

Title (en)
THREE DIMENSIONAL IMAGE DISPLAY

Title (de)
DREIDIMENSIONALE BILDANZEIGEVORRICHTUNG

Title (fr)
AFFICHEUR D'IMAGES EN TROIS DIMENSIONS

Publication
EP 1000377 A1 20000517 (EN)

Application
EP 98937677 A 19980806

Priority
• GB 9802360 W 19980806
• GB 9716689 A 19970807

Abstract (en)
[origin: WO9908145A1] The 3-D image display consists of a pixellated display (11) that is illuminated through a beam splitter (16). A plan mirror (17) is provided on a movable mount (15) so that the mirror may be moved towards or away from an objective lens (12) positioned between the mirror (17) and the beam splitter (16). A quarter wave plate (18) is provided between the beam splitter (16) and the mirror (17) so that light reflected back from the mirror (17) through the quarter wave plate (18) passes straight through the beam splitter (16) to an eyepiece lens (13). Movement of the mirror (17) enables the mirror (17) to act as an optical path length modifier and permits an image from the display (11) to be presented at different focal positions. Rapid cycling through different focal positions results in the image being perceived as a 3-D image. As the objective lens (12) is positioned between the beam splitter (16) and the mirror (17), the objective lens (12) also acts as a demagnifying lens for images from the display (11). Preliminary demagnification of the image reduces the distances the mirror (17) is required to travel to provide the desired changes in focal position. This in turn reduces the demands on the performance of the mount (15), that are considerable in conventional systems where no demagnification is performed. In this way simple optical and mechanical components may be employed in the image display to generate perceived three dimensional images.

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Citation (search report)
See references of WO 9908145A1

Cited by
US10976551B2; US10120194B2; US10649210B2

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