

Mode 3 (80-column text) is the default video mode for the video circuitry for color monitors (Mode 7 for monochrome monitors). The video circuitry supports the following classes of video modes:

- * Other standard VGA modes, EGA modes, and MCGA modes--Provide even higher higher resolutions and the ability to display more colors simultaneously. Super VGA can also display text 132 columns wide and 25, 28, or 43 lines deep.
- * CGA, Hercules, and MDA modes--Required by applications designed to run under earlier video standards (CGA, Hercules, and MDA). For example, to run Hercules-compatible software and some CGA-compatible games you must use a Hercules or a CGA mode. When in a CGA, a Hercules, or an MDA mode, the video circuitry emulates the earlier video standard.

The tables on the following pages list the supported video modes and resolutions available under each video standard. Following the tables are instructions for using VGAMODE.EXE to switch video modes.

STANDARD VGA MODES

MODE	VIDEO	TYPE	COLORS	RESOLUTION	COLUMNS	BUFFER	CHAR.
	Herc.	graphics	mono	720x348	80x25	B0000	9x14
0,1{1	CGA	text	16	320x200	40x25	B8000	8x8
0,1	EGA	text	16	320x350	40x25	B8000	8x14
0,1	VGA	text	16	360x400	40x25	B8000	9x16
2,3{1	CGA	text	16	640x200	80x25	B8000	8x8
2,3	EGA	text	16	640x350	80x25	B8000	8x14
2,3{2	VGA	text	16	720x400	80x25	B8000	9x16
4,5{1	CGA	graphics	4	320x200	40x25	B8000	8x8
6{1	CGA	graphics	mono	640x200	80x25	B8000	8x8
7	MDA	graphics	4	720x350	80x25	B0000	9x14
7{3	VGA	graphics	4	720x400	80x25	B0000	9x16
D{1	EGA	graphics	16	320x200	40x25	A0000	8x8
E{1	EGA	graphics	16	640x200	80x25	A0000	8x8
F	EGA	graphics	4	640x350	80x25	A0000	8x14
10	EGA	graphics	16	640x350	80x25	A0000	8x14
11	VGA	graphics	mono	640x480	80x30	A0000	8x16
12	VGA	graphics	16	640x480	80x30	A0000	8x16
13{1	VGA	graphics	256	320x200	40x25	A0000	8x8

NOTES:

1. All 200-line modes are double scanned to display 400 lines.
2. Default mode for color monitors.
3. Default mode for monochrome monitors.

SUPER VGA MODES

MODE	VESA	TYPE	COLORS	RESOLUTION	COLUMNS	BUFFER

41		text	16	720x476	80x34	B8000
47		text	16	1188x448	132x28	B8000
54		text	16	1188x387	132x44	B8000
55		text	16	1188x400	132x25	B8000
56		text	mono	1188x387	132x43	B0000
57		text	mono	1188x400	132x25	B0000
58	6A	graphics	16	800x600	100x75	A0000
58	102	graphics	16	800x600	100x75	A0000
5A		graphics	mono	1024x768	128x48	A0000
5C{1	103	graphics	256	800x600	100x75	A0000
5D	104	graphics	16	1024x768	128x48	A0000
5E	100	graphics	256	640x400	80x25	A0000
5F	101	graphics	256	640x480	80x30	A0000
60{2		graphics	256	1024x768	128x48	A0000

{1--Requires 1MB of video memory and a monitor operating at 72 Hz.
 {2--Requires 1MB of video memory.

USING VGAMODE.EXE

The VGAMODE.EXE utility enables you to choose one of the video standards supported by the adapter. Choose from a menu or directly from the MS-DOS prompt line.

To access the VGAMODE.EXE utility:

1. Turn on your computer.

2. Type: drive:\path\vgamode

where drive: and path specify the drive and the directory containing VGAMODE.EXE. Then, press ENTER.

3. Use the up and down direction keys on the keyboard to select the desired video mode from the VGAMODE.EXE menu. Then, press ENTER.

To exit, choose Exit to DOS and press ENTER.

To bypass the menu, include the desired video option(s) when accessing VGAMODE.EXE. At the MS-DOS prompt or in a batch file, type the command in the form: drive:\path\vgamode [options]

where options is one or more of the following video options.

VGA--Sets the video circuitry to VGA mode (the default configuration for the adapter).

CGA--Sets the video circuitry to CGA mode and emulates the video capabilities of the IBM Color/Graphics Adapter).

MDA--Sets the video circuitry to emulate the Hercules Graphics Card with no graphics memory allocated. In this configuration, the adapter is equivalent to IBM's text-only Monochrome Display Adapter.

HERCO--Emulates the Hercules Graphics Card with one page of graphics memory allocated (equivalent to using the Hercules Graphics Card in HALF mode).

HERC1--Emulates the Hercules Graphics Card with two pages of graphics memory allocated (equivalent to the Hercules Graphics Card in FULL mode).

COLOR--Sets the video circuitry to color mapping as needed.

MONO--Sets the video circuitry to monochrome mapping as needed, supporting video modes that use monochrome mapping (such as monochrome text mode).

640--Sets the video circuitry to 256-color, 640x480 graphics mode. Use this mode only with applications that support Super VGA graphics.

800--Sets the video circuitry to 800x600 graphics mode. Use this mode only with application programs that support Super VGA graphics.

1024--Sets the video circuitry to 16-color, 1024x768 graphics mode. Use this mode only with application programs that support Super VGA graphics.

56--Sets the video circuitry to 800 x 600 modes for 56 Hz.

60--Sets the video circuitry to 800 x 600 modes for 60 Hz.

72--Sets the video circuitry to 800 x 600 modes for 72 Hz.

200--Sets the video circuitry to display 200 scan lines.

350--Sets the video circuitry to display 350 scan lines.

400--Sets the video circuitry to display 400 scan lines.

400256--Sets the video circuitry to 640 x 400 resolution in 256 colors.

480256--Sets the video circuitry to 640 x 480 resolution in 256 colors.

600--Sets the video circuitry to 800 x 600 resolution in 16 colors.

768--Sets the video circuitry to 1024 x 768 resolution in 16 colors.

600256--Sets the video circuitry to 800 x 600 resolution in 256 colors.

13225--Sets 132-column, 25-line color text mode; use only with application programs designed to take advantage to Super VGA text capabilities.

13243 or 13244--Switches the video circuitry to 132-column, 43 or 44-line color text mode; use only with application programs designed to take advantage to Super VGA text capabilities.

INTERLACE--Sets 1024 x 768 modes as interlaced.

60NON-INTERLACE--Sets 1024 x 768 modes as non-interlaced, 60 Hz.

70NON-INTERLACE--Sets 1024 x 768 modes as non-interlaced, 70 Hz.

LOCK--Locks in the current video configuration as the new default configuration. This command can be used with another parameter to lock in that particular mode. For example, vgamode cga lock will enable the video circuitry to remain configured as a color/graphics adapter even after you press [CTRL] +

[ALT] + [DEL]. Any specific video mode command will unlock the previous mode of the circuitry.

REBOOT--Locks and reboots the currently selected video mode so that system re-initializes in current video mode. Can also be used with any parameter to lock that particular mode.

RESTART--Same as reboot.

IF YOU HAVE A MOUSE

Changing video modes is often simply a matter of running VGAMODE.EXE and choosing the desired setting. However, if your mouse driver is installed through the CONFIG.SYS file or if the mouse is controlled by a program such as MOUSE.COM, you might need to restart the computer after choosing a video mode.

VIDEO TROUBLESHOOTING

This section lists solutions to typical video problems:

No Display

- * The monitor and/or power cable is not properly plugged in.
- * The system is not configured correctly.
- * The monitor is not turned on.
- * The brightness and/or contrast controls are not adjusted correctly.

F1 SETUP error when you start up your system

- * The setup utility was not run correctly.
- * The CMOS RAM battery can no longer remain charged.

Display rolls horizontally or vertically

- * You are using inappropriate software. Verify that you are using the correct software files for your monitor.

Image is offset on monitor

- * Adjust the monitor centering. Refer to your monitor documentation.

Distorted images or a blank screen when you run your software

- * The software is not configured for the current video configuration of the video circuitry. Run VGAMODE.EXE.
- * The software is not compatible with the current video configuration of the video circuitry. Use VGAMODE.EXE to set the circuitry to a video standard supported by the software.

Inability to display 800x600 and 1024x768 graphics

- * The 1024x768 modes require a multi-frequency monitor.

(smm 08/05/93)