

The video circuitry for the Tandy 2500 XL is included on the main logic board. This circuitry features:

- * Full IBM Personal System/2 VGA Display Adapter compatibility
- * A color palette of more than 262,000 possible colors
- * Compatibility with VGA analog monitors

MONITOR AND SOFTWARE COMPATIBILITY

The video circuitry is compatible with software written for the following video standards on color or monochrome VGA analog monitors:

- * VGA (Video Graphics Array)
- * MCGA (Multi-Color Graphics Array)
- * EGA (Enhanced Graphics Array)
- * CGA (Color/Graphics Array)
- * Hercules graphics (Hercules Graphics Card)

To emulate one of these video standards, use the vga.exe utility found on the Startup and Operating Diskette.

DEFAULT CONFIGURATIONS

The video circuitry automatically configures itself to VGA text mode when you turn on your system. Specifically, it defaults to monochrome text mode for a monochrome monitor (or equivalent) or 80-column color text mode for a color monitor. The vga.exe utility, described later in "VGA Software", enables you to easily switch between color and monochrome modes.

OPERATION

Most application software that is designed for VGA or EGA video support will run automatically on your computer system with VGA. Just turn on the computer, and install the application package as instructed by the software manufacturer.

CAUTION: Your VGA-compatible video circuitry requires the use of a VGA analog monitor. Do not use any other type of monitor.

Connect your color or monochrome VGA analog monitor to the 15-pin video connector on the main logic board. Refer to the "Configuration Settings" section for video-related jumper settings.

CONFIGURING THE APPLICATION SOFTWARE

Many application software packages include a setup, installation, or configuration program to prepare the application for operation with the particular hardware that you are using. Most newer software will be able to run in the default configuration for the video circuitry.

Because some software packages are written specifically for certain non-EGA, non-VGA video hardware, you might need to configure the video circuitry to emulate the video adapter needed by the software. Use the vga.exe utility as described in "VGA Software." The chart on the next page lists the fully hardware-compatible video circuitry and the video modes and resolutions that are available under each video standard.

STANDARD VIDEO MODES

MODE (text or graphics)	RESOLUTION (columns by rows)	SIMULTANEOUS (colors (1)/mapping (2))
VGA, EGA, and MCGA modes (startup defaults)		
Monochrome Text	80 x 25	--/monochrome
Color Text	80 x 25 40 x 25	16/color 16/color
Graphics	320 x 200 (3) 640 x 200 (3) 320 x 200 (3) 640 x 200 (3) 640 x 350 640 x 350 320 x 200 (3) 640 x 480 640 x 480	4/color 2/color 16/color 16/color 16/color --/monochrome 256/color 2/color 16/color
CGA Mode		
Color Text	80 x 25 40 x 25	16/color 16/color
Color Graphics	320 x 200 (3) 640 x 200 (3)	4/color 2/color
HERCULES Graphics mode and MDA mode		
Monochrome Text	80 x 25	--/monochrome
Monochrome Graphics	720 x 348	--/monochrome
<p>(1) Simultaneous colors refer to the number of colors or shades that can be displayed at one time.</p> <p>(2) Simultaneous mapping refers to the type of old-style display for which the mode was originally designed.</p> <p>(3) 200-line vertical resolution modes are double-scanned to display 400 lines on the screen.</p> <p>(4) You might need application-specific drivers to operate in these modes.</p>		

SOFTWARE TIPS

- * The best-looking display can usually be achieved by selecting the highest resolution mode available when you install your application software packages.
- * Some applications automatically detect the type of video and monitor combination installed and configure themselves to take best advantage of the available hardware.
- * If your software specifies that it is for VGA, PS/2 video, or EGA, install the appropriate software. This enables your software to run on your video circuitry in the startup configuration
- * If your software does not specify a VGA, PS/2 video, or EGA option and you are using an RGB color analog monitor, if available. This usually works with your video circuitry default color mode on color monitors.
- * To enable the video circuitry to run software that will not run on VGA hardware, you must configure the video circuitry to operate in another mode (such as CGA or Hercules), using the vga.exe.
- * Hercules-compatible software and some CGA-compatible games will require using the vga.exe utility to set the video circuitry to color or monochrome text mode as needed. For example, if the video circuitry is set for color VGA text mode and you want to run software that requires monochrome text, you can use the vga.exe utility to switch modes.
- * The video circuitry default mapping depends on the type of monitor being used. If you are using the color monitor, the default mapping will be color. If you are using the monochrome monitor, the default mapping will be monochrome.

VGA SOFTWARE

Normally, the default video standard for the video circuitry is VGA. If a program requires mapping standards that are incompatible with VGA, you can use the vga.exe utility on the Startup and Operating Diskette to override the VGA setting. Vga.exe enables you to choose from the VGA, CGA, and Hercules standards.

You can also use a LOCK command to make your particular configuration the new default mode (instead of VGA mode).

In addition, the vga.exe utility switches between color and monochrome VGA mapping modes.

If you have a hard disk installed you can copy the vga.exe utility to the hard disk. We recommend making a backup copy of the VGA utilities.

To access vga.exe:

1. Start up your computer.
2. At the MS-DOS prompt, insert the Startup and Operating Diskette into Drive A.
3. Type a:vga. Then press ENTER. A simple menu appears, listing some of the

options available.

4. Use the up and down direction keys on your keyboard to select your desired feature, and then press ENTER. Choose Exit or press ESC to exit and return to the operating system.

If you wish, you can bypass the vga.exe menu by including the desired option when accessing vga.exe. Use one of the following commands either at the MS-DOS prompt or in a batch file.

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

VGA CGA--Sets the video circuitry to CGA mode. This mode emulates the video capabilities of the IBM Color/Graphics Adapter. Press CTRL + ALT + DEL to return to VGA mode.

VGA MDA--Sets the video circuitry to emulate the Hercules Graphics Card with no graphics memory allocated. This configuration is equivalent to IBM's text-only Monochrome Display Adapter. Press CTRL + ALT + DEL to return to VGA mode.

VGA HERC--Sets the video circuitry to emulate the Hercules Graphics Card with one page of graphics memory allocated. This configuration is equivalent to using the Hercules HGC HALF command. Press CTRL + ALT + DEL to return to VGA mode.

VGA HERC1--Sets the video circuitry to emulate the Hercules Graphics Card with two pages of graphics memory allocated. This configuration is equivalent to using the Hercules HGC FULL command. Press CTRL + ALT + DEL to return to VGA mode.

VGA COLOR--Changes the video circuitry to color mapping as needed. This setting supports video modes that require color mapping.

VGA MONO--Changes the video circuitry to monochrome mapping as needed. This setting supports video modes that use monochrome mapping (such as monochrome text mode).

VGA LOCK--Locks in the current video configuration as the new default configuration. This command can also be used in conjunction with another parameter to lock in that particular mode. For example, the command VGA CGA LOCK will enable the video circuitry to survive a reboot configured as a color/graphics adapter. Any specific video mode command, such as VGA CGA, unlocks the video circuitry unless you include LOCK in your particular command. If you enter an incorrect VGA command, the program displays a prompt that gives you the option of using the vga.exe menu or returning to MS-DOS.

MOUSE USERS

If your mouse driver is a program such as mouse.com or if you include a device command in your config.sys file to install your mouse driver, use the following procedure to change from VGA to CGA, MDA, or Hercules mode when the mouse is installed:

1. At the vga.exe menu, select your desired option. (Set CGA, Hercules, or MDA.)

2. Choose the Reboot System in Current Mode option. The system restarts. Reload any drivers or TSR utilities you want to run.
3. To return to VGA mode, run the vga.exe utility and select a VGA option.

Refer to your mouse installation guide for more instructions on installing and using the mouse.

NOTES:

- * Using the Reboot System in Current Mode option is equivalent to activating the vga.exe utility's Lock Current Mode option and then pressing CTRL + ALT + DEL. Subsequent restarts cause the VGA adapter to come up in the selected mode (Hercules, MDA, or CGA). Using the vga.exe utility to select any other mode causes subsequent restarts to come up in the default VGA mode.
- * The Reboot System in Current Mode option can be accessed from the MS-DOS command line or through an MS-DOS batch file by using the REBOOT parameter. For example, to switch from VGA mode to Hercules mode when the mouse driver has been loaded, use the following command:

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VGA HERC1 REBOOT
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INSTALLATION TROUBLESHOOTING

Here are some typical symptoms of installation problems, along with their solutions:

No display

- * The monitor and/or power cable is not properly plugged in.
- * The monitor is not turned on.
- * The brightness and/or contrast control on the monitor is not turned up far enough.

F1 SETUP error when you start up your system

- * The Setup program was not run.

Distorted images or a blank screen when you run your software

- * The software is not configured for or compatible with the video controller's current configuration. Run vga.exe

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