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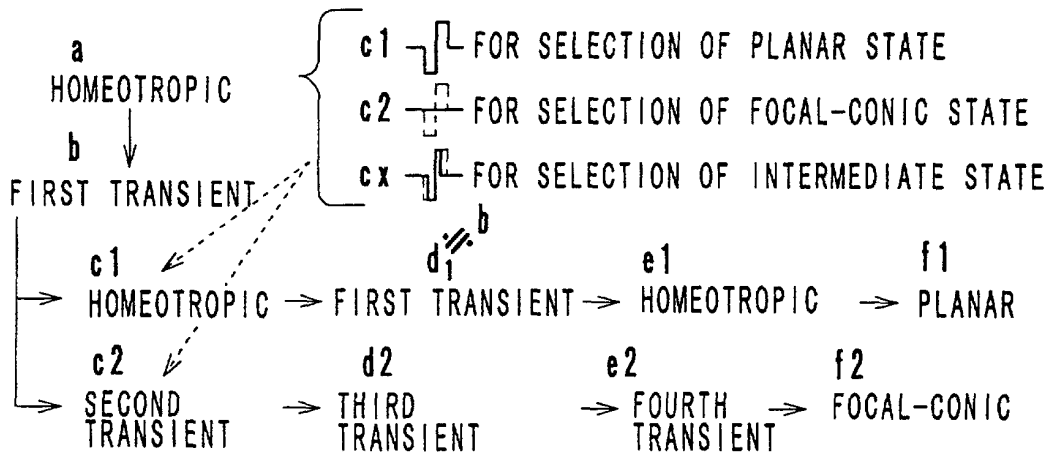
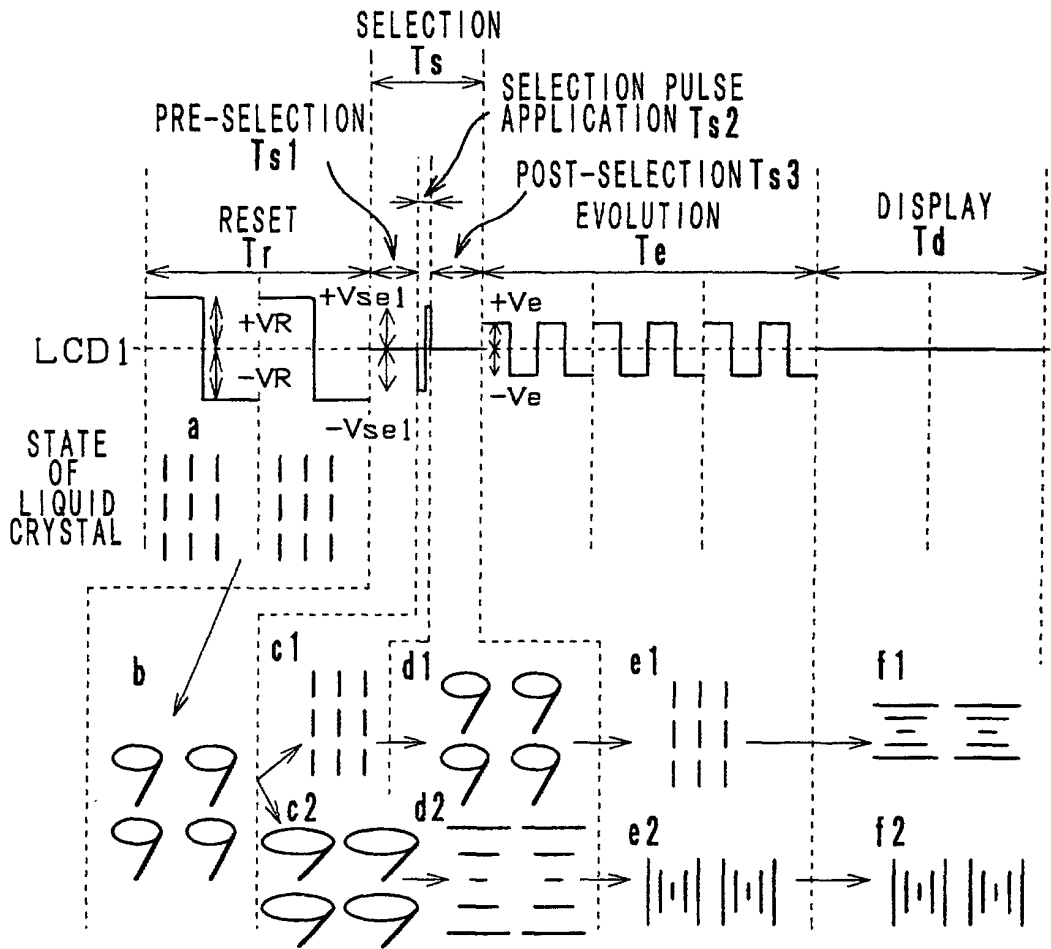
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(54) **Liquid crystal display device**

(57) A display device which has a liquid crystal display which has a plurality liquid crystal pixels arranged in a matrix and which writes an image thereon after resetting the liquid crystal. The method of writing on the liquid crystal display can be selected from driving methods according to interlace scanning in which a frame is divided into a plurality of fields and writing by interlace scanning is performed and driving methods according to sequential scanning in which scanning lines are subjected to writing serially. When high-speed writing is required, for example, when display of a motion picture, display of inputted letters or scroll display is desired, one of the driving methods according to interlace scanning is selected. In interlace scanning, based on the end of a blackout state of a scanning line in a field, selection of a scanning line in the next field for writing is started.

Writing on a scanning line comprises a reset step of resetting the liquid crystal, a selection step of selecting the final state of the liquid crystal, an evolution step of stabilizing the liquid crystal into the selected state, and one of the length of the reset step and the total length of the selection step and the evolution step is n times (n: natural number) the other. For example, when the length of the reset step is n times the total length of the selection step and the evolution step and when a frame is divided into m fields (m: natural number larger than n) for interlace scanning, there is a moment when, in serial m scanning lines, n scanning lines of them are in the reset step, one of them is in the selection step or in the evolution step, and the other m-n-1 scanning lines are in a display step.

FIG. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 01 10 4477

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 11 July 2003	Examiner Harke, M
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
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专利名称(译)	液晶显示装置		
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摘要(译)

一种显示装置，其具有液晶显示器，该液晶显示器具有以矩阵排列的多个液晶像素，并且在重置液晶之后在其上写入图像。在液晶显示器上写入的方法可以从根据隔行扫描的驱动方法中选择，其中帧被分成多个场并且通过隔行扫描进行写入，以及根据顺序扫描的驱动方法，其中扫描线经受扫描线连续写作。当需要高速写入时，例如，当需要显示运动图像，输入字母的显示或滚动显示时，选择根据隔行扫描的一种驱动方法。在隔行扫描中，基于场中扫描线的中断状态的结束，开始在下一个用于写入的场中选择扫描

线。在扫描线上写入包括重置液晶的重置步骤，选择步骤选择液晶的最终状态，使液晶进入选定状态的演变步骤，以及复位步骤的长度和选择步骤和进化步骤的总长度之一是 n 次（ n ：自然的数字）另一个。例如，当复位步长的长度是选择步骤和演变步骤的总长度的 n 倍，并且当帧被分成 m 个场（ m ：大于 n 的自然数）以进行隔行扫描时，有一个时刻当在串行 m 条扫描线中，它们的 n 条扫描线处于复位步骤时，其中一条处于选择步骤或进化步骤，而其他 $mn-1$ 条扫描线处于显示步骤。

FIG. 3

