Section Meeting

Central

Approximately 100 members and guests were present at the April 19, 1949, meeting of the Central Section. J. R. Montgomery of the Revere Camera Company delivered the first paper on, "A New General Purpose 16-Mm Sound Projector." The machine described and demonstrated is intended for the medium-priced market composed of home, school, and commercial users of 16-mm sound films. Its single case is readily portable because of its relatively small size and low weight; the loudspeaker is mounted in the removable top cover, which becomes a resonated baffle for increased low-frequency response when placed upon a flat surface. Numerous mechanical design features resulting in both good operating characteristics and significant economies in manufacturing were outlined. Optical and electrical designs are based upon the use of the lead-sulfide phototube because of its inherent high sensitivity, freedom from microphonic noise pickup, excellent signal-to-noise ratio, and electromechanical sturdiness. The exciter lamp is operated at conventional temperatures on supersonic alternating current delivered by an oscillator. An extremely wide volume-control range is afforded by varying both the lamp temperature and the amplifier gain; very little field trouble with dye-type sound tracks has been reported. With so much volume-control range available, tracks which do not fully modulate the light beam can be reproduced at usable level, although with impaired signal-to-noise ratio. The latter is almost inevitably blamed upon the recording, since films with more opaque tracks reproduce normally. The extended control range, plus the relative insensitivity of the lead-sulfide phototube to voltage-supply variations, make the projector usable under the widely varying line-voltage conditions encountered in field use.

The second presentation of the evening was given by Eugene W. Beggs of the Westinghouse Electric Corporation's Lamp Division, under the title of "New Developments in Cadmium-Mercury Lamps and Other Vapor and Gas-Discharge Lamps for Motion Picture and Television Studio Lighting." This was originally given at the fall 1948 Washington convention of the Society of Motion Picture Engineers and was re-presented at this section meeting for the benefit of the local studio people.

Mr. Beggs gave a brief history of the development of gas-discharge lamps and outlined their salient characteristics. Mercury-vapor lamps of high efficiency and large lumen output have been unsuitable for color photography because of their lack of output in the red end of the spectrum. This deficiency has been corrected in lamps now under development by adding cadmium to the mercury. Experimental lamps of this type were demonstrated in direct comparison with plain mercury lamps using various colored objects to show the improved color composition of the light. Auxiliary power-supply equipment was described and illustrated in slides. Mr. Beggs stated that while the new lamps are not yet commercially available, it is probable that eventually they will find wide use in motion picture and television studio lighting because of their efficiency, excellent color quality, and convenience in operation.