VC 512 VGA
OPERATION GUIDE

Notice

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Trademark Acknowledgements

* IBM,IBM PC,IBM PC/XT,PC/AT,PS/2. and OS/2 are trademark of International Business Machines Corp.

* Multisync is a trademark of NEC Home Elect Inc.

* Microsoft Windows is a trademark of Microsoft Corporation.

* Lotus 1-2-3 and Symphony is trademarks of Lotus Development Corporation.

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FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

* Reorient or relocate the receiving antenna.
* Increase the separation between the equipment and receiver.
* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
* Consult the dealer or an experienced radio/TV technician for help.

Shielded cables and I/O cords must be used for this equipment to comply with relevant FCC regulations.

Thank you for purchasing our VC 512 VGA graphics board. The adapter works with your IBM PC/XT/AT (or compatible) to bring you super-high resolution, 256-color capability, fast screen redraw, compatibility with most softwares and hardwares.

Features

- 486, 386, and 286 PC compatibles.
- Register compatible with Hercules™, MDA, CGA, EGA and VGA.
- Interlaced monitor support.
- Compatible with Multi-Sync and PS/2 monitors.

Resolution and Color Selection

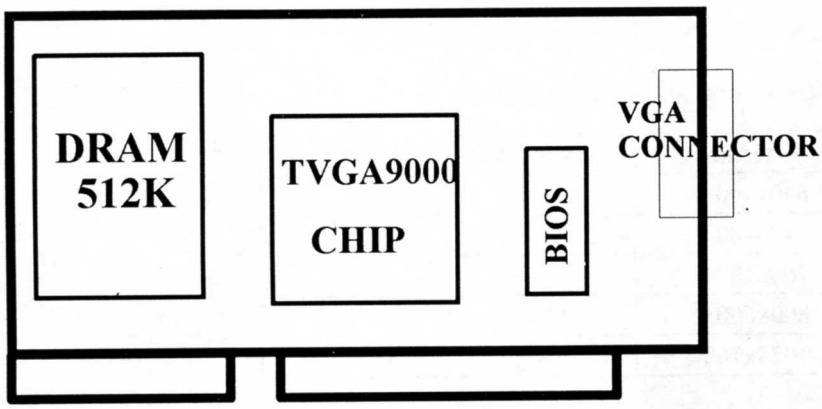
Memory	256K DRAM	512K DRAM
640x400	--	256
640x480	16	16, 256
768x1024	--	16
800x600	16	16, 256
1024x768	--	16

Software Drivers Supported

- AutoCAD
- Autoshade
- CADKEY
- MS Windows
- GEM Desktop
- Lotus
- Symphony
- MS Word
- Ventura
- WordPerfect
- Quattro Pro

WARNING: Incorrect setting or use of the adapter may result in damage to the computer system, monitor, or the graphics adapter itself. Carefully read through this manual before installing the adapter in your system. Step-by-step instructions in the "Installation" section will guide you through the installation process.

VC-512 DIAGRAM



Within the utility diskette provides the following utilities programs:

- **SVM.EXE**

  SVM is a menu-driven program designed to help you select and test all video modes available to the adapter. SVM allow you to emulate EGA, CGA, and Hercules(MDA) modes on a VGA monitor. This may be useful when you wish to run a special application (e.g. CGA PINBALL).

  You may also use SVM to select the standard VGA text mode (i.e. 80x25) and extended VGA text and graphics modes. This provides a useful method to determine if a given video mode will display correctly on your monitor.

  Some game program require you boot up in CGA mode. For these programs, SVM will lock in CGA mode and will remain in CGA mode even if you warm-boot (press[Ctrl]-[Alt]-[Del]). For other modes (EGA, 1024x768-256, etc.), SVM will reset to VGA after you warm-boot. Since most standard programs run in VGA mode, do not forget to switch back to VGA mode before starting a standard application (e.g. Windows 3.x)

- **SMONITOR**

  Switches between color and monochrome display. Some monitors (most notably Samsung monitors manufactured before 2/18/91) do not adhere to the standard IBM pinout definitions, which causes the VGA card to boot up in monochrome instead of color. This utility may be used to correct the problem. To run, add the following command to your Autoexec.bat files SMONITOR C.

  To run from the DOS prompt, just type SMONITOR from the directory where you have installed the utilities.

- **TANSI.SYS**

  TANSI.SYS provides an enhanced ANSI driver for your standard output device. This driver allows you to display more than 25 rows of text on your standard screen. If you already have an ANSI driver installed and are unable

to display more than 25 rows of text, you might want to replace your ANSI driver with TANSI.SYS.

- **TVGACRTC**

TVGACRTC program allows you to adjust video display parameters so that images will be optimally sized and centered on the screen. Adjustable parameters include horizontal size and position, vertical size and position, and pixel frequency. A list of monitors with pre-programed CRTC parameters is provided. If your monitor is not listed, you will need to create your own entry.

The program also allows you to configure the adapter's decode method (Fast or Slow Address Decode) and BIOS and Video I/O data width. These configuration settings override the hardware jumper settings.

To start the program from the DOS prompt, just type TVGACRTC from the C:\UTIL directory on your hard drive. To access the configuration screen, press F10 from the main TVGACRTC menu screen.

- **TPATCH.EXE**

The TPATCH provides several patch files to correct screen display problems. TPATCH corrects the display problems for the Print Preview function of WordPerfect 5.1, File Import/Export function of Applause 1.5, IBM 3270 Emulation, Grasp 4.0, PICEM 1.0, Windows 3.1 SKD, and EZ-Menu. To run, just type TPATCH at the DOS prompt. The TPATCH displays a list of patch files. Just select the patch you need and provide the directory of your application software. TPATCH will modify the display driver provided by your application software.

IMPORTANT NOTE : Because we are continuously updating existing drivers and developing new drivers for popular software applications, your Driver & Utility Diskette may have drivers not listed in the manual.

Installation Procedures

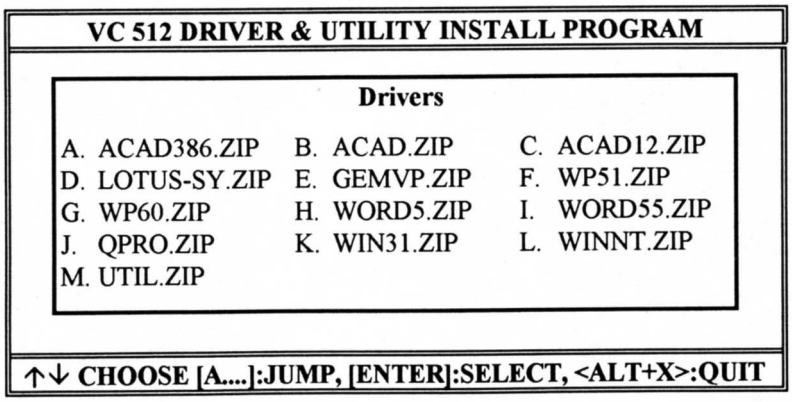
* All drivers have been compressed as *.ZIP files, so you have to decompress the *.ZIP files before using the drivers.

To install these drivers, please follow this procedure:

1. Run INST file.
2. Type letter to select install drivers.
3. Key in path where you want to install.
4. Continue install another drivers or Type ALT-X to exit.
5. Change directory to your install directory.
6. Type "READ" to get detail install information before use it. And type "TYPE READ.TXT" to read more information.

Example: Install the Utilities to your Harddisk

1. Insert the Driver & Utility diskette in DRIVER A:
2. Type :"INST "....to start install program , you will see



3. Type: "M"..... to select UTIL.ZIP file

4. Type: "C:\VGA" ..... to decompress to C:\VGA directory

5. Type: "ALT+X"..... to QUIT

6. Change directory to C:\VGA

7. Type: "MORE < README"..... to read continuous steps
   (Assume DOS COMMAND" MORE" in your system path)

** LOTUS-SY.ZIP include Lotus & Symphony drivers both.
** GEMVP.ZIP include GEM & Ventura drivers both.
** GEM31 and VENTURA need to be decompress to a diskette before installed to a harddisk.

NOTE: Please carefully study "README" before you continue the procedures.

Hardware Troubleshooting Tips

The following are some recommended steps to take if the VGA Graphics Adapter will not boot or operate properly in your system :

1. Check to see if the card is firmly seated in its bus expansion slot. Be sure it is not making contact with any other cards in the system.

2. Be sure your monitor is properly connected to the card. Be sure your monitor's pin definitions match those of your IMPACT card.

3. Be sure your system's power supply is operating properly (i.e. fan operates, system power light comes on).

4. If you are using an IBM PC/AT or compatible, be sure switches 5 and 6 of Switch Block SW1 on your motherboard are set to ON.

5. If you are using an IBM PC/XT or compatible, check to see your system BIOS is dated October 27, 1982 or later, System BIOS versions prior to this date will not support the adapter card.

Enhanced VGA Modes Supported by VC512

Mode (hex)	Type Format	Alpha Format	Display Size	Colors	H-sync. (K Hz)	V-sync. (Hz)	Char -Size	Note
0,1	text	40x25	320x200	16	31.4	70	8x8	
2,3	text	80x25	640x200	16	31.4	70	8x8	
0,1	text	40x25	320x350	16	31.4	70	8x14	1
2,3	text	80x25	640x350	16	31.4	70	8x14	1
0,1	text	40x25	360x400	16	31.5	70	9x16	2
2,3	text	80x25	720x400	16	31.5	70	9x16	2
4,5	graphics	40x25	320x200	4	31.4	70	8x8	
6	graphics	80x25	640x200	2	31.4	70	8x8	
7	text	80x25	720x350	mono	31.5	70	9x14	1
7	text	80x25	720x400	mono	31.5	70	9x16	2
D	graphics	40x25	320x200	16	31.4	70	8x8	
E	graphics	80x25	640x200	16	31.4	70	8x8	
F	graphics	80x25	640x200	16	31.4	70	8x14	
10	graphics	80x25	640x350	16	31.4	70	8x14	
11	graphics	80x30	640x480	2	31.4	60	8x16	
12	graphics	80x30	640x480	16	31.4	60	8x16	
13	graphics	40x25	320x200	256	31.4	70	8x8	
50	text	80x30	640x480	16	31.5	60	8x16	
51	text	80x43	640x473	16	31.5	60	8x11	
52	text	80x60	640x480	16	31.5	60	8x8	
53	text	132x25	1056x350	16	31.2	70	8x14	
54	text	132x30	1056x480	16	31.2	60	8x16	
55	text	132x43	1056x473	16	31.2	60	8x11	
56	text	132x60	1056x480	16	31.2	60	8x8	
57	text	132x25	1188x350	16	31.2	70	9x14	
58	text	132x30	1188x480	16	31.2	60	9x16	
59	text	132x43	1188x473	16	31.2	60	9x11	
5A	text	132x60	1188x480	16	31.2	60	9x8	
5B	graphics	100x75	800x600	16	35.2	56	8x8	

5C	graphics	80x25	640x400	256	31.5	70	8x16	5
5D	graphics	80x30	640x480	256	31.5	60	8x16	5
5E	graphics	100x75	800x600	256	29.5	90	8x8	5,6,7
5F	graphics	128x48	1024x768	16	48.7	60	8x16	5,7
60	graphics	128x48	1024x768	4	35.5	86	8x16	7
61	graphics	96x64	768x1024	16	37.9	70	8x16	4,5

Table Notes:

1 : EGA text modes with 8x14 and 9x14 character sizes and 350 lines vertical resolution.

2 : VGA text modes with 9x16 character size and 400 lines vertical resolution.

3 : Check to see if your Multisync monitor supports the interlaced or non-interlaced versions of these modes (monitor must support horizontal scan rate of 48.7 KHz or 56.4 KHz for non-interlaced display).

4 : A portrait monitor is required to run this mode (e.g. Magics -15FP).

5 : Supported by 512K configurations only.

6 : Not every multisync monitor works (e.g., NEC 3D does not support low frequency).

7 : Interlaced mode.

Note:
You may need to adjust your multi-frequency monitor to display these modes properly. Use the horizontal and vertical size and position controls on your monitor to display without distortion.

Monitor connector pin assignments

PIN	SIGNAL	PIN	SIGNAL
1	Red	9	N/A
2	Green	10	Ground
3	Blue	11	Monitor ID bit 0
4	Monitor ID bit 2	12	Monitor ID bit 1
5	N/A	13	Horizontal Sync
6	Ground	14	Vertical Sync
7	Ground	15	N/A
8	Ground		

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