

## SKIATRON PROJECTION

STILL in the laboratory stage of development, the skiatron system of TV projection promises one of the simplest methods of putting bright images on a big screen. It uses an independent light source, but with an all-electronic image-forming device, thus eliminating the difficulties usually involved in mechanical scanning.

The heart of the system is a new kind of cathode-ray tube—the skiatron tube—that has a screen of electro-sensitive crystals (such as potassium chloride) rather than the fluorescent screen found on ordinary cathode-ray tubes. These electro-sensitive crystals act just the opposite way fluorescent screens do. Instead of glowing when struck by a beam of electrons, they darken—and darken in direct relation to the strength of the electron beam hitting them.

Placed in a television-receiver circuit,

the skiatron tube produces “shadowgraphs,” or lantern-slide-like transparencies, rather than brilliantly glowing pictures. By arranging the tube’s components at a 45° angle, rather than in a straight line as in the normal cathode-ray tube, the concentrated beam from a powerful light source can be used to project the tube’s filmlike images onto a large screen. The skiatron projection system, in effect, makes it possible to employ the normal movie-projection technique used in the intermediate-film method—without the intermediate film! By using three-tube arrangements with filters, skiatron could also project color television.

The skiatron tube, still under development for television, saw war use in projecting radar images aboard battleships. One difficulty, which was unimportant in radar but must be corrected for television, is the relatively long persistence of the shadow image it produces.

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