SIEMENS

ICs for Consumer Electronics

TVTEXT

SDA 525X in Deinterlaced Mode with
Philips TV-Processor TDA 884X

Application Note   1998-06-29

SDA 525X		
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Page (in previous Version)	Page (in current Version)	Subjects (major changes since last revision)
		Application note for TVTEXT - SDA 525X in deinterlaced mode with Philips TV-processor TDA 884X

Table of Contents   **Page**

1   Deinterlaced Mode with Philips TV Processor TDA 884X

To get a satisfactoried deinterlaced mode also in case of a worse signal quality we would recommend to use the synchronization with H / V pulses.

1.1   Applications with H / V Pulses

– The V pulse at pin VS has to be delayed for 32 μS. (Independent if interlaced/or deinterlaced mode)
– Switch TDA 884X via IIC bus to deinterlaced mode.

1.2   Applications with SSC Pulse

For applications with SSC pulse a software workaround is necessary. The disadvantages of this workaround is that, due to the signal quality, the TDA 884X has to be operated in interlaced mode.

The basic idea is to shift the vertical display position due to the actual frame by increment/decrement the DVD register. If the frame information is corrupted or the vertical interrupt is missing, the TDA 884X has to be set to interlaced mode.

To increase the security of identifying the actual frame, the frame information 'fram1st' bit should be rotated into an OddEven history byte.

If the OddEven history is not equal 01010101 or 10101010 the TDA 884X has also set to interlaced mode.

Following commands has to be added in 'user_function' (USERFUNCT.A51). User_function is called every vertical sync interrupt by TV-Text firmware.

```
user_function:
    mov   c,frame1st
    mov   a,OddEvenByte
    rlc   a
    mov   OddEvenByte,a           ; load actual field info into field history
    xrl   a,#0aah
    jz    ShiftPosition
    mov   a,OddEvenByte
    xrl   a,#055h                 ; check signature
    jz    ShiftPosition
    mov   a,DvdDefault
    jmp   LoadEnd

ShiftPosition:
    mov   a,DvdDefault
    jnb   fram1st,LoadEnd
    dec   a
```

```
LoadEnd:
    mov   DVD,a
    ret
```

Beside this routine the TDA 884X has to be switch to interlaced mode corresponding to the above described cases.