

Abstract

Optical Beam Scanning Device is proposed for image recreation through optical beam scanning on a surface through oscillation of piezoelectric actuator and spherical shaped mirror according to horizontal and vertical sync signal. A video display system includes a laser beam that is reflected from a spherical shaped mirror for vertical and horizontal scan and then toward a viewing surface. the intensity of the laser are controlled by a controller that is driven by a video signal. In secondary arrangement of two piezoelectric actuators a cylindrical shaped mirror horizontally scans the laser beam across the viewing surface while the laser intensity is modulated to form pixels on the viewing surface. The vertical scan cylindrical mirror then directs the beam to the next horizontal scan line. The resolution and aspect ratio of the image are adjusted by changing the magnitude and waveform of synchronizing signal across the piezoelectric actuators and by changing the rate at which the laser is modulated.