

# *Earthworm Jim*

## Technical Troubleshooting

### Introduction

Thank you for downloading the one-level demo version of *Earthworm Jim*. This supplemental documentation is designed as a troubleshooting guide in the event you experience technical problems while running the program. The following contains technical tips and other information that could not be included in the online Help file.

### Customer Support Bulletins

In an effort to keep you informed of the latest product developments, Activision has created Customer Support Bulletins. These files are located on the various online services and contain the latest information about Activision products.

### Troubleshooting

The following information is designed to help you resolve any difficulties you may encounter while running the program.

#### Error Messages

##### "Requires a 486, Pentium or better processor"

1. *Earthworm Jim* requires a 486/33 or better processor with a minimum of 8 MB of RAM. Attempting to run the program on a lesser machine may result in hardware and performance difficulties.
2. The game is not compatible with the NextGen chip as it is a 386 chip that emulates a Pentium. *Earthworm Jim* requires a 486 or better chip in order to run.

##### "Requires Windows 95 or Windows NT 3.51+"

1. *Earthworm Jim* requires the Windows 95 or Windows NT 3.51 operating system. The game is not compatible with Windows 3.1 or other operating systems.

##### "Earthworm Jim should be played in 256 color mode for best performance"

See the section entitled Game Graphics Are Faded Or Strange In Appearance.

##### "Are you sure you want to give up the current game?"

1. Using the File Menu to start a new level or changing the level of difficulty in the middle of a game will reset the weapons, continues, energy level, enemies and other collectables to

- their default settings.
2. Switching difficulty levels in the middle of a game will result in the start of a new game in the newly selected difficulty mode. However, the game will automatically save the last level played in the previous difficulty mode. Read the online Help file for more information about switching levels of difficulty.

## Windows 95 Troubleshooting

Activision thoroughly tests its games on a variety of systems before they are released, but it is virtually impossible to test on all combinations of software and hardware. Many of the problems you may encounter in Windows 95 are caused by device drivers for video cards, sound cards and CD-ROM drives that are not fully compatible with the Windows 95 operating system.

The following troubleshooting tips are intended to assist you in solving some of the common problems that occur with the new Windows 95 operating system. If you continue to experience technical difficulties after trying the following solutions, please contact Activision Customer Support.

### Game Freezes Or Crashes

1. Make sure your system is at least a 486/33 with a minimum of 8 MB of RAM. Trying to run the game on a lesser machine may result in hardware and performance difficulties.
2. Disable the Sound Effects option in the Sound page of the Properties Box contained in *Earthworm Jim*. Particular sounds may cause the game to freeze when played on certain sound cards. If an updated driver does not correct this problem, disabling the sound effects may help to decrease the chance of game crashes.
3. Do not leave the game sitting idle for extended periods of time as this may cause your system to lock up. If you are not playing the game, please exit the program and restart it later when you want to play again.
4. It is recommended that you reboot your system after experiencing a crash. This helps to ensure that you will not experience any residual effects related to the crash.

### Game Too Slow

1. If your computer has a turbo button, make sure it is set to the highest MHz possible.
2. Make sure your system is at least a 486/33 with a minimum of 8 MB of RAM. Running the game on a lesser machine may result in hardware and performance difficulties.
3. Make sure that your display mode is set to 256 colors. *Earthworm Jim* should be played in 256 color mode for best performance. Although the game may be played in higher color modes, you may experience slowdown and minor color changes in game graphics. Although it may be time consuming to have to switch between higher color modes and 256 color mode, this is what allows for the high rate of speed in the game. To switch to 256 color mode, perform the following steps:
  - a) Make sure you have a 256 color video driver installed for use.
  - a) Open the Windows 95 Control Panel folder and double-click on the Display icon.
  - b) Click on the Settings tab.
  - c) Select 256 Color in the Color Palette drop-down menu, then click the OK button.

Various utilities that eliminate the need to reboot whenever you switch color modes are available on most online services.

4. Playing the game in a large-sized or maximized window and/or while your screen resolution is set above 640x480 may result in screen "tearing", frame dropout and general slowdown. For better performance in this situation, it is recommended that you select one of the pre-determined window sizes in the Display section of the System page located in the Properties Box contained in *Earthworm*

*Jim* and/or set your screen resolution in Windows 95 to 640x480. To do this, perform the following steps:

- a) Open the Windows 95 Control Panel folder and double-click on the Display icon.
  - b) Click on the Settings tab.
  - c) Move the slider bar in the Desktop Area section until it reads 640x480, then click the OK button.
5. If you are playing the game in an odd-sized custom window, this may result in screen "tearing" and general slowdown. For better performance in this situation, it is recommended that you select one of the pre-determined window sizes in the Display section of the System page located in the Properties Box contained in *Earthworm Jim*.
  6. If you are running the program on a Pentium machine with a speed of less than 90 Mhz and are playing in Full Screen mode with the Sync Full to Monitor option enabled, this may result in slower performance. For better performance in this situation, disable the Sync Full Screen to Monitor option.
  7. Make sure you are not running an excessive amount of background applications. Before running *Earthworm Jim*, close any applications that are not in use. If you still experience slowdown, make sure you are not running any programs or utilities, such as System Agent, that automatically perform functions at given intervals. Applications that perform auto-scans, auto-defragmentation and the like may result in slower performance during these functions.
  8. If you frequently multi-task or your system is linked to a network, go to the System page in the Properties Box contained in *Earthworm Jim* and set the Game Priority option to Real Time. This will devote maximum processing power to the game. Remember that playing the game in Real Time mode may affect any applications running in the background. It is recommended that you do not attempt downloading or other similar functions while playing in this mode.
  9. If you are experiencing general slowdown problems, it is recommended that you play the game in Full Screen mode, which is designed for maximum display combined with maximum performance. The Full Screen option is not available when running the program in Windows NT.

### **Game Too Fast**

1. There is a rare problem related to Windows 95 that results in the game running at twice the normal speed. To resolve this situation, reboot your system and restart the game.

### **Partial Sound Or No Sound**

1. Make sure your sound card is 100% Windows 95 compatible. Using a non-Windows 95 compatible sound card and drivers may result in sound problems.
2. The Sound Effects option is not available when running the program in Windows NT.
3. Make sure your speakers are plugged in correctly, turned on and the volume is set at an audible level.
4. Open the Windows 95 Volume Control program to verify that none of the various channels are muted or set to an inaudible level.
5. Make sure the Sound Effects option is enabled in the Sound page of the Properties Box contained in *Earthworm Jim*.
6. Your sound drivers for Windows 95 may require updating. Check the installation and setup parameters of your sound card using the Device Manager of Windows 95 to determine if this is the case. To do this, perform the following steps:
  - a) Open the Windows 95 Control Panel folder and double-click on the System icon.
  - b) Click on the Device Manager tab.
  - c) Click on the plus sign located next to the Sound, Video and Game Controllers icon.
  - d) Highlight your sound card and click on the Properties button.

If you purchased your sound card before the release of Windows 95, you may obtain updated drivers in a variety of places. Most hardware retailers have access to the most recent drivers. Additionally, most sound card manufacturers maintain a BBS containing the latest drivers for free downloading.

Moreover, drivers are available on CompuServe, America Online, The Microsoft Network and other popular online services. A list of sound card manufacturers and their Technical Support and BBS numbers is contained at the end of this document. Please make every effort to install the latest sound drivers before calling Activision Customer Support.

### **Game Graphics Are Faded Or Strange In Appearance**

1. Make sure your video card is 100% Windows 95 compatible. Using a non-Windows 95 compatible video card and drivers may result in display problems. It is known that playing the game using Trident video cards occasionally results in minor color changes in game graphics. It is recommended that you obtain the latest Trident video drivers in an effort to avoid this situation. A list of video card manufacturers and their Technical Support and BBS numbers is contained at the end of this document.
2. Make sure that your display mode is set to 256 colors. *Earthworm Jim* should be played in 256 color mode for best performance. Although the game may be played in higher color modes, you may experience slowdown and minor color changes in game graphics. Although it may be time consuming to have to switch between higher color modes and 256 color mode, this is what allows for the high rate of speed in the game. To switch to 256 color mode, perform the following steps:

- a) Make sure you have a 256 color video driver installed for use.
- a) Open the Windows 95 Control Panel folder and double-click on the Display icon.
- b) Click on the Settings tab.
- c) Select 256 Color in the Color Palette drop-down menu, then click the OK button.

Various utilities that eliminate the need to reboot whenever you switch color modes are available on most online services.

3. If you are experiencing problems in seeing all of the File pull-down menu on your screen, it is recommended that you change the font size in Windows 95 to a smaller setting. To do this, perform the following steps:
  - a) Open the Windows 95 Control Panel folder and double-click on the Display icon.
  - b) Click on the Appearance tab.
  - c) Select the word Menu located in the Item drop-down menu.
  - d) Change the font size by clicking on the bottom arrow in the Size menu located to the right of the Item drop-down menu.

If you purchased your video card before the release of Windows 95, you may obtain updated drivers in a variety of places. Most hardware retailers have access to the most recent drivers. Additionally, most video card manufacturers maintain a BBS containing the latest drivers for free downloading. Moreover, drivers are available on CompuServe, America Online, The Microsoft Network and other popular online services. A list of video card manufacturers and their Technical Support and BBS numbers is contained at the end of this document. Please make every effort to install the latest video drivers before calling Activision Customer Support.

### **Keyboard Controls Do Not Work**

1. Make sure the Keyboard option is enabled in the Keyboard page of the Properties box contained in *Earthworm Jim*.
2. Make sure all connections between your keyboard and computer are properly connected.
3. Certain key configurations will not allow three simultaneous key presses, which often results in not being able to perform certain game actions simultaneously. You will hear a keyboard "tick" from the PC speaker when this happens.

### **Gamepad Or Joystick Does Not Work**

1. Make sure your joystick is properly calibrated in Windows 95. To do this, perform the following steps:
  - a) Open the Windows 95 Control Panel folder and double-click on the Joystick icon.
  - b) Select the appropriate settings in the Current Joystick and Joystick Selection drop-down menus.
  - c) Calibrate your controller.
2. Although Windows 95 contains several built-in gamepad and joystick drivers, you may need to obtain a Windows 95 compatible driver from the gamepad or joystick manufacturer.
3. The Joystick option is not available when running the program in Windows NT.

## Hardware Manufacturers

The following is a list of Technical Support and Customer BBS numbers for system, sound card, video card and CD-ROM manufacturers. Activision has made every effort to ensure that these numbers are correct. However, you may want to consult the documentation for your PC, video card, sound card or CD-ROM drive for more up-to-date information about each company. The first section is for people living in North America. The second section is for people living outside of North America.

## Inside North America...

### System Manufacturers

#### Acer

Technical Support	(800) 733-2237
BBS	(408) 428-0140
BBS	(800) 833-8241

#### AST Research

Technical Support	(800) 727-1278
BBS	(714) 852-1872

#### Compaq

Technical Support	(800) 652-6672
BBS	(713) 378-1418

#### Dell

Technical Support	(800) 624-9896
BBS	(512) 728-8528

#### Epson

BBS	(310) 782-4531
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#### Gateway

Technical Support	(800) 846-2301
BBS	(605) 323-2224 or (605) 232-2109
Download Service	(800) 846-7562

#### Hercules Computer Technology Inc.

Technical Support	(510) 623-6050	
BBS	(510) 623-7449	(V.32 bis)

BBS	(510) 623-7034	(9600 baud)
BBS	(510) 623-7142	(2400 baud)

### **IBM**

Technical Support Multimedia	(908) 329-7131
Technical Support PS/1 PRO	(800) 765-4747
Technical Support Valuepoint	(800) 772-2227
Technical Support Valuepoint	(213) 621-5576

### **Intel**

Technical Support	(800) 538-3373
BBS	(503) 645-6275

### **Leading Edge**

Technical Support	(800) 225-2283
BBS	(503) 836-3971

### **Micronics**

Technical Support	(510) 651-2323
BBS	(510) 651-6837

### **Packard Bell**

Hardware Support	(800) 733-4411
Software Support	(801) 579-0161
BBS	(801) 250-1600
BBS	(818) 773-7207

### **Tandon**

Technical Support	(805) 523-0340
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### **Tandy Computer**

Technical Support	(817) 878-6875
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### **Toshiba**

Technical Support	(800) 999-4273
BBS	(415) 656-5159

### **Zenith**

Technical Support	(800) 227-3360
BBS	(800) 888-3058

## **Sound Card Manufacturers**

### **Advanced Gravis**

Technical Support	(206) 881-6945
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### **ATI Technologies Inc.**

Technical Support	(905) 882-2626
BBS	(905) 764-9404

### **Aztech**

Technical Support	(800) 886-8879
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### **Boca Research Inc.**

Technical Support	(407) 241-8088
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BBS (407) 241-1601

**Cardinal**

Technical Support (717) 293-3124  
BBS (717) 293-3074

**Creative Labs**

Technical Support (408) 428-6622  
BBS (408) 428-6660

**Diamond**

Technical Support (408) 736-2000  
BBS (408) 524-9301

**Logitech**

Technical Support (510) 795-8100  
BBS (510) 795-0408

**Media Vision**

Technical Support (800) 638-2807  
BBS (510) 770-0968

**Microsoft**

Technical Support (206) 637-7096  
BBS (206) 936-4082  
BBS (206) 936-6735

**Reveal**

Technical Support (800) 473-8325

**Roland US**

Technical Support (213) 685-5141

**Turtle Beach**

Technical Support (717) 843-6916  
BBS (717) 845-4835

**Video Card Manufacturers**

**Actix Systems**

Technical Support (408) 986-1625  
BBS (408) 970-3719

**Advanced Integration Research**

Technical Support (408) 428-0800  
BBS (408) 428-1735

**Advanced Micro Technology**

Technical Support (909) 598-6120  
BBS (909) 594-5770

**Alpha Systems Lab**

Technical Support (800) 576-4275

**Altech International**

Technical Support (800) 882-8194  
BBS (408) 946-2227

**Artist Graphics Company**

Technical Support (800) 627-8478  
BBS (612) 631-7664

**ATI Technologies**

Technical Support (905) 882-2626  
BBS (905) 764-9404

**Atlaz Intl., Limited**

Technical Support (516) 239-1854

**Boca**

Technical Support (407) 241-8088  
BBS (407) 241-1601

**Cache Computers, Inc.**

Technical Support (510) 226-9922  
BBS (510) 226-7486

**Cardinal**

Technical Support (717) 293-3124  
BBS (717) 293-3074

**Celerite Graphics, Inc.**

Technical Support (510) 226-6390  
BBS (510) 226-7851

**Cirrus Logic**

Technical Support (510) 435-8808  
Technical Support (510) 623-8300 (west coast)  
Technical Support (508) 470-3380 (east coast)  
BBS (510) 440-9080

**Colorgraphic Communication**

Technical Support (404) 455-3921  
BBS (404) 452-8238

**Cornerstone Technology**

Technical Support (800) 562-2552 x306  
BBS (408) 435-8943

**CSS Laboratories, Inc.**

Technical Support (800) 966-2771  
BBS (714) 852-9231

**Diamond Computer Systems, Inc.**

Technical Support (408) 325-7100  
BBS (408) 325-7175 (14400 baud, 8 bits, no parity, 1 stop)  
BBS (408) 325-7080 (2400 baud, 8 bits, no parity, 1 stop)

**Edge Technology, Inc.**

Technical Support (800) 438-3343



**ELSA America, Inc.**

Technical Support (800) 272-3572  
BBS (415) 588-6286

**Focus Information Systems, Inc.**

Technical Support (510) 657-4586  
BBS (510) 657-9451

**Genoa**

Technical Support (408) 432-8324  
BBS (408) 943-1231

**Headland (Video Seven)**

Technical Support (800) 553-1850  
BBS (415) 656-0503

**Hercules Computer Technology Inc.**

Technical Support (510) 623-6050  
BBS (510) 623-7449 (V.32 bis)  
BBS (510) 623-7034 (9600 baud)  
BBS (510) 623-7142 (2400 baud)

**Identity Systems Technology**

Technical Support (800) 723-8324  
BBS (214) 705-7213

**IOcomm Intl., Corp.**

Technical Support (800) 998-8919

**Liberty Electronics USA**

Technical Support (800) 497-8324

**Matrox Electronics Systems Limited**

Technical Support (800) 462-8769  
BBS (514) 685-6008

**Metheus Corporation**

Technical Support (503) 690-1550  
BBS (503) 690-1559

**MicroStep, Inc.**

Technical Support (818) 336-8991  
BBS (818) 961-9992

**Mirage Computer Systems**

Technical Support (310) 440-1460

**National Design, Inc.**

Technical Support (512) 329-5055  
BBS (512) 329-6327

**Number Nine Computer Corporation**

Technical Support (617) 674-0009  
BBS (617) 862-7502

**Nth Graphics**

Technical Support (800) 624-7552  
BBS (512) 832-1964

**Oak Technology**

Technical Support (408) 737-0888  
BBS (408) 524-9014

**Orchid Technology Inc.**

Technical Support (510) 683-0323  
BBS (510) 683-0327

**Paradise**

Technical Support (800) 832-4778  
BBS (415) 968-1834

**Sigma Designs**

Technical Support (510) 770-0100  
BBS (510) 770-0111

**SixGraph Computing, Limited**

Technical Support (800) 561-2892  
BBS (514) 336-4169

**STB Systems**

Technical Support (800) 234-4334  
Technical Support (214) 234-8750  
BBS Phone (214) 437-9615  
BBS (214) 237-9615

**SuperMac Technology, Inc.**

Technical Support (408) 245-0646  
BBS (408) 773-4500

**Swan Technologies, Inc.**

Technical Support (800) 468-7926  
BBS (814) 237-6143

**Trident Microsystems Inc.**

Phone (415) 691-9211  
BBS (415) 691-1016

**Tseng Labs**

Technical Support (215) 968-0502  
BBS (215) 579-7536

**Video Logic, Inc.**

Technical Support (617) 494-0530  
BBS (617) 494-4960

**Video Seven**

Technical Support (800) 553-1850  
BBS (510) 656-0503  
BBS (415) 656-0503

**VidTech Microsystems, Inc.**

Technical Support (800) 752-8033

BBS (612) 780-3564

#### **Willow**

Technical Support (212) 402-9500

### **CD-ROM Manufacturers**

#### **Hitachi**

Technical Support (800) 241-6558

#### **Mitsubishi**

Technical Support (800) 344-6352

BBS (714) 236-6286

#### **Mitsumi**

Technical Support (408) 970-9699

#### **NEC**

Technical Support (708) 860-0335

BBS (508) 635-6328

#### **Panasonic**

Technical Support (800) 222-0584

BBS (201) 863-7845

#### **Sony**

Technical Support (714) 826-6410 (west coast)

Technical Support (201) 368-3774 (east coast)

BBS (408) 955-5107

#### **Teac**

Technical Support (213) 726-0303

### **Outside North America...**

#### **System Manufacturers**

##### **Acer**

Technical Support USA (408) 434-6677

BBS USA (408) 428-0140

##### **AST Computers**

Technical Support USA (817) 232-9824

BBS USA (714) 852-1872

##### **Compaq**

Technical Support USA (713) 378-2000

BBS USA (713) 378-1418

##### **Dell**

Technical Support France 1-30-60-6900

Germany 61-03-971-0

Spain 1-32-91080

	United Kingdom 344-860-456 Australia 2-930-3355 Finland 0-692-3122 Ireland 61-304091 Poland 644-2525 Sweden 8-590-05-100 Austria 2243-34100-0 Belgium/Luxembourg 2-466-91-99 Netherlands 20-6812666 Canada (416) 758-2100 Czechoslovakia 2-879250 Japan 3-5420-5353 Mexico 5-228-7800 Norway 67-125711 Singapore 32-08370 Switzerland 22-979-0101 USA (512) 728-8528
BBS	
<b>Epson</b>	
Technical Support	USA (310) 782-0770
BBS	USA (310) 782-4531
<b>Gateway</b>	
Technical Support	USA (605) 232-2191
BBS	USA (605) 232-2109
<b>Hercules Computer Technology Inc.</b>	
Technical Support	Germany 14-24-910-5
BBS	Germany 14-24-089-8
<b>IBM</b>	
Technical Support	USA (404) 238-1234
BBS	USA (919) 517-0001
<b>Intel</b>	
Technical Support	USA (503) 264-7000
BBS	USA (503) 264-7999
<b>Leading Edge</b>	
Technical Support	USA (508) 836-4800
BBS	USA (503) 836-3971
<b>Micronics</b>	
Technical Support	USA (510) 651-2323
BBS	USA (510) 651-6837
<b>Packard Bell</b>	
Technical Support	France 1-40-64-1000
	Germany 89-83-703-1
	Italy 2-29-52-7444
	Spain 1-45-80055
BBS	USA (801) 250-1600
<b>Tandon Computer</b>	
Technical Support	USA (805) 582-6119

**Tandy**

Technical Support

United Kingdom 922-434-000

**Toshiba**

Technical Support

BBS

USA (714) 859-4273

USA (714) 837-4408

**Zenith**

Technical Support

BBS

USA (708) 808-5000

USA (708) 808-2264

**Sound Card Manufacturers****Advanced Gravis**

Technical Support

BBS

France 1-39-73-1534

Germany 99-61-507-7

USA (206) 883-3211

**ATI Technologies Inc.**

Technical Support

BBS

Germany 46-09-077-7

Germany 46-21-020-1 or 46-09-076-6

**Aztech Labs**

Technical Support

BBS

Germany 11-69-084-3

Germany 11-69-178-2

**Boca Research Inc.**

Technical Support

BBS

USA (407) 997-7202

USA (407) 241-1602

**Cardinal**

Technical Support

BBS

USA (717) 293-3124

USA (717) 293-3074

**Creative Labs**

Technical Support

BBS

France 1-39-20-0421

Germany 31-10-283-8

USA (918) 742-2377

**Diamond Computer Systems, Inc.**

Technical Support

BBS

France 42-20-5959

Germany 78-04-023-5

Italy 39-25-16-671

Spain 1-30-41534

USA (408) 325-7175

**Logitech**

Technical Support

BBS

France 34-48-9050

Switzerland 21-869-9851

USA (510) 795-0408

**Media Vision**

Technical Support

BBS

USA (510) 770-9905

USA (510) 770-0968

**Microsoft**

Technical Support

France 1-69-86-1020  
Germany 08-93-176-0  
Italy 39-22-69-121  
Spain 1-80-40000

BBS

Belgium 2-735-00-45

**Reveal**

Technical Support

United Kingdom 818-457-400

BBS

USA (818) 713-8188

**Roland US**

Technical Support

Germany 05-26-0009-0

Italy 29-35-81-311

Spain 3-30-81000

**Turtle Beach**

Technical Support

Switzerland 22-347-1181

BBS

USA (717) 767-5934

**Video Card Manufacturers****Actix Systems**

Technical Support

USA (408) 986-1625

BBS

USA (408) 970-3719

**Advanced Integration Research**

Technical Support

USA (408) 428-0800

BBS

USA (408) 428-1735

**Advanced Micro Technology**

Technical Support

United Kingdom 256-811-101

BBS

USA (909) 594-5770

**Alpha Systems Lab**

Technical Support

USA (714) 252-9200

BBS

USA (714) 252-0624

**Artist Graphics Company**

Technical Support

United Kingdom 844-261-313

BBS

USA (612) 631-7664

**ATI Technologies**

Technical Support

Germany 46-09-077-7

BBS

Germany 46-21-020-1 or 46-09-076-6

**Atlaz Intl., Limited**

Technical Support

USA (516) 239-1854

**Boca Research Inc.**

Technical Support

USA (407) 997-7202

BBS

USA (407) 241-1602

**Cache Computers, Inc.**

Technical Support

USA (510) 226-9922

BBS USA (510) 226-7486

**Cardinal**

Technical Support USA (717) 293-3124  
BBS USA (717) 293-3074

**Cirrus Logic**

Technical Support France 1-48-12-2812  
Germany 15-24-008-4  
Italy 92-61-34-836  
BBS USA (510) 440-9080

**Colorgraphic Communication**

Technical Support USA (404) 455-3921  
BBS USA (404) 452-8238

**Cornerstone Technology**

Technical Support Germany 97-44-154-0  
BBS USA (408) 435-8943

**CSS Laboratories, Inc.**

Technical Support USA (714) 852-8161  
BBS USA (714) 852-9231

**Diamond Computer Systems, Inc.**

Technical Support France 42-20-5959  
Germany 78-04-023-5  
Italy 39-25-16-671  
Spain 1-30-41534  
BBS USA (408) 325-7175

**ELSA America, Inc.**

Technical Support USA (408) 565-9669  
BBS USA (408) 565-9630

**Focus Information Systems, Inc.**

Technical Support USA (510) 657-4586  
BBS USA (510) 657-9451

**Genoa**

Technical Support USA (408) 432-8324  
BBS USA (408) 943-1231

**Hercules Computer Technology Inc.**

Technical Support Germany 14-24-910-5  
BBS Germany 14-24-089-8

**Liberty Electronics USA**

Technical Support USA (510) 623-6000

**Matrox Electronics Systems Limited**

Technical Support USA (514) 685-2630  
BBS USA (514) 685-6008

**Metheus Corporation**

Technical Support United Kingdom 734-312-112

BBS	USA (503) 690-1559
<b>Micron Computer</b>	
Technical Support	USA (208) 463-3444
<b>Mirage Computer Systems</b>	
Technical Support	USA (310) 301-4541
BBS	USA (310) 301 4542
<b>Number Nine Computer Corporation</b>	
Technical Support	Germany 96-14-491-0
BBS	Germany 96-12-139-0
<b>Nth Graphics</b>	
Technical Support	USA (512) 832-1944
BBS	USA 512) 832-1964
<b>Oak Technology</b>	
Technical Support	USA (408) 737-0888
BBS	USA (408) 524-9014
<b>Orchid Technology Inc.</b>	
Technical Support	France 1-47-80-7050
	Germany 13-28-007-1
	United Kingdom 256-479-898
BBS	United Kingdom 256-463-373
<b>Sigma Designs</b>	
Technical Support	Germany 89-33-644-3
BBS	USA (510) 770-0111
<b>STB Systems</b>	
Technical Support	United Kingdom 818-970-662
BBS	United Kingdom 818-971-008
<b>Swan Technologies, Inc.</b>	
Technical Support	USA (814) 238-1820
BBS	USA (814) 237-6145
<b>Trident Microsystems Inc.</b>	
Technical Support	USA (415) 335-1179
BBS	USA (415) 691-1016
<b>Tseng Labs</b>	
Technical Support	Germany 49-00-004-9
	Belgium 2-716-50-00
BBS	USA (215) 579-7536
<b>Video Logic, Inc.</b>	
Technical Support	United Kingdom 923-260-511
BBS	United Kingdom 923-271-301
<b>VidTech Microsystems, Inc.</b>	
Technical Support	USA (612) 785-9717
BBS	USA (612) 780-8033



**Western Digital**

Technical Support  
BBS

USA (714) 932-4900  
USA (714) 753-1234

**Willow**

Technical Support  
BBS

USA (718) 402-0203  
USA (718) 993-2066

**CD-ROM Manufacturers****Hitachi**

Technical Support

France 1-48-21-6015  
Germany 40-73-441-0  
Italy 39-02-30-231  
Spain 3-33-08652

**Mitsumi**

Technical Support

USA (415) 691-4465

**NEC**

Technical Support  
BBS

USA (508) 264-8000  
USA (508) 635-4706

**Panasonic**

Technical Support

BBS

France 1-49-46-4300  
Germany 32-18-702-0  
Spain 7-24-81100  
USA (201) 863-7845

**Sony**

Technical Support  
BBS

USA (408) 894-0555  
USA (408) 955-5107

**Teac**

Technical Support  
BBS

USA (213) 726-0303  
USA (213) 727-7660