

**SUPPLEMENTARY
EUROPEAN SEARCH REPORT**

Application Number
EP 01 99 8959

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 6 069 605 A (OZAWA TOKUROH [JP]) 30 May 2000 (2000-05-30) * column 26, lines 26-50 *	1-7,11	INV. G09G3/36
A	* column 13, line 50 - column 16, line 22; figures 1-4,33a,33b *	8	
Y	US 5 526 014 A (SHIBA HIROSHI [JP] ET AL) 11 June 1996 (1996-06-11) * column 5, line 28 - column 9, line 22; figures 1,2 *	1-7,11	
Y	EP 0 541 364 A1 (CANON KK [JP]) 12 May 1993 (1993-05-12) * page 12, lines 11-46; figures 14,15 * * page 9, lines 30-55 *	1-3,5-7, 18	
Y	WO 95/01701 A (PHILIPS ELECTRONICS NV [NL]; PHILIPS ELECTRONICS UK LTD [GB]; PHILIPS) 12 January 1995 (1995-01-12) * page 18, line 11 - page 19, line 20; figure 2 *	1-3,5-7	TECHNICAL FIELDS SEARCHED (IPC)
Y	EP 0 755 044 A1 (IBM [US]) 22 January 1997 (1997-01-22) * column 8, line 40 - column 12, line 51; figure 1 * * column 20, lines 49-57 *	1-7,18	G09G
X	EP 0 586 155 A2 (SHARP KK [JP]) 9 March 1994 (1994-03-09)	8-10, 13-17, 19,20	
Y	* column 16, line 5 - column 21, line 24; figures 10-17 *	11	
A		12	
X	JP 09 288261 A (CANON KK) 4 November 1997 (1997-11-04) * paragraphs [0016] - [0021]; figures 1,2 *	8-10, 13-17,19 18	
Y			
-/--			
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search Munich		Date of completion of the search 8 October 2008	Examiner Harke, Michael
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C04)

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
P,X P,Y	-& US 6 181 311 B1 (HASHIMOTO SEIJI [JP]) 30 January 2001 (2001-01-30) * column 4, line 38 - column 5, line 49; figures 1,2 * -----	8-10, 13-17,19 18	
			TECHNICAL FIELDS SEARCHED (IPC)
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search Munich		Date of completion of the search 8 October 2008	Examiner Harke, Michael
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C04)

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7

The first invention concerns a display driver for a display unit having a liquid crystal cell, the display driver comprising a second switching arrangement coupled to the liquid crystal cell, wherein the display driver circuit comprises further a first display driver circuit having a first storage capacitor and a first differential amplifier coupled between the first storage capacitor and the liquid crystal cell ; a second display driver circuit having a second storage capacitor and a second differential amplifier coupled between the second storage capacitor and the liquid crystal cell ; a first switching arrangement coupled to the liquid crystal cell enabling the switching of the display driver between the first display driver circuit during a positive frame and the second display driver circuit during a negative frame, and wherein the second switching arrangement is coupled to at least a supply voltage and controlled by at least one global address line.

2. claims: 8-20

The second invention concerns a display driver for a display unit having a liquid crystal cell, the display driver comprising a second switching arrangement coupled to the liquid crystal cell, wherein the display driver comprises a driver circuit for each liquid crystal cell, and the switching arrangement controls a voltage developed in the given liquid crystal cell via a signal path that bypasses the driver circuit for the given liquid crystal cell.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 99 8959

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-10-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6069605 A	30-05-2000	CN 1428756 A	09-07-2003
		CN 1138904 A	25-12-1996
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专利名称(译)	用于改善液晶显示器中亮度控制的驱动电路及其方法		
公开(公告)号	EP1275103A4	公开(公告)日	2008-11-12
申请号	EP2001998959	申请日	2001-11-29
[标]申请(专利权)人(译)	汤姆森特许公司		
申请(专利权)人(译)	汤姆森许可S.A.		
当前申请(专利权)人(译)	汤姆森许可S.A.		
[标]发明人	ODONNELL EUGENE MURPHY		
发明人	O'DONNELL, EUGENE, MURPHY		
IPC分类号	G02F1/133 G09G3/20 G09G3/36		
CPC分类号	G09G3/3614 G09G3/3648 G09G3/3659 G09G2300/0809 G09G2300/0823 G09G2300/0842 G09G2300/0852		
优先权	60/250196 2000-11-30 US		
其他公开文献	EP1275103A1		
外部链接	Espacenet		

摘要(译)

用于具有存储元件和液晶单元的显示单元的显示驱动器包括：第一显示驱动器电路，其具有第一存储电容器和耦合在第一存储电容器和液晶单元之间的第一差分放大器；以及第二显示驱动器电路，其具有第二存储电容器（14'）和第二差分放大器（16'）耦合在第二存储电容器和液晶单元之间。显示驱动器还包括第一开关机构和与电源电压耦合的第二开关机构，该第一开关机构使得在正帧期间的第一显示驱动器电路与在负帧期间的第二显示驱动器电路之间的显示驱动器能够进行切换。第二切换机制由至少一条全局地址线控制。

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Y	WO 95/01701 A (PHILIPS ELECTRONICS NV [NL]; PHILIPS ELECTRONICS UK LTD [GB]; PHILIPS) 12 January 1995 (1995-01-12) * page 18, line 11 - page 19, line 20; figure 2 *	1-3,5-7	
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X	EP 0 586 155 A2 (SHARP KK [JP]) 9 March 1994 (1994-03-09) * column 16, line 5 - column 21, line 24; figures 10-17 *	8-10, 13-17, 19,20 11	
Y	JP 09 288261 A (CANON KK) 4 November 1997 (1997-11-04) * paragraphs [0616] - [0621]; figures 1,2 * -/-	8-10, 13-17,19 18	
Y	The supplementary search report has been based on the last set of claims valid and available at the start of the search.		
Munich		8 October 2008	Harke, Michael
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T: theory or principle underlying the invention P: prior art document, but published on, or after, the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document			