# Earthworm Jim

# **Technical Troubleshooting**

# Introduction

Welcome to 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**

- 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 occassionally 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

# **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

# **Tandy Computer**

Technical Support (817) 878-6875

# **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

# **ATI Technologies Inc.**

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

# **Aztech**

Technical Support (800) 886-8879

# **Boca Research Inc.**

Technical Support (407) 241-8088

BBS	(407) 241-1601
Cardinal Technical Support BBS	(717) 293-3124 (717) 293-3074
Creative Labs Technical Support BBS	(408) 428-6622 (408) 428-6660
<b>Diamond</b> Technical Support BBS	(408) 736-2000 (408) 524-9301
Logitech Technical Support BBS	(510) 795-8100 (510) 795-0408
Media Vision Technical Support BBS	(800) 638-2807 (510) 770-0968
Microsoft Technical Support BBS BBS	(206) 637-7096 (206) 936-4082 (206) 936-6735
Reveal Technical Support	(800) 473-8325
Roland US Technical Support	(213) 685-5141
Turtle Beach	<b></b>

# **Video Card Manufacturers**

# **Actix Systems**

**Technical Support** 

**BBS** 

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

(717) 843-6916

(717) 845-4835

# **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 BBS	(800) 624-7552 (512) 832-1964
Oak Technology Technical Support BBS	(408) 737-0888 (408) 524-9014
Orchid Technology Inc Technical Support BBS	(510) 683-0323 (510) 683-0327
Paradise Technical Support BBS	(800) 832-4778 (415) 968-1834
Sigma Designs Technical Support BBS	(510) 770-0100 (510) 770-0111
SixGraph Computing, Technical Support BBS	<b>Limited</b> (800) 561-2892 (514) 336-4169
STB Systems Technical Support Technical Support BBS Phone BBS	(800) 234-4334 (214) 234-8750 (214) 437-9615 (214) 237-9615
SuperMac Technology Technical Support BBS	y, Inc. (408) 245-0646 (408) 773-4500
Swan Technologies, In Technical Support BBS	ic. (800) 468-7926 (814) 237-6143
<b>Trident Microsystems</b> Phone BBS	Inc. (415) 691-9211 (415) 691-1016
Tseng Labs Technical Support BBS	(215) 968-0502 (215) 579-7536
Video Logic, Inc. Technical Support BBS	(617) 494-0530 (617) 494-4960
Video Seven Technical Support BBS BBS	(800) 553-1850 (510) 656-0503 (415) 656-0503

**VidTech Microsystems, Inc.**Technical Support (800) 752-8033

) 780-3564

Willow

Technical Support (212) 402-9500

# **CD-ROM Manufacturers**

		- 1	
н	ІТЗ		nı
	ILU		

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

BBS USA (512) 728-8528

**Epson** 

Technical Support USA (310) 782-0770 BBS USA (310) 782-4531

**Gateway** 

Technical Support USA (605) 232-2191 USA (605) 232-2109

**Hercules Computer Technology Inc.** 

Technical Support Germany 14-24-910-5

BBS Germany 14-24-089-8

**IBM** 

Technical Support USA (404) 238-1234 BBS USA (919) 517-0001

Intel

Technical Support USA (503) 264-7000 BBS USA (503) 264-7999

**Leading Edge** 

Technical Support USA (508) 836-4800 BBS USA (503) 836-3971

**Micronics** 

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

**Packard Bell** 

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

**Tandon Computer** 

Technical Support USA (805) 582-6119

**Tandy** 

Technical Support United Kingdom 922-434-000

**Toshiba** 

Technical Support USA (714) 859-4273 BBS USA (714) 837-4408

Zenith

Technical Support USA (708) 808-5000

BBS USA (708) 808-2264

**Sound Card Manufacturers** 

**Advanced Gravis** 

Technical Support France 1-39-73-1534 Germany 99-61-507-7 BBS USA (206) 883-3211

**ATI Technologies Inc.** 

Technical Support Germany 46-09-077-7

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

**Aztech Labs** 

Technical Support Germany 11-69-084-3

BBS Germany 11-69-178-2

**Boca Research Inc.** 

Technical Support USA (407) 997-7202 BBS USA (407) 241-1602

**Cardinal** 

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

**Creative Labs** 

Technical Support France 1-39-20-0421 Germany 31-10-283-8 BBS USA (918) 742-2377

**Diamond Computer Systems, Inc.** 

Technical Support France 42-20-5959

Germany 78-04-023-5 Italy 39-25-16-671 Spain 1-30-41534 USA (408) 325-7175

BBS USA (408) 325-7175

Logitech

Technical Support France 34-48-9050

Switzerland 21-869-9851

BBS USA (510) 795-0408

**Media Vision** 

Technical Support USA (510) 770-9905 BBS 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 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 USA (404) 452-8238

**Cornerstone Technology** 

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

**CSS Laboratories, Inc.** 

Technical Support USA (714) 852-8161 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 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

**BBS** 

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 USA (514) 685-6008

**Metheus Corporation** 

Technical Support United Kingdom 734-312-112

BBS USA (503) 690-1559

**Micron Computer** 

Technical Support USA (208) 463-3444

**Mirage Computer Systems** 

Technical Support USA (310) 301-4541 USA (310) 301 4542

**Number Nine Computer Corporation** 

Technical Support Germany 96-14-491-0 Germany 96-12-139-0

**Nth Graphics** 

Technical Support USA (512) 832-1944 BBS USA 512) 832-1964

**Oak Technology** 

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

**Orchid Technology Inc.** 

Technical Support France 1-47-80-7050

Germany 13-28-007-1

United Kingdom 256-479-898 United Kingdom 256-463-373

**Sigma Designs** 

**BBS** 

Technical Support Germany 89-33-644-3 BBS USA (510) 770-0111

**STB Systems** 

Technical Support United Kingdom 818-970-662 United Kingdom 818-971-008

Swan Technologies, Inc.

Technical Support USA (814) 238-1820 BBS USA (814) 237-6145

**Trident Microsystems Inc.** 

Technical Support USA (415) 335-1179 BBS USA (415) 691-1016

**Tseng Labs** 

Technical Support Germany 49-00-004-9
Belgium 2-716-50-00
USA (215) 579-7536

Video Logic, Inc.

Technical Support United Kingdom 923-260-511 United Kingdom 923-271-301

VidTech Microsystems, Inc.

Technical Support USA (612) 785-9717 BBS USA (612) 780-8033

**Western Digital** 

Technical Support USA (714) 932-4900 BBS USA (714) 753-1234

Willow

Technical Support USA (718) 402-0203 BBS 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 USA (508) 264-8000

BBS USA (508) 635-4706

**Panasonic** 

Technical Support France 1-49-46-4300

Germany 32-18-702-0 Spain 7-24-81100 USA (201) 863-7845

Sony

**BBS** 

Technical Support USA (408) 894-0555 BBS USA (408) 955-5107

**Teac** Technical Support USA (213) 726-0303

BBS USA (213) 727-7660