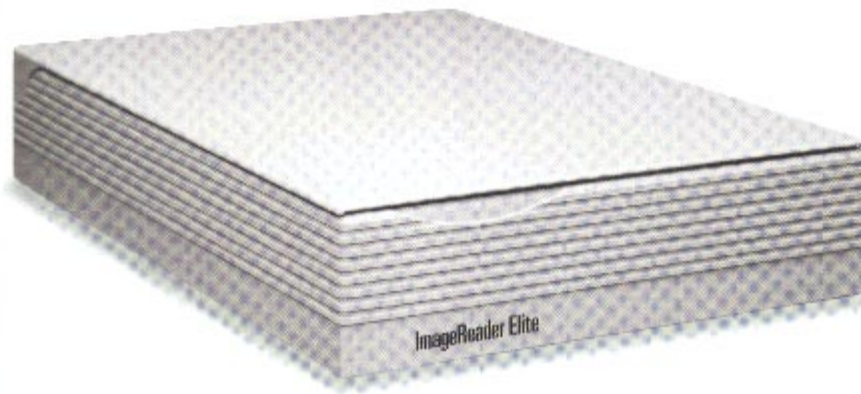


ImageReader Elite EPP™



4800 dpi Flatbed Scanner with 24-bit True Color



user's guide

Info
580 Division Street
Campbell CA, 95008
Phone (408) 538-2500 Fax (408) 538-2599

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The Info Technician
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Chapter I

Introduction

Welcome

Thank you for purchasing an Info ImageReader Scanner. This product is the result of our efforts to develop high technology computer peripherals that are easy to use, affordably priced, and that enhance your computing experience.

Using this manual

This manual includes complete instructions for scanner installation, use, and maintenance. Note that “use,” in this context, refers to scanner operation independent of the task performed with the application software. This guide is organized in a “do as you read” format. For best results, perform the tasks as they are presented.

This manual assumes that you have a basic understanding of the DOS and Windows operating system. As a convention, this guide presents all references to guide names or sections in *italics*, and commands you must type at a command line are presented in a **different** typeface.

Assistance

If you experience difficulties and cannot find solutions within this guide, please contact Info’s Technical Support Department at (800) 777-3280, Monday through Friday, between 8:00 AM and 4:30 PM, Pacific time. If you wish, you may fax questions to (408) 538-2599, or email questions to tech@infoconnection.com. Provide a fax number or email address for return contact. We maintain a BBS at (408) 5382580 that contains the latest updates to our software, as well as a web site at www.infoconnection.com, and fax on demand system at (408) 538-2585.

What is TWAIN?

TWAIN is the interface that links the scanner with scanning software applications. TWAIN is an industry standard that enables you to use the ImageReader with any TWAIN-compliant software application.

With the introduction of Windows 95, the TWAIN specification has overhauled to take advantage of the 32-bit architecture. When you install our scanner driver under Windows 95, you will have two **TWAIN** sources - one for 16-bit applications and one for 32-bit applications. Use the following as a guide to select the appropriate source

16-bit applications are legacy Windows 3.x programs that you are running under Windows 95.

32-bit applications are programs specifically designed for Windows 95, to take advantage of performance enhancements provided by the new architecture.

You may experience scanning problems if you do not use the appropriate source.

-There is no change to the TWAIN source for Windows 8.x users. Only **the 16-bit** TWAIN source is installed.

A note about application software

The scanner hardware by itself is not very useful. It takes a combination of the scanner hardware and application software to perform any task. Before you begin scanning, you need to choose the appropriate application to use for the task at hand. Please read this section to gain an understanding of the types of scanning software there are.

-Scanning software generally falls into two groups, Graphics (image editing), or OCR (Optical Character Recognition). Each type has specific features designed to address the technical challenges faced in the scanning of graphics or of text.

Graphics: Software provides the user with image editing tools for performing extensive modifications to art, photographs, or other continuous tone images. While having the ability to scan text, unlike OCR software it is not designed to specifically identify individual characters. Any image scanned using a graphics program can only be saved in a graphics file format (i.e. Tiff or Gif). It cannot be saved as an editable text file. Your system software CD includes iPhoto Express image editing software to facilitate your image editing requirements.

OCR: Software in this category is designed to recognize alphanumeric characters in preparation for export to word processing and desktop publishing applications. In other terms, it creates text files. OCR software will not provide image editing capabilities. If there is no intention of editing a given piece of text (with or without graphics), it may be simpler to scan and save it as a graphic. OCR is one of many scanning control features included in the InfoCenter application software included on your system software CD.

Additional types of applications are available that offer solutions for special or unique tasks. These include document storage, form scanning, fax utilities, copy utilities, custom screen saver creation, photo album creation, and so on. If applications are intended to link directly to the scanning device, look for the TWAIN-compliant specification. If compliant, they are compatible with Info ImageReader scanners.

Package contents

Verify that all materials have been received before setting up and using your scanner. This package contains:

- ImageReader Elite EPP scanner
- Quick Start Guide
- This User's Guide
- Info's System Software CD-ROM including installation and application software
- Scanner registration card

System requirements

System requirements are largely dependent on the "work" performed. By work, we are referring to the task or operation performed using the scanner in conjunction with application software.

Because scanners are capable of inputting large amounts of data in relatively short periods of time, they commonly push computer systems to the limits of their capabilities. Before beginning any scanning task or operation, carefully consider your system's processing capabilities, especially processor speed, RAM, and available hard disk space. OCR processes, fax operations, and the processing of simple black & white graphics are least demanding. High resolution scanning of large images in full color creates an extreme demand for processor time and memory.

When you are scanning with the TWAIN interface, the number labeled image size (calculated in bytes) provides the working file size that is the result of the selected scanning mode, resolution, and image size. Take careful note of this information.

Minimum and recommended system requirements are:

- 386 processor or higher or 100% compatible
- DOS 5.0 or later
- Windows 3.1 or later
- CD-ROM drive
- * 8 MB RAM minimum; 16 MB RAM recommended
- 10 MB available hard disk space; 50 MB recommended
- VGA/SVGA monitor with at least 256 color capability, 24 Bit True Color recommended
- Enhanced Parallel port

Chapter 2

Scanner Installation and Info Technician

Installation

Installation of the scanner is comprised of few steps and designed to be as easy as possible. The following instructions walk you through connecting the scanner and cable. It is important to note that both the scanning hardware and its supporting software (e.g. Info Technician and the included applications) must be installed in order for the scanner to operate.

Connecting the scanner

Attach the female connector of the interface cable to the port on the scanner labeled Host. Place the scanner unit in the desired location, and route the interface cable to the computer in such a way as to assure it is safe from possible damage due to pinching or crimping. Insert the male connector on the cable into the parallel port on your computer. The cable can only be inserted one way do not force a connection.

Important. The scanner will not function until the device driver is installed. This is loaded when you run the Info Technician, described later in this chapter.

Using the pass-through

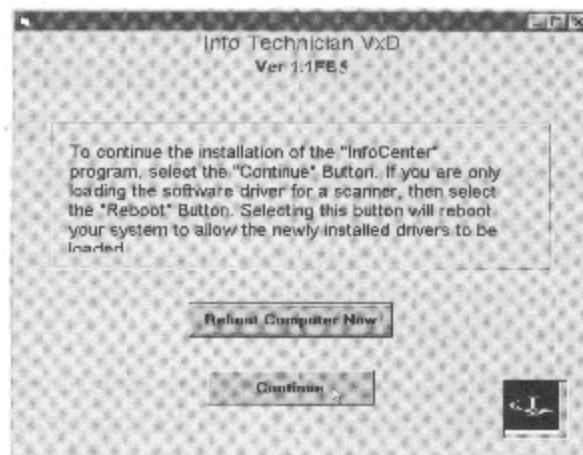
This scanner is equipped with an additional port for connecting your printer or other parallel device. This way, two devices can share the parallel port, and you won't be inconvenienced by having to switch cables when you want to use one or the other.

To use the pass-through port, connect the printer's cable to the port labeled Printer on the back of the scanner. Both the scanner and the printer are now sharing the parallel port and can be used at any time, except in tandem.

Installing the device driver and application software

Run the Info Technician to install the scanner drivers. To do so:

1. Place the Info Scanner System Software CD-ROM in the CD Rom drive. Select *Run* from the File Menu in the Windows Program Manager (Windows 3.1 x), or select *Run* after clicking *Start* on the taskbar (Windows 95).
2. Type `d:\install\setup` at the command line (substitute the appropriate drive letter if the CD-ROM drive is not the "d" drive). Click OK.
3. Select the Scanner Driver: *Click on the picture displaying the **Image Reader Elite-(16)** scanner*
4. Click OK to install the TWAIN driver in the "c" drive or substitute the appropriate drive letter for the drive that contains the Windows directory. The screen will inform you that the Installation was Successful. Click *Continue* to begin the InfoCenter software installation.



Installing the application software

When the hardware and device driver software are installed, the System Software OD will continue with the application software installation. Please refer to the *Quick Start Guide for InfoCenter and Photo Express* installation instructions.

Changing the BIOS Setting

In order to ensure the best results possible with your ImageReader Elite EPP scanner, you will need to select Enhanced Parallel mode in your computer's BIOS or CMOS settings. Enhanced Parallel Port is supported by late model motherboards (i.e. VLB and PCI). Info Peripherals Inc. provides an interface card free of charge for systems that do not support the enhanced parallel mode.

Important

Changing your BIOS or CMOS settings can render your computer system inoperable. Use caution to ensure that only the Parallel mode is changed (this will effect you parallel port only). Please consult your computer hardware manual for instructions specific to your system.

To Change Your Parallel Port Mode Setting (in most systems):

1. Restart your computer and when in start-up mode press your delete key, this will take you to the BIOS or CMOS menu.
2. Locate the Parallel Port option, it will tell you what address the parallel port is set for and the mode of the port.
3. Change your parallel port setting to EPP (read your screen for instructions on how to change settings)
4. Go back to the main menu.
5. Exit and save changes.

Chapter 3

Using your scanner

Scanning features and controls

Before scanning images, it is important to understand the scanner's basic hardware features as well as the software controls.

Hardware features

Power

The scanner requires its own power source (use the adapter provided). There is no on/off power switch on the unit. When the scanner is plugged in to a power source, its power light is lit, indicating that power is available. The scanner is activated when first powered on, when the action button is pressed, or when you choose Acquire. After approximately five minutes of non-use, the scanner switches to its "sleep mode." Again, the power indicator remains lit, indicating that power is available.

Paper loading

Place the document to be scanned face *down* on the scanning glass. Books, magazines and other 3-dimensional objects can be easily scanned as well, by laying them on the scanning glass. With bound materials and other objects, the cover is designed to lift up at the hinge to accommodate the item being scanned. Do not force the cover down when scanning these items, it may break or scratch the glass.

Paper size

The scanner will handle documents ranging in size from that of a postage stamp to a letter size document (8.5" x 11"), and A4 (8.5" x 11.7").

Paper condition

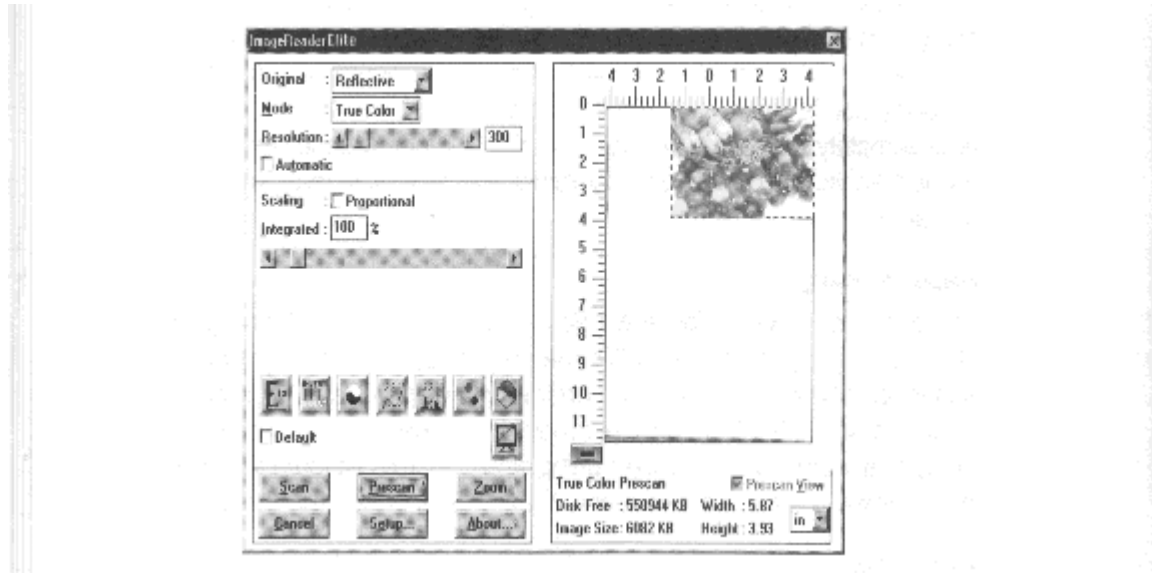
If the sheet to be scanned has any of the following conditions, please take the following precautions before inserting.

- Remove paper clips, pins or staples
- Let wet paper dry first
- Avoid scanning documents with correction fluid (dry or otherwise)

These precautions will help prevent scratching or marring the scanning glass, and ensure years of beautiful scans.

Software controls

Scanning is initiated from within the application software. All scanning activities are controlled from the user interface window titled ImageReader Elite. The interface window's Prescan command is used to adjust the scanning area, contrast, and intensity before executing the actual "working" scan. The actual scan is then placed into the application software for viewing, editing, printing, or storage. In this section, the components and controls of the scanning interface window are explained.



Preview Window

The interface window's right side displays Prescan images. The Crop Box around the perimeter is used to select the area you want to scan. Position the pointer over a square, click, hold, and drag the border to adjust the scanning area. The slider bar on the vertical ruler is also a convenient tool. This slider tells the scanner how far down the page to scan. You can shorten the time it takes to prescan by adjusting this slider to approximately the length of the document you are scanning.

Original Scan Media

Select which media you are scanning. Reflective is pieces like photographs, documents, magazines, etc., and indicates items will be placed on the scanning glass,

Scan Mode

Your scanning mode options are True Color, Gray Scale, and Bi-tone. These selections indicate the amount of data you want to capture for the image. Follow these guidelines when selecting a scan mode:

True Color: Scan color images and photographs in True Color mode when you want to capture and reproduce all the color data. To manage file sizes efficiently, take careful note of the guidelines for resolution (described later) when scanning in True Color. The combination of True Color and a high dpi can create an extremely large file size.

Gray Scale: What is referred to as black and white photographs are actually gray scale images. Different shades of gray are used to make up the whole picture. When you scan these types of images, you want to scan using the gray scale mode. Also use this mode to convert color photographs to black and white. Scanning a color photograph in gray scale will capture the continuous tones.

Bi-tone: This mode captures black and white only. Use this mode when scanning single color (usually black) images, such as drawings or sketches, business logos, or text. This mode is also used when scanning a document you want to OCR.

Resolution

Resolution is measured in dots per inch (dpi). The higher the re-solution is set, the more detail in your image is captured. There are some guidelines you should follow when determining the resolution to scan at. They are detailed on the following page.

On-line graphics: If you are scanning an image to be used on-line, such as the Internet, a BBS or in a multimedia presentation, you

needn't scan any higher than 100 dpi. This is because a monitor's resolution is either 72 dpi (Mac), or 96 or 120 dpi (PC), and is not capable of displaying a higher resolution. Images scanned at 300 dpi and viewed on a monitor will appear three times as large as the actual image. This enlargement results because your monitor displays images in a 1:1 ratio of pixels (or dots), meaning one dot in the image equals one dot on-screen. At 300 dpi, the image contains 3 times as many dots when displayed on the monitor.

Faxing images: Any image you intend to fax from a PC-based fax modem should be scanned at 200 dpi. Fax machines only receive images at 200 dpi, and some programs may fault if you try to scan at higher resolutions.

Printed images: If you plan to print the images you scan, use the following table to select a resolution when scanning in color and gray scale. As a general rule, scan at twice the Line Screen Frequency of the output device. This information can be found in your printer's manual. When scanning in line art mode, scan at the resolution of your printer, usually 300 or 600 dpi. This avoids sizing distortions in your printed images.

Output Device	Line Screen	Scanning	Resolutions
		Frequencies	Line Art Color
Laser Printer (300 dpi)	60	300	120
Laser Printer (600 dpi)	85	600	170
Laser Printer (1200 dpi)	105	1200	210
Imagesetter	133	2400	266
Color DySub Printer	varies	match	1.5x to 2x LSF

Automatic

This function boost the image adjustments to maximum settings and fill the entire spectrum, causing the image to become more vivid.

Scaling

Use the checkbox to toggle between proportional (set width and height individually) and integrated (set width and height together) scaling. Enter a percentage in the text box or use the slider bar to change the scaling values.

Dither

You can select this option when scanning in bi-tone mode. Use a variety of patterns to simulate gray scale in a black and white image.

Flip

This command creates a mirror image of the item scanned.

Inverse

This command reverses an image's display, Black pixels will be white, and white pixels will become black. The resulting image is like a photo negative of the original.

Brightness and Contrast

These controls adjust the brightness and contrast of the image you are about to scan. Increasing the contrast will sharpen the image, but cause it to look dark. Increase the brightness to lighten the image and compensate for the contrast selection. Experiment with these controls to determine the look you prefer. Usually these controls are adjusted together in a 2:1 ratio of brightness to contrast.

Curves

The curves function allows you to alter the way different pixel values in your image are adjusted. The diagonal line shows a Gamma function of input to output pixel values. The default is a straight line, which makes no adjustments to the pixels. All the pixels that fall below the line are darkened, and those above the line are lightened. The four buttons in the lower left corner make automatic adjustments for types of images and documents. Use the lower right button for hazy images, the upper right button for high contrast images, and the lower left button for normal images. The upper left button restores the curve to its default setting.

Prescan View

Check this item to restore the prescan image to its unaltered appearance with out resetting the image adjustments.

Scanning images

Scanning images with your ImageReader scanner is a rela" simple process. The steps below walk you through selectiing the appropriate TWAIN source to use, and then scanning an image or document. If you experience problems during any of these steps, please refer to the appendix at the end of this manual, *Troubleshooting*. You may need to modify the configuration.

Select the TWAIN source (PC)

Before you can scan with the ImageReader Elite on a PC, you need to tell the application what scanner you are using. The scanner is referred to as the "source," and you need to select the appropriate source for the application you are using.

Note: In some cases, an application's User Guide may direct you to use the application's custom "ImageReader" driver. In these cases, the instructions provided below are / I nappropriate for that application. Peter to that application's user guide for scanning instructions.

1. Start the image editing application software in Windows.
 2. Choose Select Source from the File menu.
 3. Select Flatbed (EPP) from the Source list.
 4. Click OK.
- The application is now set to use the ImageReader Elite EPP to scan.

The scanning process

The initiation of the scanning process may vary from application to application. Consult the application's manual for more information if the steps below don't result in a scan. The instructions provided in these steps assume the applica-tion uses the most common process.

To scan an image:

1. Start the image editing application.

2. Select Acquire from the File menu, this displays the scanning interface window.
3. Place the image face down in the scanner Click Prescan. The prescanned image displays in the Prescan window.
4. Adjust the image as you desire. Make your selections for scan mode, resolution, etc., (refer to sections 3-3 through 3-6 for scan mode descriptions) and use the crop box in the Prescan window to select the area you want to scan. Follow the guidelines described in the previous section to make your selections.

***Note:** If the image is not as large as the Crop box, the additional blank area is also scanned, creating an unnecessarily large file size. Be sure to adjust the Crop box to fit the exact area you want to scan. To do so, simply click and drag one of the anchor squares.*

5. When you are satisfied with the selected settings, click Scan.

The image is scanned using the selected settings, and transferred into the application's workspace.

6. Click Cancel to close the scanning interface window.

You are returned to the application, and the scanned image is displayed in the workspace. You may now manipulate, save, print, or fax the image.

Other scanning features

The ImageReader Elite scanner is capable of scanning all types of documents and images. The scanning instructions provided here are to ensure the installation is complete and your scanner is working properly. For more detailed instructions about manipulating images once they are scanned, or for using your scanner for OCR, document archiving/retrieval, and faxing, refer to those applications' manuals.

Appendix A

Troubleshooting

Scanner does not turn on

Confirm that the scanner's power adapter is plugged into a power source and the indicator light is on.

Scanner turns on but does not respond

Reinstall the Info Technician to ensure the driver is properly loaded or restart your computer to reset the system. Check the cable connections on the scanner and parallel pod. Be sure the cable is plugged into the port labeled Host on the back of the scanner. Check that the parallel connection on the computer is secure.

Scans extremely slow

This is common when scanning true color at high resolutions. Follow the setting guidelines in Chapter 3 for the particular scanning task. Avoid scanning at higher settings than necessary-this improves performance.

Cannot print to printer

Check the cable connections on the printer and the scanner. Be sure the cable is plugged into the port marked Printer on the back of the scanner.

TWAIN Errors

1. Be sure you have selected the appropriate source for the application you are scanning into. Most 32-bit applications require you use the Flatbed Scanner (32) source, and 16-bit applications require you use the Flatbed Scanner (16) source.
2. If your computer cannot find or does not recognize the scanner:
 - a) Check your cable connection and retry scanning.
 - b) verify your port by selecting Info Tech from the program manager in Windows 3.1 x or from the Start menu in Windows 95. From Info Tech select Flatbed Utility and click Verify Port in the Utility window. This feature will search for and connect to correct port address.

Error messages:

Scanner not found

You need to select Enhanced Parallel (EPP) mode in your computer's BIOS or CIVIOS settings (refer to section 2-3). EPP is supported by late model motherboards (i.e. VLB and PCI). Info Peripherals Inc. provides an interface card free of charge for systems that do not support the enhanced parallel mode.

IMPORTANT!

Changing your BIOS or CMOS settings can render your computer system inoperable. Use caution to ensure that only the Parallel mode is changed. Please consult your computer hardware manual for instructions specific to your system.

To Change Your Parallel Port Mode Setting (in most systems):

1. Restart your computer and when in start-up mode press your delete key, this will take you to the BIOS or CMOS menu.
2. locate the Parallel Port option, it will tell you what address the parallel port is set for and the mode of the port.
3. Read your screen for instructions on how to change settings, and change your parallel port setting to EPP.
4. Go back to the main menu.
5. Exit and save changes.

Cannot Create Cache or Cache Buffer Space, or Image Transfer Failed

This error message indicates that the selected scan settings have created a file size that exceeds available disk space. Reduce the dpi, image size, or select a lower mode to reduce the file size.

Grainy images

Check the video driver settings within Windows. The difference between 16 colors viewed and 256 colors viewed is dramatic. Select 256 Colors (or higher) if the system hardware supports such.

Specs or lines across -scanning area

Open the document feed cover and clean the glass with a soft lens cloth.

Scanner care

Info ImageReader scanners are designed to provide years of trouble free service. To assist in realizing this end, follow the guidelines listed below.

1. Avoid using the scanner in a dusty environment, and keep it as dust-free as possible.
2. If necessary, clean the scanner glass with a soft lens cloth.
3. Do not scan documents with correction fluid. This will cause spotting on the scanner glass.
4. Do not scan documents with paper clips or staples. The glass may become scratched.
5. Don't touch the scanner glass. Fingerprints or scratches will show up as unwanted marks on your scanned image.
6. Don't remove the scanner case. There are no consumer serviceable parts inside. There is a danger of electric shock, and the warranty will be void.
7. Don't move the scanner excessively or subject it to excessive vibration, as the lens focus may become distorted.
8. The scanner operates best in temperatures of 10°C to 4°C (50°F to 104°F).

Limited two year warranty

Info warrants this scanner to be free of manufacturing defects, both materials and workmanship, for a period of two years from the date of original purchase. This warranty applies only to the original purchaser. In the event of a defect, Info will repair this product free of charge, including parts, labor, and return postage.

This warranty does not cover damage, loss, abuse, misuse, unauthorized repair, shipping damage, natural phenomena, or effects of use other than intended. Info is not responsible for consequential damages, including but not limited to, lost profits, lost sales, loss, of use, or injury to property.

For scanner service, contact us at (800) 777-3280, and request a Return Authorization (RA) number. Repackage the product in its original packing container (for protection), and return postage prepaid to:

Info Service Center
580 Division Street
Campbell, CA 95008

Include an address, phone number, the RA number, and a description of the scanner's defect. Enclose a copy of the original purchase receipt to verify warranty eligibility. Write the RA number legibly on the outside of the package.

FCC radio frequency interference statement

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 to an outlet on a circuit different from that which the receiver is connected.
- Shielded interconnect cables and shielded power cord which are supplied with this equipment must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device.
- Consult the dealer or an experienced radio/TV technician for help if the conditions persist.
- Changes or modifications not expressly approved by the manufacturer or authorized service center could void the user's authority to operate this equipment.



INFO

Info Peripherals
580 Division Street
Campbell, California 95008
Phone (408) 538-2510
Fax (408) 538-2577
www.infoconnection.com