EPSON®

S1D13705 Embedded Memory LCD Controller

13705SPLT Display Utility

Document No. X27A-B-003-02

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13705SPLT

13705SPLT demonstrates S1D13705 split screen capability by showing two different areas of display memory on the screen simultaneously.

Screen 1 memory is located at the start of the display buffer and is filled with horizontal bars. Screen 2 memory is located immediately after Screen 1 in the display buffer and is filled with vertical bars. On either user input or elapsed time, the line compare register value is changed to adjust the amount of display area taken up by each screen.

The 13705SPLT display utility must be configured and/or compiled to work with your hardware platform. The program 13705CFG.EXE can be used to configure 13705SPLT. Consult the 13705CFG users guide, document number X27A-B-001-xx, for more information on configuring S1D13705 utilities.

This software is designed to work in both embedded and personal computer (PC) environments. For the embedded environment, it is assumed that the system has a means of downloading software from the PC to the target platform. Typically, this is done by serial communications. The PC uses a terminal program to send control commands and information to the target processor. Alternatively, the PC can program an EPROM, which is then placed in the target platform. Some target platforms can also communicate with the PC via a parallel port connection, or an Ethernet connection.

S1D13705 Supported Evaluation Platforms

13705SPLT has been tested with the following S1D13705 supported evaluation platforms:

- PC system with an x86 processor. Both 16-bit and 32-bit code is supported.
- M68EC000IDP (Integrated Development Platform) board, revision 3.0, with a Motorola M68EC000 processor.
- SH3-LCEVB board, revision B, with an Hitachi SH-3 HD6417780 processor.

If the platform you are using is different from the above, please see the S1D13705 Programming Notes and Examples manual, document number X26A-G-002-xx.

Installation

PC Intel Platform

For 16-Bit Program Version: copy the file 13705SPLT.EXE to a directory that is in the DOS path on your hard drive.

For 32-Bit Program Version: install the 32-bit Windows device driver S1D13X0X.VXD as described in the S1D13X0X 32-Bit Windows Device Driver Installation Guide, document number X00A-E-003-xx. Copy the file 13705SPLT.EXE to a directory that is in the DOS path on your hard drive.

Embedded Platform

Download the program 13705SPLT to the system.

Usage

PC platform: at the prompt, type **13705SPLT [/a] [/?]**

Embedded platform: execute **`13705splt`** and at the prompt, type the command line argument.

Where:	`no argument`	enables manual split screen operation
	`/a`	enables automatic split screen operation (a timer is used to move screen 2)
	`/?`	display the help screen

After starting 13705SPLT the following keyboard commands are available.

Manual mode:	↑, `u`	move Screen 2 up
	↓, `d`	move Screen 2 down
	`HOME`	covers Screen 1 with Screen 2
	`END`	displays only Screen 1
Automatic mode:	`any key`	change the direction of split screen movement (for PC only)
Both modes:	`b`	changes the color depth (bits-per-pixel)
	`ESC`	exits 13705SPLT

13705SPLT Example

1. Type “13705splt /a” to automatically move the split screen.
2. Press “b” to change the color depth from 1 bit-per-pixel to 2 bit-per-pixel.
3. Repeat step 2 for the remaining color depths (4 and 8 bit-per-pixel).
4. Press <ESC> to exit the program.

Program Messages

`ERROR: Did not find a 13705 device.`

The HAL was unable to read the revision code register on the S1D13705. Ensure that the S1D13705 hardware is installed and that the hardware platform has been configured correctly. Also check that the display memory address has been configured correctly.

`ERROR: Unable to locate/load S1D13XXX.VXD`

13705PLAY was unable to load a required driver. The file S1D13XXX.VXD should be located in x:\WINDOWS\SYSTEM or in x:\WINNT\SYSTEM. If the file is not there, install it as described in the S1D13XXX 32-Bit Windows Device Driver Installation Guide, document number X00A-E-003-xx.

`ERROR: An IOCTL error occurred`

This message indicates an error at the IO control layer occurred. The usual cause for this is an incorrect hardware configuration.

`ERROR: The HAL returned an unknown error`

This message should never be displayed, it indicates that 13705SOLT is unable to determine the cause of an error returned from the HAL.

Not enough memory for www x hhh x bpp!!

This message is displayed if there is insufficient display memory to contain two complete images with a width of www pixels, a height of hhh pixels, and a color depth of bpp bit-per-pixel. In this case the mode is skipped and the next display mode is attempted.

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