

A BIT-MAPPED ON-SCREEN-DISPLAY DEVICE FOR A TELEVISION RECEIVER

ABSTRACT

In order to increase the speed of the transfer of control data to an OSD circuit (100), and to eliminate "holes" in memory caused by the use of memory mapped registers, dual use is made of the serial data port (SIO BUS) of the OSD circuit to accomplish two distinct tasks, serial transfer of graphics data and serial transfer of the control data. The on-screen display apparatus includes an OSD circuit (100) for generating graphics signal (R,G,B) for display on a display screen, a controller (120) coupled to the OSD circuit (100), for controlling the OSD circuit (100), and a VRAM (140) including a first area for storing graphics data and a second area for storing control data for the OSD circuit. The VRAM (140) has a parallel input/output port coupled to the controller (120) and a serial output port (SIO BUS) coupled to the OSD circuit (100), the serial output port conveys the graphics data from the first area of the VRAM (140) to the OSD circuit (100) for processing and display. The controller (120) writes the control data to the second area of the VRAM (140) via the input/output port and the OSD circuit (100) reads the control data from the VRAM (140) via the serial output port (SIO BUS) during each vertical sync interval (VSYNCH).

Fig 1