteen dollars ($15) for Associate members, payable on or before January 1 of each year, and five dollars ($5) for Student members, payable on or before October 1 of each year."

In the Board's discussion of this proposal it was indicated that the last increase in dues was in 1955 when Active and Fellow dues were raised from $15 to $18 annually, Associate dues from $10 to $12 annually, while Student dues remained at $5. The purpose of the dues increase which if approved will go into effect beginning with the year 1963, is to raise revenue and to keep a reasonable relationship between the various items that produce revenue and our total budget. Since 1955, our total budget has increased by more than 50%, the rates for printing our Journal have gone up 20%, and other expenses have increased more or less accordingly.

Individual membership revenue in 1955 represented about 30% of our total budget, whereas it will represent less than 25% for the year 1962. Over the years, the individual membership revenue has varied around a 25% figure and, with the additional revenue expected from the increased membership rates, we should come close to realizing this 25% figure.

Contingent upon adoption of the above resolution, the Executive Committee has approved an increase in annual subscription rates to the *Journal* from $12.50 per year to $16.00 per year. This increase maintains a differential between Associate member dues and the cost of an annual *Journal* subscription which favors an individual becoming a member rather than a subscriber.—*C. S. Stodter*, Executive Secretary.

Proposed American Standards

Four proposed film dimensions standards, developed by the SMPTE Film Dimensions Committee and approved by the Standards Committee, are published here for a trial period. Comments should be addressed to Alex E. Alden at Society Headquarters prior to (six weeks from release date). If no adverse criticism is received by that date, the proposals will be submitted to ASA Sectional Committee PH22 for further processing.

Three proposed revisions, PH22.1, American Standard Dimensions for 35mm Motion-Picture Film, DH-1870; PH22.36, American Standard Dimensions for 35mm Motion-Picture Film, KS-1970; and PH22.93, American Standard Dimensions for 35mm Motion-Picture Film, BH-1866, are technically the same as the previous issues. The appendix has been enlarged to incorporate tutorial data concerning perforation and shrinkage problems. PH22.139, American Standard Dimensions for 35mm Motion-Picture Film, KS-1866, is a new proposed standard for 35mm film stock having short pitch and a positive-type perforation.—*A.E.A.*