Deluxe Text Display Adapter (250-3046) Programming Faxback Doc. # 2143

The following information is used to set the MODE Registers:

DTDA REGISTER VALUES

Resolution: Adapter Mode:	80 x 25 Monochrome Text	80 x 25 Color Text
R0--HOR TOTAL	61	61
R1--HOR DISP	50	50
R2--HYSNC POSN	52	52
R3--HS WIDTH	0F	0F
R4--VERT TOTAL	19	19
R5--VERT ADJ	06	06
R6--VERT DISP	19	19
R7--VSYNC POSN	19	19
R8--INTERLACE	02	02
R9--MAX SCAN	0D	0D
R10--CUR START	0B	0B
R11--CURSOR END	0C	0C
R12--START (H)	00	00
R13--START (L)	00	00
R14--CURSOR (H)	00	00
R15--CURSOR (L)	00	00
MODE REG	29	2D

Notes:

* All values given are in HEX.
* Use CRTC I/O addresses 3B4 (register number) and 3B5 (register value)

MODE register I/O address of 3B8

Available Colors

Color Code	Screen Color	Color Code	Screen Color
0	Black	8	Dark Gray
1	Blue	9	Bright Blue
2	Green	10	Bright Green
3	Cyan (pale blue	11	Bright Cyan
4	Red	12	Bright Red
5	Magenta (purple	13	Bright Magenta
6	Yellow	14	Bright Yellow
7	White	15	Bright White

Blinking Text:

The background intensity bit (80 of ODD bytes) in the video display word is shared with the character BLINK logic. If bit 20 of the MODE register is a 0, then all 16 colors are available for character backgrounds. If the bit is set to a 1, the background intensity bit (80) is changed to be a BLINK CHARACTER bit.

Mode Control Register:

Bit Function

08 VIDEO ENABLE--When set to a "0" the video displays are turned off. The monochrome display SYNC signals are set to the OFF state and all video outputs are turned off.

20 BLINK ENABLE--When set to "0" text characters can not blink. When set to a "1" the BACKGROUND INTENSITY bit (80) of the display RAM character attribute byte will control the blinking of the character (if set, the character will blink).

Text Mode:

The even byte of each word contains the number of the character to display. The IBM standard character set contains 256 unique characters numbered from 0-255.

The odd byte (attribute byte) determines the shade of the character dots and their surrounding background. The lower four bits contain the color code of the character's dots. If bit 0 (B) is set to a 1, then underline is enabled. The upper four bits determine the color of the dots in the character matrix that determine the color of the dots in the character matrix that surround the character outline.

Even Byte Character Code:

```
Bits:  7   6   5   4   3   2   1   0
       character code 00-FF

Bits:  7   6   5   4   3   2   1   0
       I   R   G   B   I   R   G   B

       BACKGROUND        FOREGROUND
```

Sixteen unique colors are available for the foreground or background. These colors are formed by combining the basic colors Red, Green, and Blue with an optional intensity bit.