

Title (en)
LASER ILLUMINATED DISPLAY SYSTEM

Title (de)
LASERLICHT BELEUCHTETES ANZEIGESYSTEM

Title (fr)
SYSTEME D'AFFICHAGE A ECLAIRAGE PAR LASER

Publication
EP 0742940 A4 19980930 (EN)

Application
EP 95907449 A 19950112

Priority
• US 9500581 W 19950112
• US 18941894 A 19940131

Abstract (en)
[origin: WO9520811A1] A display system in which lasers scanlessly illuminate the pixels of a spatially modulating display panel (11, 13, 15), such as a liquid crystal display or micromirror array. At least three sources at least one of which is a laser with each different wavelengths are used, such as laser diode-based sources (81, 83, 85) producing red, green and blue light. The laser may be pulsed rapidly in sequence to provide time multiplexed illumination of all of the display pixels or may be operated in continuous (cw) mode, using color filters on the display, phase plates (147) or microlens arrays to image light spots (148) of each color only on designated pixels. Two sets of laser sources (123), either orthogonally linearly polarized or at slight different wavelengths, can be used to create 3-D images. Each set may illuminate a different display panel, one for each eye, or the two sets may be time multiplexed using the same display panel (125). A viewer has polarizing or bandpass filters in front of each eye to separate the binocular images. Fiberoptic coupling (99) of the laser sources (81, 83, 85, 87) can be used to physically separate these sources and their power supply from the display panel (115).

IPC 1-7
G09G 3/22; G09G 3/28

IPC 8 full level
G02F 1/13 (2006.01); **G02B 6/14** (2006.01); **G02B 6/42** (2006.01); **G02B 26/08** (2006.01); **G02B 27/22** (2006.01); **G02F 1/1335** (2006.01); **G02F 1/13357** (2006.01); **G09G 3/20** (2006.01); **G09G 3/34** (2006.01); **G09G 3/36** (2006.01); **H04N 5/66** (2006.01); **H04N 9/12** (2006.01); **H04N 13/00** (2006.01); **H01S 5/40** (2006.01)

CPC (source: EP)
G02B 6/14 (2013.01); **G02B 6/4249** (2013.01); **G02B 26/0833** (2013.01); **G02B 30/34** (2020.01); **H04N 13/324** (2018.04); **H04N 13/337** (2018.04); **G09G 3/3406** (2013.01); **G09G 2310/0235** (2013.01); **H01S 5/4025** (2013.01); **H01S 5/4087** (2013.01); **H04N 13/334** (2018.04)

Citation (search report)
• [XY] US 5170156 A 19921208 - DEMOND THOMAS W [US], et al
• [Y] US 5224198 A 19930629 - JACHIMOWICZ KAREN E [US], et al
• [A] US 5037173 A 19910806 - SAMPSELL JEFFREY B [US], et al
• [A] EP 0548830 A1 19930630 - TEXAS INSTRUMENTS INC [US]
• See references of WO 9520811A1

Designated contracting state (EPC)
DE FR GB IT NL

DOCDB simple family (publication)
WO 9520811 A1 19950803; EP 0742940 A1 19961120; EP 0742940 A4 19980930; JP H09508476 A 19970826

DOCDB simple family (application)
US 9500581 W 19950112; EP 95907449 A 19950112; JP 52008295 A 19950112