

Appendix D: Character Generator Control Codes

(a) Attribute Byte

<u>Bit</u>	<u>Function</u>
D8	Character color - red bit
D9	Character color - green bit
D10	Character color - blue bit
D11	reserved - set low
D12	reserved - set high
D13	Transparency bit (active high)
D14	Inverse bit (active low)
D15	ACON bit (active high)

Character Color:

<u>D10</u>	<u>D9</u>	<u>D8</u>	<u>Color</u>
0	0	0	Black
0	0	1	Red
0	1	0	Green
0	1	1	Yellow
1	0	0	Blue
1	0	1	Magenta
1	1	0	Cyan
1	1	1	White

Inversion and Transparency:

<u>D14</u>	<u>D13</u>	<u>"ON" Pixels</u>	<u>"OFF" Pixels</u>
0	0	black	character color
0	1	background video	character color
1	0	character color	black
1	1	character color	background video

(b) Vertical RAM Output

<u>Bit</u>	<u>Output</u>	<u>Function</u>
D8	VLTC	Row counter clock (active high strobe)
D9	VBL	Vertical blanking (active high)
D10	VCRST	unused
D11	MIDV	Middle of raster (high = second half of raster)
D12	VDAT4	Font slice address - bit 0 (lsb)
D13	VDAT5	Font slice address - bit 1
D14	VDAT6	Font slice address - bit 2
D15	VDAT7	Font slice address - bit 3 (msb)

- Notes:
- 1) The row counter strobe is delayed in the circuit by two scan lines (ie. the row counter will increment two lines after the scan line selected in the vertical RAM.)
 - 2) VBL transitions are delayed by one scan line.
 - 3) The MIDV transition is delayed by two scan lines.
 - 4) The font slice address is NOT delayed.