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(84) Designated Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR Designated Extension States: AL HR LT LV MK	(72) Inventors: - Takeuchi, Yukihiisa, c/o Intellectual Property Dept Nagoya City Aichi-ken, 467-8530 (JP) - Nanataki, Tsutomu, c/o Intellectual Property Dept. Nagoya City Aichi-ken, 467-8530 (JP) - Ohwada, Iwao, c/o Intellectual Property Dept. Nagoya City Aichi-ken, 467-8530 (JP) - Akao, Takayoshi, c/o Intellectual Property Dept. Nagoya City Aichi-ken, 467-8530 (JP)
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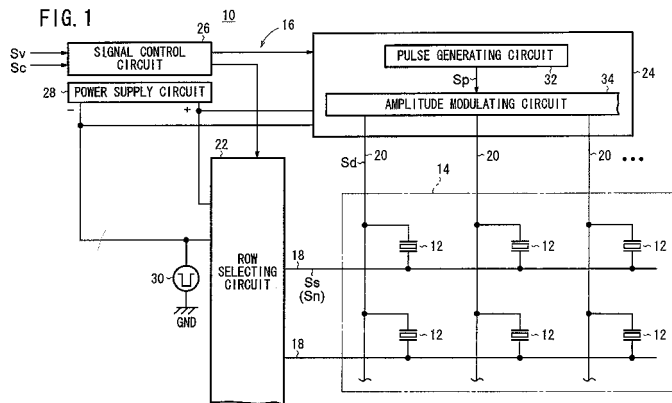
(54)

Electron emitter display apparatus, method of driving electron emitter display apparatus, apparatus for driving electron emitter display apparatus

(57)

One image is displayed in a period as one frame, which includes one charge accumulation period and one light emission period. In the charge accumulation period (Td), all electron emitters (12) are scanned, and voltages depending on the luminance levels of corresponding pixels are applied to the electron emitters (12) which correspond to pixels to be turned on (to emit light), to accumulate charges (electrons) in amounts de-

pending on the luminance levels of corresponding pixels in the electron emitters (12) which correspond to pixels to be turned on. In the next light emission period (Th), a constant voltage is applied to all the electron emitters (12) to emit electrons in amounts depending on the luminance levels of corresponding pixels from the electron emitters (12) which correspond to pixels to be turned on, thereby emitting light from the pixels to be turned on.





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EUROPEAN SEARCH REPORT

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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 (Int.Cl.7)		
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A	US 2001/050537 A1 (ITOH SHIGEO ET AL) 13 December 2001 (2001-12-13) * paragraph [0071] - paragraph [0079]; figures 6,7 *	1,19, 37-39, 43, 47-49,53			
A	WO 01/09870 A (MOTOROLA INC) 8 February 2001 (2001-02-08) * page 5, line 14 - page 6, line 27; figure 3 *	1,19, 37-39, 43, 47-49,53			
A	US 6 538 391 B1 (KUSUNOKI TOSHIAKI ET AL) 25 March 2003 (2003-03-25) * column 13, line 11 - line 67; figures 7,8 *	1,19, 37-39, 43, 47-49,53	<table border="1"> <thead> <tr> <th>TECHNICAL FIELDS SEARCHED (Int.Cl.7)</th> </tr> </thead> <tbody> <tr> <td>G09G H01J</td> </tr> </tbody> </table>	TECHNICAL FIELDS SEARCHED (Int.Cl.7)	G09G H01J
TECHNICAL FIELDS SEARCHED (Int.Cl.7)					
G09G H01J					
2 The present search report has been drawn up for all claims					
Place of search Munich		Date of completion of the search 6 December 2004	Examiner Farricella, L		
<table border="0"> <tr> <td style="vertical-align: top;"> 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 </td> <td style="vertical-align: top;"> 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 </td> </tr> </table>				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
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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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims 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 the first ten claims.

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:

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LACK OF UNITY OF INVENTION
SHEET B

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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: 1-15, 19-33, 37-56

An electron emission display in which charge is accumulated in all electron emitters in a first period and in a second period electron emitters are polarized to emit electrons.

2. claims: 16-18, 34-36

An electron emission display in which the display period is divided in a selection period, a reset period and a non selection period.

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

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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
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