

HEAD-MOUNTED DISPLAY APPARATUS
WITH A SINGLE IMAGE DISPLAY DEVICE

ABSTRACT

A head-mounted display apparatus comprises an image display device for displaying images, a first beam splitter for partially transmitting and partially reflecting light from the image display device, a second beam splitter for partially transmitting and partially reflecting the light transmitted by the first beam splitter, and a first and a second concave reflection mirrors. The image display device, disposed on the right side of an observer, displays images on the basis of video signals from a video signal source. The first and the second beam splitters are disposed in front of the right and the left eyes of the observer, respectively. The first and the second concave reflection mirrors are disposed on the reflection side of the first and the second beam splitter, and reflect the light therefrom to the right and the left eyes of the observer, respectively. The head-mounted display apparatus of the present invention can also provide a stereoscopic vision by displaying images on the image display device on the basis of the principle of binocular parallax.

Fig. 3