

Mechanical Video Scanner Exhibited

IRE Delegates See System of Kolorama Laboratories

By BRUCE ROBERTSON

TELEVISION with a mechanical scanner was demonstrated to members of the Institute of Radio Engineers during their recent convention by Kolorama Laboratories, an independent organization for television research, at its plant in Irvington, N. J. A standard news-reel was used for the test, projected from the rear on a screen 3x4 feet. Pictures were black and white and reasonably clear, although the scanning lines were visible across the screen and there was a flicker. Frank Goldbach, Kolorama chief engineer, in charge of the demonstration, said this was the first public demonstration and equipment was still far from perfect.

Pictures were scanned by a single dot method, using 225 lines, interlaced two to one, giving 112½ lines per field, with 24 fields. Mr. Goldbach said he was unable to give a detailed explanation of the apparatus because of the patent situation, but he expressed confidence that when the interlacing is perfected the 225-line mechanical system will produce pictures comparable to those of the 441-line electronic system employed by the RMA. This he explained, is because in mechanical scanning the spot is rectangular and remains constant in size, whereas in electronic scanning the spot contracts and expands.

What Its Backers Claim

Several advantages are claimed for the mechanical system by its backers. First, it requires only 250,000 cycles, as compared to the 2,500,000 cycles required by the 441-line, 60-field, electronic system. This means that the effective range of television transmission could be extended to hundreds of miles, instead of the 50-mile limit of electronic television. Network television is also financially feasible with the mechanical system, as two or three programs could be carried on a single coaxial cable, it was said.

The demonstration was not an actual broadcast, but the signals were carried from transmitter to receiver by wire, as the company has no experimental broadcast license, although Mr. Goldbach said it expected to apply for one shortly. In addition to the 3x4 foot images, the pictures were also shown on a screen measuring 4x5 feet and finally projected on a curtain 10 feet square. The latter images were weak and blurry, which was partly due to lack of a strong enough light source, according to Mr. Goldbach. He said that while the company did not intend to build receiving sets, it had estimated a cabinet 2x3x4 feet, containing a receiver and a light source, and projecting images on a screen 18x24 inches at the front of the set, could be manufactured to retail for not more than \$250. The actual receiver, he stated, could be housed in a two-foot cube.

Kolorama Laboratories personnel includes Emil A. Kern, executive vice-president; Stewart L. Clothier and Harold C. Hogencamp, research engineers; George Ruckstuhl, broadcast engineer, and a staff of mechanics and optical experts.