

INDUSTRIAL DESIGN

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Three-D, peripheral, tactual, aromatic simulator.

For \$6,000 you can now buy a simulator which provides three-dimensional, peripheral vision, binaural sound, tactual and aromatic sensations for the viewer. Morton L. Heilig is the inventor, designer and president of Sensorama Inc., a company he formed to produce his idea, having spent many fruitless years trying to interest manufacturers in the 'thing'.

In essence the design is simple: the user looks through a pair of eyepieces and watches a three-D film (dual track, 35 mm). He is seated on chair (fully adjustable, fore, aft, up and down), with hand resting on the equivalent to a



control panel. Tactual sensations can be conveyed through seat and panel to the viewer. So far, the prototype machine is limited to vibrations, but there is no reason why elaborate production versions should not provide sensations of roll, pitch and yaw, perhaps even without the elaboration of a Link trainer system. Binaural sounds come from two loud speakers mounted inside the head shield, which also serves to act as a muffle and deadens recorded sounds from the device. Aromas come from specially prepared impregnated wax pellets; a fan blows or wafts air past the watcher's face. Nearly 180° vision gives the viewer parafoveal streamer effects, a fact ably made use of in one of Mr. Heilig's demonstration films of a motorcycle ride through New York.

The uses are obvious. Entertainment value of such a device is high—coin operated machines for time-wasting airports, special effects at fairs. Educational films can be prepared, showing new processes or techniques in industry. Vehicle simulators could be built for research. Mr. Heilig intends to exploit all possibilities.