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(72) Inventors:  
• **Lee, Seok Woo**  
**Seoul (KR)**  
• **So, Hyun Jin**  
**Seoul (KR)**

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(74) Representative: **Viering, Jentschura & Partner**  
**Postfach 22 14 43**  
**80504 München (DE)**

(71) Applicant: **LG Display Co., Ltd.**  
**Youngdungpo-gu,**  
**Seoul (KR)**

(54) **Apparatus and method for driving liquid crystal display device**

(57) An apparatus and method for driving an LCD device is disclosed for increasing the response speed of liquid crystal even without using a memory table. The apparatus includes an image display unit including a plurality of liquid crystal cells formed in areas defined by a plurality of gate and data lines; a gate driver to sequentially supply a scan pulse to the gate lines; a data driver

to modulate input data in accordance with the input data, to selectively convert the input data and the modulated input data into an analog video signal, and to supply the analog video signal to the data line; and a timing controller to arrange externally supplied source data, to supply the arranged source data to the data driver, and to control the data driver and the gate driver.

**FIG. 5**

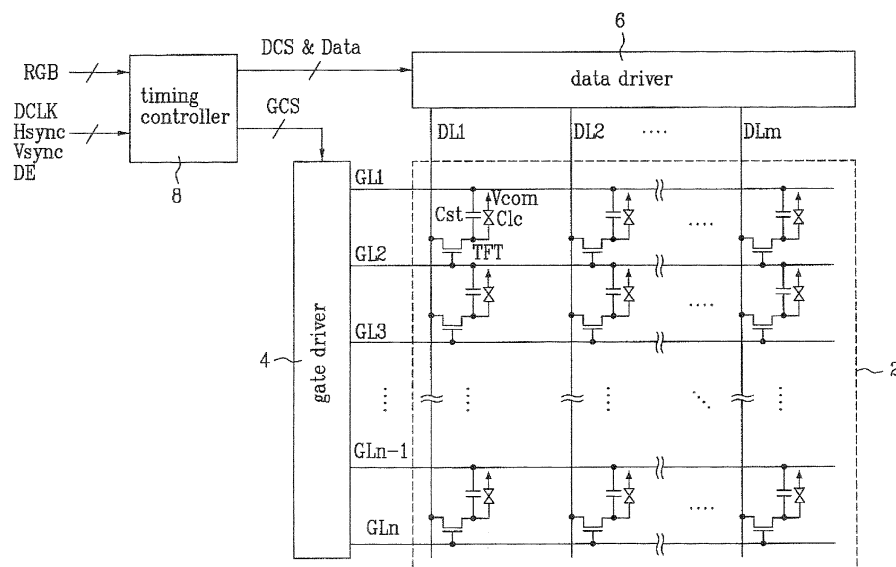
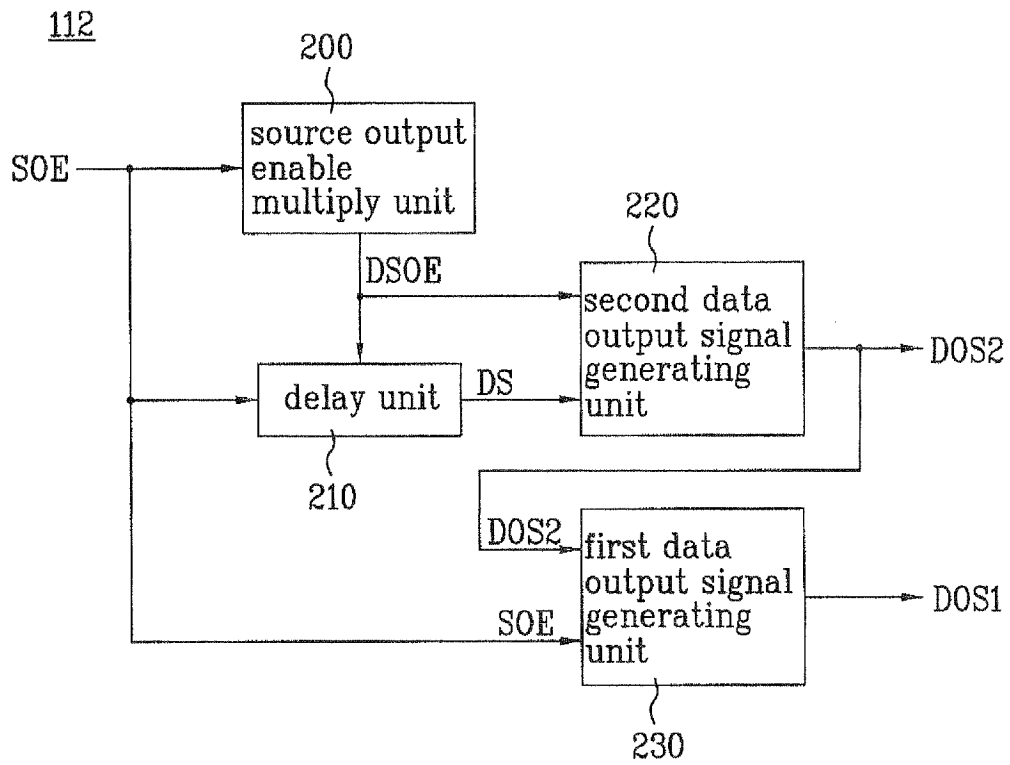


FIG. 7





## EUROPEAN SEARCH REPORT

Application Number  
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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                    |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                       |                                         |
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|                                                                                                                                                                                                                                                        |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                       | G09G                                    |
| The present search report has been drawn up for all claims                                                                                                                                                                                             |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                       |                                         |
| Place of search<br>Munich                                                                                                                                                                                                                              |                                                                                                                                                                     | Date of completion of the search<br>9 April 2009                                                                                                                                                                                                                                      | Examiner<br>Bader, Arnaud               |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                                                     | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |                                         |

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EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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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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09-04-2009

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|----------------|----------------------------------------------------|---------|------------|
| 专利名称(译)        | 用于驱动液晶显示装置的装置和方法                                   |         |            |
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| [标]申请(专利权)人(译) | 乐金显示有限公司                                           |         |            |
| 申请(专利权)人(译)    | LG.飞利浦液晶CO., LTD.                                  |         |            |
| 当前申请(专利权)人(译)  | LG DISPLAY CO., LTD.                               |         |            |
| [标]发明人         | LEE SEOK WOO<br>SO HYUN JIN                        |         |            |
| 发明人            | LEE, SEOK WOO<br>SO, HYUN JIN                      |         |            |
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| 代理机构(译)        | 庆祝活动, JENTSCHURA & PARTNER                         |         |            |
| 优先权            | 1020060056859 2006-06-23 KR                        |         |            |
| 其他公开文献         | EP1870876B1<br>EP1870876A2                         |         |            |
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#### 摘要(译)

公开了一种用于驱动LCD装置的装置和方法，用于即使不使用存储器表也能提高液晶的响应速度。该装置包括图像显示单元，该图像显示单元包括形成在由多条栅极线和数据线限定的区域中的多个液晶单元；栅极驱动器，用于顺序地向栅极线提供扫描脉冲；数据驱动器，用于根据输入数据调制输入数据，选择性地将输入数据和调制输入数据转换为模拟视频信号，并将模拟视频信号提供给数据线；时序控制器，用于排列外部提供的源数据，将排列的源数据提供给数据驱动器，以及控制数据驱动器和栅极驱动器。

FIG. 5

