Title (en)

Power management for a display device

Title (de)

Leistungssteuerung für eine Anzeigeeinrichtung

Title (fr)

Gestion de l'énergie dans un dispositif d'affichage

Publication

EP 0707301 A1 19960417 (EN)

Application

EP 95114252 A 19950911

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US 30628294 A 19940914

Abstract (en)

A field emission display electronics system includes a power reduction apparatus 40 in accordance with the present invention. The system includes a matrix-addressable emitter plate 14 and a voltage-switched trichromatic anode plate 10. In a reduced power consumption mode, the display is switched from a color mode to a monochrome mode, and power reduction apparatus 40 performs three functions, each of which contributes to power reduction of the display device. The first function disables the switched application of high voltage sequentially to the three combs of anode stripes 12R, 12G and 12B, substituting the constant application of high voltage to all of the anode stripes 12, thus reducing the anode switching power to zero. The second function supplies a clock signal to column drivers 18 and row address counter/decoder 20 which is one-third the frequency of the clock signal used during color operation, thus reducing by two-thirds the capacitative power drop in row driver circuits 22, column driver circuits 18 and the emitter panel 14 over a color display. The third function performed by power reduction apparatus 40 is to provide display inversion. Data analyzer 60 senses the data being passed from the host to video controller 16, and determines whether the display data provided by video controller 16 to column drivers 18 should be altered so as to provide an inverted display. Three alternative schemata for controlling entry into the reduced power consumption mode are disclosed. <IMAGE>

IPC 1-7

G09G 3/22

IPC 8 full level

G09G 3/22 (2006.01)

CPC (source: EP KR)

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