

Model FB-OMP

***ImageReader LimitedEdition
Color Flatbed Scanner***

User's Manual

Version 980413

Info Peripherals 1998

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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 will enhance your computing experience. The ImageReader LE (FB-OMP) is designed with an exact A4 scanning bed and less weight in an aim to save the most space possible on your desktop while maintaining the highest quality scanning results with an optical resolution of 300x600 dpi (4800dpi through interpolation).

Using this manual

This manual includes complete and detailed 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 systems. As a convention, this guide presents all references to guide names or sections in *italics*, commands you must type at a command line are presented in a **different** (bold) typeface, and items you must click on with your mouse pointer are also presented in a **different** (bold and underline) typeface.

Assistance

If you experience difficulties with the installation or operation of your scanner, there are many solutions in the *Troubleshooting* section of this manual, including how to get in touch with our Technical Support staff.

What is TWAIN?

TWAIN is the interface that links the scanner with scanning software applications. It is an industry standard that enables you to use the ImageReader LE with any TWAIN-compliant software application. The scanning applications included in your scanner package are all TWAIN-compliant and will work not only with your ImageReader LE but will also work with any other TWAIN-compliant device (i.e. digital cameras and image capturing devices).

With the introduction of Windows 95, the TWAIN specification has been overhauled to take advantage of the 32-bit architecture. Your scanner installation software contain a TWAIN sources for using your scanner with 32-bit applications (i.e. ImageDock and PictureFun! or other applications such as Microsoft Picture Editor or Adobe Photoshop). The ImageReader LE is designed for use only with Windows95 (or higher) and 32-bit applications.

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

See *Scanner Operation* in this manual for specific information on what source to select and when.

Note: The ImageReader LE scanner driver will not work with older applications that were designed to work with Windows 3.1 or 3.11 (16-bit or Legacy applications). Attempting to use the scanner with

Legacy applications can result in error messages or problems running Windows.

A note about application software

The scanner hardware by itself is not very useful and will perform no tasks by itself. It takes a combination of the scanner hardware, scanner driver, and application software to perform any task. More information about the scanning applications that came with your scanner can be found in the *Included Applications* section of this manual.

Before scanning, you need to choose the appropriate application(s) to use for your desired use of the scanned item. Scanning software generally falls into two primary groups, Graphics (image editing), or OCR (Optical Character Recognition of scanned text). Some applications have elements of both Graphics and OCR.

Graphics: If your desired use is to edit or digitize (convert into a computer file) a photo or other picture, you will want to use a graphics application (i.e. PictureFun!, Microsoft Photo Editor, Adobe Photoshop, etc). These types of applications provide image-editing tools for performing modifications to art, photographs, or other continuous tone images. Graphics applications will see any text as part of the image and will not recognize individual letters or characters. It not possible to edit (like a word-processor) text in a scanned image with a graphics application. An image scanned using a graphics program can only be saved in a graphics file format (BMP, GIF, JPG, etc). It cannot be saved as an editable text file.

Your scanner installation CD includes image-editing software, PictureFun!, to facilitate your image editing requirements.

OCR: If your desired use is to edit text in a document you scan with a word-processing application, you will first want to convert the text using Optical Character Recognition (OCR). OCR applications are designed to recognize alphanumeric characters in preparation for export to word processing and desktop publishing applications. In other words, the OCR conversion will go through the scanned document looking for characteristics that resemble known letters, number and other symbols and put the results into either a text file or place it on the clipboard so you can paste it into a text file.

OCR applications do not provide image-editing capabilities. If you 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.

Your scanner installation CD includes basic OCR software incorporated into the primary scanning application, ImageDock.

Additional types of applications are available that offer solutions for special or unique tasks (including applications that expand on the features of the included application software). These tasks may 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. Since the drivers for your scanner are TWAIN-compliant, your scanner should work with any TWAIN-compliant software. Most software vendors sell a variety of TWAIN-compliant scanning applications, such as Caere OmniPage Pro, Xerox TextBridge, and many others.

Info does not directly support any third party software (software you purchased separate from the

scanner). Included in this manual are general guidelines for using your scanner with applications other than those that came with your scanner. This is for your use only and does not imply support for those applications.

! **PictureMall** is not directly affiliated with Info. You will need to contact PictureMall for any questions about orders or pricing for items ordered through the PictureMall or PictureFun! applications.

Scanner Setup

System Requirements

Minimum and recommended system requirements are:

IBM compatible PC with a 486 or Pentium Processor

Microsoft Windows Windows 95 (or later)

8 Megabytes of RAM (16 Megabytes or higher recommended)

EPP, ECP, or SPP parallel port (EPP recommended)

VGA, SVGA color monitor and video card supporting at least 256 colors (24-bit True Color recommended)

30 Megabytes of available hard disk space for scanner driver installation, additional space is required for the scanning applications.*

A Microsoft Windows-compatible pointing device (such as a mouse)

A CD-ROM drive

Recommended: A surge-protected power strip or power center

*Available disk space needed for installation varies with which software applications are installed. 30Mb is the minimum required for the scanner driver only. The scanner driver and scanning application software may take up to 100Mb.

Additional available hard disk space is recommended and may be required for scanning purposes, requirements vary with the work performed. Work refers to the task or operation performed using the scanner in conjunction with application software. Factors that will influence the amount of available hard disk space required include resolution, scanning mode, and scanning area.

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 processing capabilities, especially processor speed, RAM, and available hard disk space. The processing of simple black & white graphics is the least demanding. High resolution scanning of large images in full color creates an extreme demand for processor time and memory.

For specific information on how to set image controls while scanning, refer to the *Scanner Operation* section of this User's Guide.

Package Contents

1. Power Adapter,
2. Cushion
3. Manual, Driver Kit CD.
4. D25P Cable, etc
5. Scanner
6. Carton

FB-OMP ImageReader LE Checklist

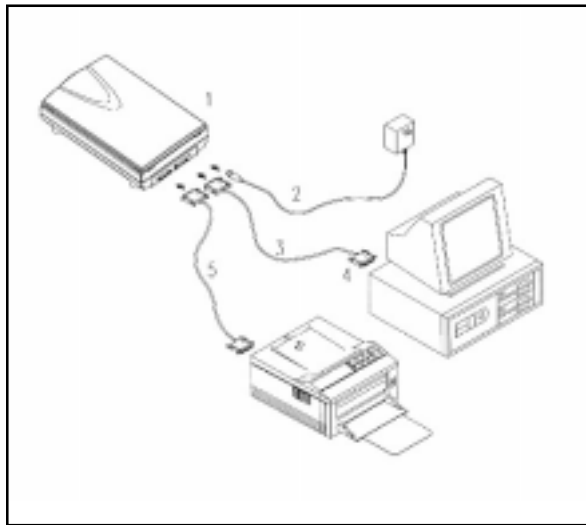
Scanner
Power Adapter
D25P Cable
Quick Start Guide
CD-ROM disc with Scanner Driver, Application Software, User's Guide and Software Manuals
ImageDock Quick Reference Guide
Technical Support Card
Troubleshooting Card

Connecting the Scanner to the Computer

Connect the D25P Cable (the scanner cable) to the port on the scanner labeled **HOST** and to the parallel port computer. If there is another device (such as a printer) already connected to the computer's parallel port, disconnect it and refer to the section below. The cable can only be connected one way, do not force the connection. The female end of the cable (with small holes) connects to the scanner. The male end (with small pins) connects to the computer. Screw down the connectors to ensure a good, tight connection.

To connect the scanner to your computer, you should use the cable that came in the scanner package. The ImageReader LE uses a specific type of cable characterized by a "choke" around the cable close to the point where it plugs into the scanner. The cable filters the signal going to the scanner in a way that is not supported by a normal cable.

In addition, parallel port signal is generally relatively weak and degenerates the further it travels. With a longer cable, there may not be enough signal getting to the scanner to enable it to scan successfully.



1. Scanner
2. Power Supply
3. D25P Cable
4. PC Parallel Port
5. Printer Cable

Connecting the Power Adapter to a

Power Supply

The Power Adapter should be plugged into an AC power supply that is 110 Volts and 60 Hertz and then into the port on the scanner labeled **POWER**.

It is highly recommended that you use a surge-protected power strip or power center for your computer and all computer peripherals such as the scanner.

Connecting a Printer to the Scanner

If you previously had a printer connected to your computer's parallel port or if you later purchase a printer, you can use the pass-through port on the scanner to enable the printer to use the same parallel port on your computer.

Connect one end the printer cable to the port on the scanner labeled **PRINT** and the other end to your printer. The cable can only be connected one way. Do not force the connection. On the scanner, screw down the connectors to ensure a good, tight connection.

1. Be sure to have the scanner plugged into an active power supply if you want to do pass-through printing.
2. Do not attempt to scan and print at the same time.
3. Do not use an overly long cable to connect the printer to the scanner. Parallel port signal can be weak and degenerates the further it travels. A total cable length exceeding twelve feet (12') could cause problems with your printing.
4. If you are having problems with pass-through printing, refer to the *Troubleshooting* section of this User's Guide.

Scanner Driver and Application Software Installation

Starting the Installation Program

Most **Windows 95** and **Windows NT** computers have **Autorun** enabled. With a computer with Autorun enabled, as soon as you insert the ImageReader LE Installation CD-ROM disc in the computer, the installation program will start.

If you have Autorun enabled, start at *Installation Program*, below.

If you do not have Autorun enabled, you will have to start the installation yourself. If your CD-ROM drive letter is not D, please substitute the appropriate letter.

1. Click **Start**
2. Click **Run**
3. Type **D:\Setup.exe** or **Autorun.exe**
4. Click **OK**

Installation Program

The first screen you will see at the start of the Installation will give you a number of options: Install Scanner Software, Install Scanner Drivers, Install PictureFun! (or ColorDesk Utilities), Install Adobe Acrobat Reader, Browse Manuals and Exit. You can use this installation screen later to gain easy access to the Scanner User's Guide and the software manuals. You will need to install each component that you want. To operate the scanner you will need to, at minimum, install the scanner driver. If you want to edit the scanned image or manipulate it in any way you will need to install a scanning application.



To go to any portion of the Installation program, all you need to do is click on the appropriate words.

Reading the Manuals and User's Guide will be covered later in this User's Guide (see *Included Software Applications*).

Due to changes made in the installation program or the installation of individual applications after the publication of this User's Guide, the images below may not match exactly what you see on the screen.

Scanner driver

The scanner driver will be installed to your Windows directory. You will need approximately 30 Mb for the driver and support files. You will likely need additional free disk space while you are scanning at any resolution.



ImageDock

ImageDock is a Windows 95 and Windows NT only application. You cannot run this application in Windows 3.1 or 3.11, attempting to do so may cause problems with your Windows.



As you go through the installation, there are some points where you will be asked to fill in information.

Each section here is a separate installation screen. Many of the screen-shots below only show a portion of the screen (the portion that changes or has important information). To go from one screen during the installation to another click **Next**, **Back**, or as applicable.

User Information

Some of this information may already be entered from information in your Windows configuration (name & company).

Name:	<input type="text" value="T Shrew"/>
Company:	<input type="text" value="-none-"/>
Serial Number:	<input type="text"/>

If you want to change the information that was pre-entered by your computer, you will have to clear the line (click your mouse on the line and either delete or backspace or highlight the existing text and overwrite).

If you have no company name or the scanner and software is for your personal use, type **-none-** in the company field.

You will need to type in the software serial number on the appropriate line.

The serial number for ImageDock is on the on the envelope for the CD-ROM disc. The serial number is *not* written anywhere on the scanner or the box. The installation is looking for a software serial number *not* a hardware serial number.

Note: If any of the blanks are empty, the installation will not proceed and you will be prompted to fill in the missing information by the cursor remaining on the empty field.

Destination Directory

ImageDock needs to be installed to a directory of its own on your hard drive. You will need to decide where you want it to be installed. ImageDock does not need to be on your C: drive, and it can be in a sub-directory (such as e. C:\Program Files\ImageDock).



ImageDock needs approximately 40 Megabytes of free disk space to install, but you will likely need additional space as you use the application. Keep this in mind when you choose where to install.

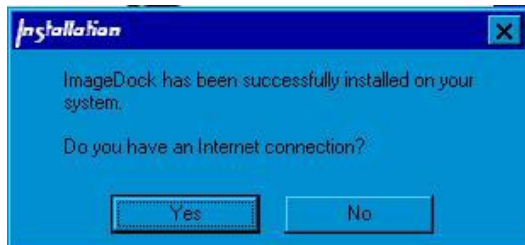
The default directory for ImageDock is **C:\ImageDock**. If you want to change the directory where ImageDock will install, you will need to type in a drive and directory of your choice.

Installing files

Once you have completed filling in the required information, ImageDock will proceed to install on your computer.

ImageDock Complete, installing Headliner

When the ImageDock installation is complete, you will be asked if you have an Internet Connection. This information is not for ImageDock. There is a bonus application from Onset included in your installation called Headliner.



Headliner is a news and information retrieval service that is designed to display the news and information in an easy to read and access format.

If you do not have an Internet connection or you do not want to install Headliner, click **No**. This will end the installation without installing Headliner. Headliner is not necessary to the scanner operation.

If you decide to install Headliner, the installation will lead you through several steps and ask you to provide information for its configuration.

PictureMall PictureFun!

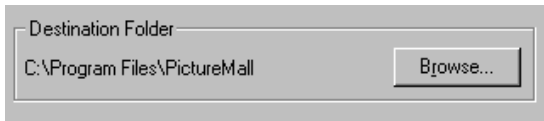
The PictureMall PictureFun! suite of applications are Windows 95 and Windows NT only applications. You cannot run these applications in Windows 3.1 or 3.11, attempting to do so may cause problems with your Windows.



Each section here is a separate installation screen. Many of the screen-shots below only show a portion of the screen (the portion that changes or has important information). To go from one screen during the installation to another click **Next**, **Back**, or as applicable.

Destination Directory

PictureFun! needs to be installed to a directory of its own on your hard drive. You will need to decide where you want it to be installed. PictureFun! does not need to be on your C: drive, and it can be in a sub-directory (such as e. C:\Program Files\PictureFun).



PictureFun! needs approximately 40 Megabytes of free disk space to install, but you will likely need additional space as you use the application. Keep this in mind when you choose where to install.

The default directory for PictureFun! is **C:\Program Files\PictureMall**. If you want to change the directory for PictureFun!, you will need to click Browse.

Installing files

Once you have completed filling in the required information, PictureFun! will proceed to install on your computer.



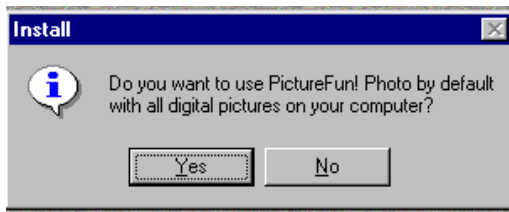
During the installation you will be asked if you want to install high resolution templates for Paper.

If you want to use the more advanced features of Paper (adding your images to cards, magazine covers, and invitations), you may want to install these high resolution templates now.

If you do not, you will be given the option to do so later when you use Paper.

File Associations

Near the end of the PictureFun! installation, you will be asked if you want to use PictureFun! with all the digital images on your computer.



If you answer **yes**, the icons for your images will change to one associated with PictureFun! and every time you double-click on one of these files, Photo will open with the image displayed.

If you answer **no**, you can still view your image files with Photo or any other PictureFun! application, but you will first have to open the desired application.

Registration

At the completion of the PictureFun! installation, you will be reminded to register the application suite with the software developer. This registration is with PictureMall and not Info and will entitle you to services through PictureMall.

! **PictureMall** is not directly affiliated with Info. You will need to contact PictureMall for any questions about orders or pricing for items ordered through the PictureMall or PictureFun! applications.

Adobe Acrobat Reader

Adobe Acrobat Reader is the application necessary to read PDF files. Most of the application software manuals and the scanner User's Guide are in PDF format. This format allows you to view a document as if it is a printed book. You can Zoom in on a view to have larger print. You can search on a specific word. You can jump to a particular page. You can print one or several pages. And more.

If you already have a copy of Adobe Acrobat Reader, version 2.11 or better, installed on your computer,



you do not need to install this option.

Installation Paths

If for some reason the installation above doesn't proceed, as it should, or you want to install only a single component of the total installation without using the Installation program, the following are the direct paths to each of the components. If your CD-ROM drive letter is not D, please substitute the appropriate letter. You can run any of these from a command prompt within Windows (Win95: > **Start** > **Run**; Win3.x: > **File** > **Run**). These are Windows applications and cannot be run from a DOS prompt.

ImageDock

D:\Setup32\Set32.exe

ColorDesk

D:\Setup32\ColorDesk\Setup.exe

Adobe Acrobat Reader

D:\Adobe\Acroread.exe

Scanner driver

D:\Driver\Setup.exe

This scanner driver will only work with Windows 95 or Windows NT. Attempting to use the 32-bit driver in Windows 3.1 or 3.11 can impair the operation of your computer.

Uninstalling

If you just delete the directory where the application or driver resides, you will leave configuration information and shared files that can cause problems with your computer later. Use the Uninstall program(s) if you need to uninstall the scanning applications.

In the Windows 95 **Control Panel** (> **Start** > **Setting** > **Control Panel**), use **Add/Remove Programs** (double-click on the icon) to uninstall the application(s).

Scanner Operation

The following directions specify using your scanner with ImageDock. However, most TWAIN compliant applications have similar controls and menu choices with regard to TWAIN. For any application other than ImageDock, consult the software manual for specific information.

Due to changes made in the installation program or the installation of individual applications after the publication of this User's Guide, the images below may not match exactly what you see on the screen.

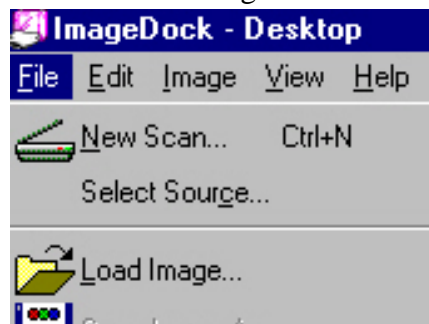
TWAIN

TWAIN is the interface that links the scanner with scanning software applications. It is an industry standard that enables you to use the ImageReader LE with any TWAIN-compliant software application. The scanning applications included in your scanner package are all TWAIN-compliant and will work not only with your ImageReader LE but will also work with any other TWAIN-compliant device (i.e. digital cameras and image capturing devices).

Info does not directly support any third party software (software you purchased separate from the scanner). Information given on how to use the scanner with other applications is for your use only and does not imply support for those applications.

Selecting a Source in Scanning Applications

In any TWAIN compliant application, the first thing you will want to do before you scan is select your TWAIN or scanning source.



In ImageDock, you need to choose **Select Source** from the **File** menu. Some programs may require you to select your source from a different menu location.

Some applications require you to select a scanner type in addition to selecting a source. If you need to select a type, choose **Generic**, or **TWAIN**.

For your scanning source you will need to choose your new scanner, **ImageReader LE v1.3.1** (the version number may be different).

If you select the wrong scanner source, you will get a “cannot access TWAIN driver” error or you will open a different TWAIN device installed on your computer. Try selecting your source again.

If there is nothing listed in the source selection window, the scanner driver is not installed. See the Troubleshooting section for information on what may have interfered with the driver installation.

Note: With the ImageReader LE, you will only be able to use 32-bit programs (designed specifically for

Windows 95). If you attempt to use a 16-bit program (designed for Windows 3.1 or 3.11), you will get an error message, the scanner driver will not open, or you will encounter problems with your computer or the application.

Document Placement

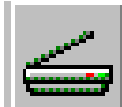
Your original should be placed into the scanner face down against the glass. The top left edge of the document should be aligned with the arrow on the outside edge of the scanning bed (the glass).

If you are scanning something small, like a photograph, you can put anywhere in the scanning bed. However, unless you place the edges parallel with the sides of the scanning bed your image will be crooked. And, unless you align the top of your original with the top edge of the scanner (marked with the arrow as described above) your image will not be upright.

How the document is placed in the scanning bed and scanned is crucial to most image editing functions and OCR conversion.

Starting the Scan

In most applications there is an Acquire or New Scan command that you will have to use to start the scanning process. For many programs, you will want to choose **Acquire** from the **File** menu.



In ImageDock, select **New Scan** from the File menu or click on the scanner icon on the tool bar.

You can also access the scanner driver directly to scan to file, printer, fax, or email. Using the TWAIN interface in this way will not allow you to have the image automatically transferred into an application for further editing. If you want to edit the image, you will need to start the TWAIN interface from a scanning application.



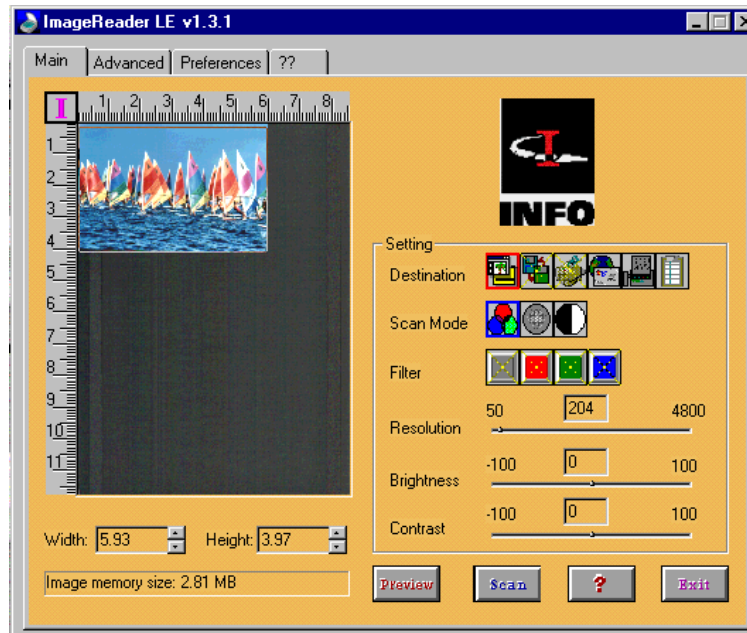
Click **Start**, click **Programs**, click **ImageReader LE**, click **ImageReader LE**.

TWAIN User Interface, scanning controls

After you start the scanning process, the TWAIN User Interface will appear on your screen. This is your direct link to the scanner driver. It is here that you will make changes to how the scanner is going to scan and process the image.

The LE TWAIN interface has four tabbed sections: Main, Advanced, Preferences and About. The first three tabbed sections are further divided into sections to help guide you through all the scanning settings.

Main has the primary controls you are most likely to use when scanning. The controls on Main are repeated on Advanced. **Advanced** provides further controls to modify how the scan will take place. **Preferences** allows you to set specific information about general scanning. **??** provides information on the scanner driver. The controls for Main, Advanced and Preferences are detailed below.

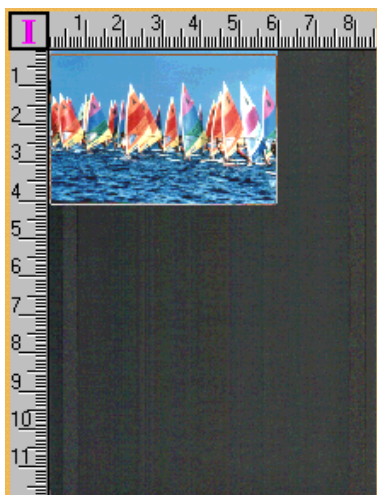


On Main and Advanced the left side of the screen is taken up with the Preview Window which will display your previewed image.

Note: The ImageReader LE gives you flexibility to scan a variety of originals in a variety of ways. You should choose the settings that best suit your original and your intended use. Any settings that are not available in a particular scan mode or from accessing the scanner driver from within an application will have a colored “x” through them.

Preview Window

Once you preview your original (see below), an image will appear in the Preview window. With an image in the preview window, you can set the scanning area.



Below the Preview Window, information about the size of your image will be displayed, including how large the final file size will be at the current scanner settings. You can change the way the size values are listed by clicking on the letter in the upper left corner of the preview window: I, C, or P.

I will display the image information in inches.

C will display the information in metric.

P will display the information in pixels.

Main

Destination



The scanner driver for the ImageReader LE allows you to choose where you want the scanned image to end up once you have scanned.



Send to Application

When you start the TWAIN driver from your scanning application, such as ImageDock, you can have the image sent to the application so you can edit or save the image from there.



Send to File

Your scanned image will be saved as a BMP file in the location you specify in Preferences (see below).



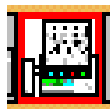
Send to Printer

Your scanned image will be printed using the printer you specify in Preferences (see below). **Note:** You will have to keep in mind your printer's limitations when using this destination. Most printers can only print images that have been scanned at 300dpi.



Send to Mail

Using the email program set as your default email program in Windows 95, the TWAIN interface will attach the scanned image as a BMP file (specify the file name in Preferences, see below). **Note:** The email function will only work with a stand alone email program and then only the one set as the Windows default email program. The email feature will not work with a proprietary email (non POP3) program such as America OnLine's email.



Send to Fax

Your scanned image will be sent to the fax program you specify in Preferences (see below). The TWAIN interface does not have built in faxing software, but relies on the software already installed on your computer.



Send to Clipboard

Your scanned image will be sent to the clipboard where you can then paste the image into any application that supports the pasting of images as an image. **Note:** If you are scanning a document, you will have to use OCR software to convert it to editable text. Send to clipboard will send the scanned item as an image only.

Note: If you start the TWAIN interface from a scanning application, such as ImageDock, you will not be able to send the image directly to a File or to your Printer from the TWAIN interface. If you start the TWAIN interface on its own, not from an application, you will not be able to send the image into an Application.

Scan Mode



There are three Scanning Modes for you to choose:



Color

Color images are composed of three channels of a predefined bit depth: red, green, and blue (RGB). The number of bits in a channel provided the number of color combinations or shades that are possible. The ImageReader LE scans (hardware) in 30-bit (3 channels of 10-bits each) color providing for over 50 billion color combinations. This allows for more vivid color reproductions with subtle gradations of hue. The output is 24-bit (3 channels of 8-bits each), producing over 16 million possible color combinations and providing for a relatively photo-realistic image. 24-bit images are also called True Color.

Color scanning, of all the modes, uses the most resources and will create the largest image files.



Gray Photo

Grayscale images are characterized by 256 shades of gray. The ImageReader LE scans your image with 10 bits of gray (hardware) but outputs 8 bits (256 colors).

Grayscale is useful for converting color pictures into “black and white” or for retaining a higher quality when scanning “black and white” photos.

Grayscale images take up more storage space than any of the single-bit images and require more resources during the scan, but they are not nearly as heavy in resource use as is color



B/W Line Art

Line Art captures the image in black and white only (single-bit) with no intermediate shades of gray. Because there is very little image information that has to be stored, a LineArt scanned item takes up very storage space.

Many OCR programs require an image be scanned in Line Art. This mode is also useful for scanning documents to be archived as images.

Filter



The filters are available only with Grayscale and LineArt. They tell the scanner how to interpret and translate a color image into these other modes. There are four filters: True Gray, Red, Green, and Blue.

Resolution

The resolution of an image determines the number of dots or pixels per square inch of in image (dpi). Generally, denser pixel coverage per square inch (higher resolution) results in sharper images.

There are two types of resolution: **Optical** and **Interpolated**. Optical is the resolution that is accomplished by the operation of the hardware; Interpolated is achieved through the software scanner driver. The resolution setting in the TWAIN interface is the **Interpolated** resolution.



The ImageReader LE is capable of a maximum resolution of 4800dpi (300x600 Optical). However, if you try to scan at 4800 dpi, be very aware the resulting file size will be astronomically Huge. In addition, the amount of time needed for the scan will be greatly increased.

You should match your scanning resolution to the purpose of your image or scanning task. Some software has specific requirements for resolution for specific scanning tasks (refer to your software manual for this information). Avoid exceeding the recommended resolution settings for your scanning task.

You can adjust the resolution by typing in your desired resolution or sliding the bar.

Note: In some applications, some resolutions will not be available or may not produce an image.

The resolution has a direct impact on the scanned image file size. Adjusting to a higher resolution setting will result in an increasingly larger file size. Increased demands on your computer resources due to high-resolution settings can also slow down the scanning process exponentially.

Brightness/Contrast

Brightness adjusts the lightness or darkness of an image. The higher the brightness value, the brighter the image. Adjusting the brightness before scanning is much like adjusting the aperture of a camera.



Contrast adjusts the range between the darkest and the lightest shades in the image. This range determines the number of shades in an image. An image with low contrast can look dull and flat.



Unless you seem to be getting a dark image, you shouldn't need to adjust the brightness. If you do make adjustments to the brightness, it is best to do so in small increments so you can increase the light without washing out the image.

If you make adjustments to the brightness, you may also need to adjust the contrast. Just as with brightness, you will get better results if you make small adjustments only as needed.

You can adjust either brightness or contrast by moving the slide bars.

Scanning Buttons



These are the buttons which actually initiate the scanning process.

Preview

When you preview an image, it will appear in the preview window. The preview is a low resolution scan (72dpi) that is designed to help you set the scanning controls and scanning area before beginning your actual scan.

You cannot edit or save a preview image. You must Scan before your image will be available in any scanning application.

Once your image has been Previewed, you will need to set the scanning area. In the Preview Window, click & hold your mouse pointer on the upper righthand corner of your image, then drag the mouse pointer to the lower lefthand corner. This will create a line around the image, blocking it and marking the area to be scanned.

Scan

After you have made any necessary adjustments to the scanning control, this button will begin the actual scan.

Your scanning progress will be indicated with a window that will open after you have clicked scan.

Scanning requires HUGE amounts of system resources. While you are scanning, most other processes on your computer will likely slow down. If you have minimal resources on your computer, it is best to scan without anything running in the background.

?

This will open the Help file for the TWAIN interface.

Exit

Exit will close the TWAIN interface without scanning. With most applications (such as ImageDock), the TWAIN interface will close automatically upon the completion of your scan.

Advanced



There are several special controls which will help you achieve a better image. **Note:** Using any of these controls may slow the scanning process and increase your scanning time.

Image



Zoom

You can select an area of the preview window to expand for a closer view. This will not affect the final scan.



Mirror

Flip the scanned image so that it will be a mirror copy of the original.



Before



After



Invert

Reverse the brightness and color in the image. For color images, each pixel will be changed to its complementary color just like a negative image.



Before

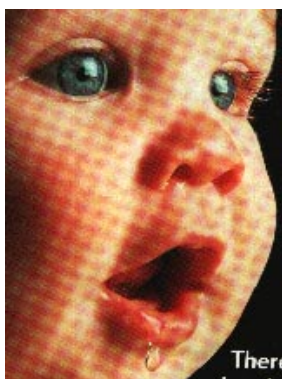


After



Descreen

Most printed material (such as magazine photos) commonly has a Moiré pattern across the image. The moiré is caused by the printing process and will often appear like a dirty screen has been placed across the scanned image. The ImageReader LE has a built in Descreening process to eliminate the moiré.

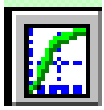


Before



After

If you are scanning a printed picture and not an original photograph, it is best to set Descreen to eliminate the moiré pattern.



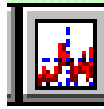
Gamma

Fine tune the color values of the image: Hue, Saturation, Value, Red, Green, and Blue.



Histogram/Tone Map

With the Histogram/Tone Map, you can make adjustments to color values: brightest, middle & darkest gray.



Tone Adjustment

Fine tune the color values of the image: Hue, Saturation, Value, Red, Green, and Blue.



Auto Color

Auto Color will automatically make adjustments to the scanned output to achieve a closer match to the colors of your original in the scanned image.

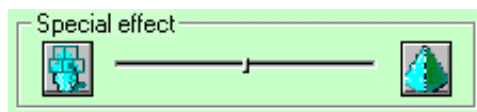


Before



After

Special Effect

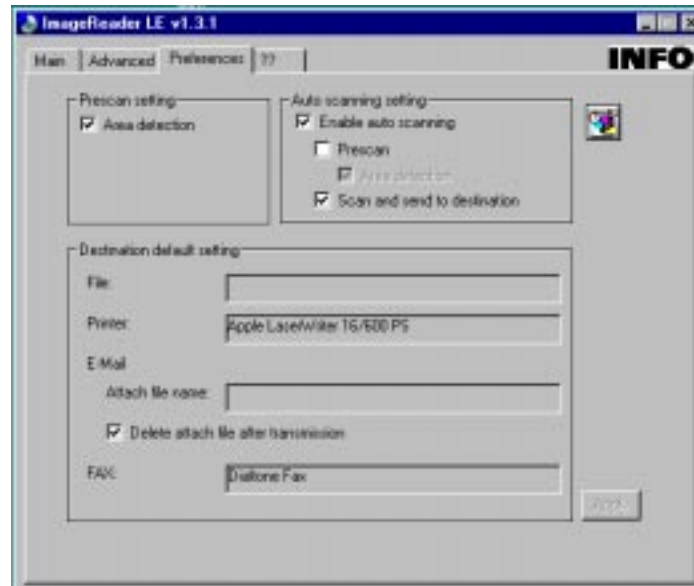


Blur & Sharpen

Slide the bar to either side to change the appearance of your scanned image. Toward the left side is more blurred to the right sharper.

Preferences

The preferences screen allows you to preset some controls for the scanner and set destinations.



Prescan Setting

Enabling **Area Detection** will allow the scanner to predefine the scanning area based on the prescanned item.

Auto Scanning Setting

There are a few defaults you can set here: Auto Scan Setting, Prescan, Area Detection, and Scan & Send to Destination.



Monitor Calibration

Monitors differ in how they display images. Monitor Calibration will allow you to configure the TWAIN interface to best display the image on your monitor.

Destination Default Setting

This defaults will set the paths or devices for the Scan to Destination options.

File: The TWAIN interface can only save the image as a BMP file. Specify your path and file name.

Printer: Specify the printer you want the output to go to. The printer must be installed in Windows 95.

Email: The TWAIN interface can only save the image as a BMP file. Specify your path and file name. If you want the image to be detached after it is sent, mark the option.

Fax: Specify the fax program you want the output to go to. The fax program must be installed in Windows 95 and listed in your printers folder.

One-button Easy Scan

On the outside of the scanner is a single button which is also the power indicator light. This is the One-button Easy Scan feature of your scanner. Press this button to start ImageDock and the TWAIN user interface without having to start each separately. With the One-button Easy Scan feature, you don't need to click on Start in Windows to operate your scanner.

You can then operate your scanner exactly as you normally would. See *Scanner Operation* for information on the scanning controls and the TWAIN User Interface..

After you scan, your image will be sent to ImageDock as a thumbnail on the desktop. This is a normal thumbnail and can be used exactly like any other ImageDock thumbnail image.

Note: Your computer must be on and the scanner connected for the One-button Easy Scan feature to work.



*One-button
Easy Scan Feature*

Included Applications and Reading the Software Manuals

This section of the manual is intended as a quick reference to the applications that came with your scanner. It is not intended to replace or to expand on the software manuals.

Adobe Acrobat Reader



The Acrobat Reader is the application you can use to read the software manuals for the applications included with your scanner. It is also the application you are using to read this manual.

[The Acrobat reader allows anyone to view, navigate, and print documents in the Portable Document Format \(PDF\).](#)

Many software and hardware developers are going to manuals on a CD-ROM disc rather than in paper form. This saves you money because the developers do not have to pay publishing costs and this saving is passed on to you. This also provides a more dynamic manual. If there are software changes, without having to worry about a large print run of documents, the manual can be changed and included on the same CD.

The Acrobat Reader can also be used to view PDF files you might find on the Internet or from other software or hardware developers.

ImageDock



ImageDock is a Windows 95 and Windows NT only application. You cannot run this application in Windows 3.1 or 3.11, attempting to do so may cause problems with your Windows.

ImageDock is a native 32-bit document and image management program. ImageDock allows you to scan an image in one central application and then use its drag and drop feature to open other programs with the scanned results, performing OCR or preserving it as an image.

You will find the manual for ImageDock on the CD.

`\\Manuals\\ImgDock.PDF` is the manual for ImageDock.

PictureFun!

PictureFun! is a Windows 95 and Windows NT only application. You cannot run this application in Windows 3.1 or 3.11, attempting to do so may cause problems with your Windows.

To find the applications of this suite, click **Start**, click **Programs**, click **Picture Mall**, and, for some applications, click **PictureFun!**

Note: PictureMall is not affiliated with Info. You will need to contact PictureMall for any questions about orders or pricing.

PictureMall



Copy: Easily scan color images to either your printer, turning your computer, color printer, and scanner or digital camera into a full-featured digital color photocopier.



PictureMall: Link to the ColorDesk Website where you can find out how to transform your scanned image into a variety of things like tee-shirts, mugs, and more.

PictureTalk: Add your images to custom designed items with PictureMall.



Setup: Configure your scanner, printer, and monitor for use with PictureFun!

Shop on Picture Mall: Add your images to custom designed items with PictureMall.

PictureFun!



Frame: Enhance your image with one of a variety of realistic looking frames.



Paper: Add your image to a card, invitations or magazine covers for fun ways to display your image.

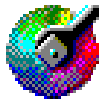


Photo: Enhance your image and save it in one of several popular graphics file formats.



Warp: Create new and interesting looks to your images by adding special effects.

On the CD, you will find the HLP manuals for ColorDesk Copy and ColorDesk Photo:

D:\manuals\ClrDsk32\CDCopy.hlp is the manual for Copy.

D:\manuals\ClrDsk32\CDPaper.hlp is the manual for Paper

D:\manuals\ClrDsk32\CDWarp.hlp is the manual for Warp.

D:\manuals\ClrDsk32\CDPhoto.hlp is the manual for Photo.

D:\manuals\ClrDsk32\CDFrame.hlp is the manual for Frame.

D:\manuals\ClrDsk32\PMCW.hlp is the manual for PictureMall Connection Wizard.

When to Use Which Application

When you use a specific application depends on what you want to do with the item you have scanned.

- * How do I scan a picture of Aunt Lucy and add a mustache (or maybe take one off)? You will want to use an **image editing or graphics** application, such as **Photo**.
- * How do I scan an important document from work, I need to make some changes to the text before I print it? You will want to convert the image to editable text using **OCR**, and open the converted document in your word-processor. **ImageDock** has built in OCR.
- * How do I read the ImageDock manual? You will want to use the **Adobe Acrobat Reader**.
- * How do I use my scanner and computer like a color photo copier? You will want to use **Copy**.
- * How can I make my scanned image into a tee-shirt or mug? You will want to use **PictureMall**.

Graphics: These types of applications provide image-editing tools for performing modifications to art, photographs, or other continuous tone images. Graphics applications will see any text as part of the image and will not recognize individual letters or characters. It not possible to edit (like a word-processor) text in a scanned image with a graphics application. An image scanned using a graphics program can only be saved in a graphics file format (BMP, GIF, JPG, etc). It cannot be saved as an editable text file.

Photo, Paper, Frame and Warp

OCR: OCR applications are designed to recognize alphanumeric characters in preparation for export to word processing and desktop publishing applications. In other words, the OCR conversion will go through the scanned document looking for characteristics that resemble known letters, number and other symbols and put the results into either a text file or place it on the clipboard so you can paste it into a text file.

ImageDock

OCR is often not an exact conversion. If you have special fonts or formatting, it may not be translated exactly. Also, the condition of your original will make a major impact on the OCR results. If your original is smudged, has a pronounced watermark, or has a background graphic it will decrease the accuracy. How you scan your original will also affect the accuracy. If your scanned image is upside-down, your results will be nil. If you scan in a mode not supported by the OCR software (Grayscale or Color is the best mode to use for ImageDock, Line Art is the correct mode in many other OCR applications), you will likely get an error message that the OCR cannot be started or your results will be marginal.

If the software applications that came with the ImageReader LE don't fit your entire scanning, image editing, or OCR needs, there are many other Graphics and OCR applications available from most software vendors. Because the driver for your scanner is TWAIN-compliant, you are not limited to only the applications that came with your scanner.

Info does not directly support any third party software (software you purchased separate from the scanner. Use the general guidelines in the *Scanner Operation* section of this manual to use other software.

Maintenance

Precautions

Keep the scanner out of direct sunlight. Direct exposure to the sun or excessive heat may cause damage to the unit.

Do not install the scanner in a humid or dusty place. Moisture or excessive dust can impair the scanning mechanism and may cause damage to the unit.

Be sure to use the proper AC power source. A surge protector is highly recommended. Place the scanner securely on an even, flat surface. Tilted or uneven surfaces may cause technical problems.

Retain the scanner box and packing materials for possible future shipping purposes.

Cleaning the Glass:

Wipe the scanner glass with a dry, soft, clean cloth to rid the glass of dust or other particles (such as from toner on photocopied or printed documents).

DO NOT use any solvents or other liquids to clean the glass. Liquid can seep around the edges of the glass.

It is best to wipe the glass in long even strokes. Be sure not to push any small particles into the tiny gap between the glass and plastic.

Clean the document board glass.

Troubleshooting

Frequently Asked Questions (FAQ)

Frequently Asked Questions are a collection of problem solving questions and solutions. If you are having problems, looking in the FAQ might help you solve it. The FAQ is created using both those questions we think you might ask and questions others have asked (with this or other scanners) and the best solutions from Technical Support.

The FAQ is presented in a Question and Answer format to answer questions you might be having about your scanner, its installation, and possible problems.

Setup & Installation

*** Do I have to have a special kind of port (or plug) to connect my scanner to my computer?**

Situation & Solution: The ImageReader LE uses a parallel port connection. On most computers, there is at least one parallel port (if you have a printer, this is the port that it also uses). The ImageReader LE works with most port modes (the way a port passes a signal or communication from the computer to any device attached to it): Standard (SPP), Bi-directional (BPP), Enhanced (EPP), and Enhanced Centronics (ECP). EPP is recommended as the port mode you that use with the ImageReader LE since it is the fastest.

*** My scanner cable is too short; can I attach a different or longer cable to my scanner than the one that came with it?**

Situation & Solution: You should use the cable that came with the scanner. Use of any other cable is not supported by Info. If any damage occurs with the use of a different cable or if the scanner will not operate with a different cable, it is not covered under warranty.

The ImageReader LE uses a specific type of cable characterized by a “choke” around the cable close to the point where it plugs into the scanner. The cable filters the signal going to the scanner in a way that is not supported by a normal cable.

In addition, parallel port signal is generally relatively weak and degenerates the further it travels. With a longer cable, there may not be enough signal getting to the scanner to enable it to scan successfully. Also, if you have a printer connected to the pass-through port on the scanner, a longer cable for the scanner could decrease the operating ability of your printer.

*** Why does my scanner have two plugs (or ports) on the back?**

Situation & Solution: Since the ImageReader LE is a parallel port device, a pass-through port was included as part of its design that will allow you to connect your printer to the scanner so they can share the same parallel port on your computer. In most cases, you will not need to install a second parallel port to have both the scanner and printer work on the same computer. See the last section of Scanner Setup for instructions on how to connect both your scanner and printer to the same port on your computer.

*** I have a Zip drive (or parallel port device other than a printer); can I connect the ImageReader LE to it or it to the ImageReader LE?**

Situation & Solution: There are two problems here. The parallel port is not designed to operate multiple devices. And, each parallel port device other than a printer (and some printers) wants to be connected directly to the computer without any other device in-between, including the scanner. If you want to operate several parallel port devices, you might want to consider installing an additional parallel port into your computer.

*** Can I use the ImageReader LE with an A/B switch (a switch that connects to the parallel port and redirects the signal to one of two devices)?**

Situation & Solution: Info does not recommend or support the use of an A/B switch with any of its parallel port scanners, the ImageReader LE included.

Many A/B switches are not capable of the advanced communication the scanner requires. In addition, if the scanner is not connected to the computer when Windows starts, such as when another device is in possession of the port through the turn of the switch, Windows may not ever recognize the scanner in relation to that port.

*** Windows 95 did not find my scanner as a new device. Or My scanner is not listed in the Windows 95 Device Manager.**

Situation & Solution: Windows 95 does not have built in support for scanning devices. Thus, no scanner will be plug and play in Windows 95. You should follow the Quick Start Guide or the Scanner Driver and Application Software Installation in this manual to install your scanner onto your computer system.

*** I get an error when I attempt to scan.**

Situation & Solution: There could be four reasons why this has occurred.

1. Verify that you have selected the correct source in your scanning program. If your program is 16-bit (originally written for Windows 3.x) you must select the /16 source. If your program is 32-bit (written only for Windows 95), then you should choose /32. InfoCenter Lite is a 16-bit program.
2. Check that the scanner's cable is connected and tightly screwed into the computer's parallel port. It is not recommended to run the scanner connected to any non-computer port, including A/B switches and other pass-through ports on parallel port devices. If you have another parallel port device, such as a Zip drive, you may need to get a second parallel port. It is also necessary to use the cable that came with your scanner. A standard parallel port cable will not work with the scanner.
3. Check that the AC power cord is connected to the scanner and is plugged into a power outlet. It is recommended to use a surge-protector.
4. Check to be sure that your parallel port is set to EPP, ECP or SPP. Changing the parallel port mode is usually done in the CMOS/BIOS setup (usually accessed while your computer is booting up). Consult the documentation that came with your computer for specific information on how to access your CMOS/BIOS and how to change the parallel port mode. The following directions may not apply directly to your CMOS/BIOS setup. Change ONLY the parallel port mode. Making other changes in your CMOS/

BIOS could render your computer inoperable.

- a) Shut Down your computer and restart it. While it is beginning to start-up, press the Delete key (may also be F1, F2, or some other key sequence depending on your computer, consult your computer manual) to go to the Setup Menu. There may be a message on your screen while your computer is starting that will tell you which key to press to go into the CMOS/BIOS.
- b) Locate the Parallel Port option. This may be in a section titled Peripherals or Advanced or just on a second page. The parallel port option might also include things such as LPT1 or LPT2 and the address and IRQ.
- c) Consult the on screen directions and change the MODE to EPP or ECP (preferred) or SPP. If there is a Standard or LPT mode, this is likely to equate to SPP. If you have no other modes, set it to this.
- d) Change ONLY the parallel port mode. Making other changes in your CMOS/BIOS could render your computer inoperable.
- e) Save changes and exit.

Scanner Operation

*** There is nothing in the selection box when I go to select source. Or I got an error message when installing the scanner driver (or application software).**

Situation & Solution: If there are other programs running while you are installing the driver, it may not completely install, even though you got the message the installation was successful. You need to ensure there are no programs running in the background when you install the CD.

1. With your desktop clear, press the **Ctrl**, the **Alt** and the **Delete** keys at the same time (Ctl+Alt+Del). This will bring up a **Close Programs** window. Everything listed in this window is a running program. **Explorer** is the Windows 95 desktop, you cannot close this program. **Systray** is the taskbar and time listing in generally in the lower right hand corner of your screen, you also cannot close this program (some systems do not list this program in the Close Program window). All other programs can be closed one at a time.
2. Highlight a program then click on **End Task**. The Close Program window will disappear, but pressing Ctl+Alt+Del will bring it back up. This will only close these programs until the next time you boot your computer. All of these programs are generally set up to run as soon as you start your computer or boot up Windows.
3. When only Explorer and Systray are listed in the Close Programs window, click on **Cancel**.
4. Try to install the driver once more following the instructions found in the Quick Start Guide or in this manual (*Scanner Driver and Application Software Installation*).

Note: You can also install the driver in **Safe Mode**. Copy the installation files into a temporary directory before shutdown and reboot into Safe Mode, then install from the temporary directory.

*** When I go to scan, I get a “cannot access TWAIN driver” error.**

Situation & Solution: The ImageReader LE is designed to work only with Windows 95 (or higher) and 32-bit scanning applications. It will not work with 16-bit applications (applications originally written for Windows 3.1 or 3.11).

* How can I change the scanning area? Or How can I crop my image before I scan?

Situation & Solution: To reduce the size of an image or to have less blank area in your scanned image, you can crop the size of the scanning area so it will match your original. There are two ways to change the scanning area: use a predefined scanning area setting or create a custom scanning area. There are 6 predefined scanning areas.

In the TWAIN user interface window, click **Preview**. This will scan an image at 72 dpi and display it in the preview window. The preview is not your final scanned image. You cannot save or edit or OCR a preview image.

After the previewed image is displayed in the preview window, you can change the scanning area by moving the dashed lines to encompass just the area you want to scan.

To move a line: Move your mouse pointer over the line until it changes shape (generally to a double arrow pointing in opposite directions). Click & hold your mouse button. Drag the line to where you want it, and then release the mouse button. *Tip:* You can drag the corners diagonally.

To move the entire area: Move your mouse pointer to the inside the area defined by the red line or until it changes into four arrows (pointing in four directions). Click & hold your mouse button. Drag the box to the position you want, and then release the mouse button.

* Why do my scanning results seem dark?

Situation & solution: Every computer deals with images and graphics differently. You may need to make adjustments to better suit your computer.

1. Try using the Color Matching setting in the TWAIN user interface window. **Note:** The scan could take a bit longer than without the Color Matching setting.
2. Modify the Gamma setting to 1.8 for your monitor and, when printing, set the Gamma to 2.2 for your printer (consult your printer and/or monitor documentation for instructions on performing gamma adjustments).
3. Prior to scanning, increase the Brightness setting of the TWAIN interface.

* Is there anyway to speed up the scanning speed?

Situation & solution: Set your parallel port mode to EPP (see above). EPP is the fastest mode usable with the scanner. If you do not have an EPP mode for your parallel port, you may need to purchase an EPP interface card. Most computer stores sell parallel port interface cards capable of EPP mode, or contact Info Peripherals at 800-777-3208, ext. 2534.

If you are using extra settings while scanning (Descreen, Color Matching, Quality), the scan may also take longer because the scanner is doing more work.

* When I attempt to scan, I get an Image Transfer Failed, Out of Memory, or Cannot Write File message.

Situation & Solution: Error messages while scanning, such as these, usually only occur if there is

not enough free disk space or enough free resources for the scanning software to process the image. Even if you seem to have enough free disk space for the image, the virtual memory usage during the image transfer will take up some of the free disk space making it not free for the image transfer.

There are three things that influence the size of the file created when scanning an image: Resolution, Mode, and Scanning area. A higher resolution (dpi) will yield a clearer picture, but it will also create a larger file. A color mode (millions of billions of shades) will create a larger file than a grayscale (256 shades) or black and white (LineArt, Half-tone, Bi-tone, only two shades) mode. A larger scanning area will also create a larger file than a small scanning area. The following example is a letter-sized image scanned with a 30-bit scanner (billions of shades in the color mode). All sizes are approximate and may differ from your own results.

	color	grayscale	black and white
100dpi:	2 ½ Mb	1 Mb	120 Kb
300dpi:	25 Mb	8 Mb	1 Mb
4800dpi:	6 Gb	2 Gb	260 Mb

Try reducing the resolution of your image, reduce the scanning area, change the mode, or free up hard drive space. Information on how to change the resolution, mode and scanning area is in the scanner User's Guide. Freeing up hard drive space is a matter of deleting or otherwise removing unneeded files or programs. Information on how to do delete files is in Windows documentation. Which files you delete or remove is your decision (only you know what is important to you). Some software has special uninstall programs to remove them from your computer. The alternative to freeing up hard drive space is getting a larger hard drive.

* **How do I use the application software?**

Situation & Solution: The manuals for the software are on the CD-ROM disc that came with your scanner. They are in pdf format that can only be read with the **Adobe Acrobat Reader**. The Reader installation is also on the CD (see *Included Software Applications* in this manual). If you want printed manuals, you can print from the Adobe Acrobat Reader (for pdf files). Info does not offer any pre-printed or bound manuals.

Printer Setup and Operation

* **What is the function of the pass-through port?**

Situation & solution: The pass-through port will allow you to connect your printer to the scanner so they can share the same parallel port on your computer. In most cases, you will not need to install a second parallel port to have both the scanner and printer work on the same computer.

Connect the scanner cable directly to the parallel port on the computer (the port where your printer has been connected). Connect the scanner cable to the port on the scanner labeled **HOST**. Connect the printer cable to the port on the scanner labeled **PRINT**. Make sure all connections are tightly connected and screwed into place.

*** Sometimes, while my printer is connected to the scanner, my printer does not work.**

Situation & solution: There are several things to check:

1. Your scanner may be off. Make sure the scanner is turned on when you want to print (indicated by the power light on the front of the scanner).
2. Check the scanner cable connection. Be sure the printer cable is plugged into the port marked **To Printer** on the back of the scanner.
3. Occasionally there may be a conflict between the ImageReader Ultra and specific printers. If you get an error message “Printer not found” or “Printer not recognized”, you may need to adjust your printer spooler to print direct to printer rather than print to spooler.
 - a) Click **Start**
 - b) Click **Settings**
 - c) Click **Printers**
 - d) Right-click with your mouse on your **printer icon**.
 - e) Click **Properties**
 - f) Click the **Details** tab
 - g) Click **Spooler Settings**
 - h) Select **Print Directly to the Printer**
 - i) Click **OK** and **OK** again
 - j) If prompted to reboot, do so.
 - k) If the problem persists, you will need to disable the bi-directional properties of your printer (refer to your printer documentation or consult your printer manufacturer).

Technical Support

If you experience difficulties and cannot find solutions within this, we have a comprehensive Technical Support Department ready to assist you in several different ways.

Technical Support is for hardware or software problems. They will not provide tutorials on the use of the scanner or application software.

Website: <http://www.infoconnection.com>

Updated on a periodic basis with the latest FAQs and driver updates.

Fax on demand: (408) 538-2585

Updated on a periodic basis with the latest FAQs.

Bulletin Board Service (BBS): (408) 538-2580

Updated on a periodic basis with the latest FAQs and driver updates.

Email: tech@infoconnection.com

Communicate with members of our Technical Support staff.

Fax: (408) 538-2577

Communicate with members of our Technical Support staff.

Voice: (800) 777-3280 or (408) 538-2510

Communicate with members of our Technical Support staff.

The Tech Support staff is available **Monday through Friday, 8am to 4:30pm Pacific Time**, excluding holidays.

The Website, Fax on Demand, BBS, Fax and Email are available 24 hours a day 7 days a week (fax and email replies are made only during the hours of voice tech support, with of a goal of within one working day of delivery).

Replies are generally returned in the same media in which they are received, i.e. an email communication will be replied to via email.

If you call the Tech Support and get voicemail, all the technicians are on other calls, please leave some basic information and a technician will attempt to return your call at a later time (the goal is within one working day of receipt). Calls are returned in the order they are received.

Glossary

Some of the terms here are not used in the scanner driver or application software included with your scanner. The information here is for your information only and does not imply support for any scanning task or application.

3rd-Party Software

Application software of many kinds is generally available from your computer store or other vendor. Any application that was not supplied with your scanner is considered 3rd party. Info does not directly support 3rd party software. There are many general guidelines to using all scanning applications (see Scanner Operation).

16-bit & 32-bit

This refers to the operating system or an application written for a specific operating system. Windows 3.x is 16-bit and Windows 95 is 32-bit (to be precise a 32-bit emulation over 16-bit). Programs that work in both Windows 3.x and Windows 95 are 16-bit (also called Legacy programs). Programs written only for Windows 95 are 32-bit and will not work in Windows 3.x. When you are choosing a source, if you are using a 16-bit application, you should choose (16). If you are using a 32-bit application, you should choose (32). 3rd party software can be either 16-bit or 32-bit and an appropriate source should be chosen.

32-bit color

Color images composed of three 8-bit channels: cyan, magenta, yellow, black (CMYK). Over 50 billion color combinations are possible, providing for more vivid color reproductions with subtle gradations of hue. 32-bit color has nothing to do with the operating system. At this time (1/20/98), none of the ImageReader scanners are CMYK enabled. There are many graphics programs that will convert RGB color to CMYK.

30-bit color

Color images composed of three 10-bit channels: red, green, and blue (RGB). Over 50 billion color combinations are possible, providing for more vivid color reproductions with subtle gradations of hue. Even though a picture is scanned with 30-bit hardware, the image output will be 24-bit due to limitations with bitmap graphics.

24-bit color

Color images composed of three 8-bit channels: red, green, and blue (RGB). With 24-bit color, it is possible to have over 16 million possible color combinations providing for a more photo-realistic image. Also called True Color.

8-bit grayscale

Grayscale, in contrast, is scanned in 8 or 10 bits (output of 8 bits), a single channel of color, providing for 256 shades of gray.

1-bit black and white

Line-Art, Error Diffusion and Half-tone modes scan in single bit (either on or off) which is only black and white, no shades or gradations of color. Error Diffusion and Half-tone use spacing of pixels to mimic grayscale imaging.

Alpha Blending

Additional information is coded into each pixel for creating transparent materials.

ASCII text

Plain text without any fonts or formatting codes (including line breaks in most cases). Most word-processors can import ASCII text.

Application Software for scanners

Applications are any software that manipulates scanned images or text in some manner. Different software has different functions: some allow you to manipulate and modify an image (see Imaging Software) and some allow you to convert a scanned document into editable text (see OCR).

BBS

Bulletin Board Service. Computers setup so that other computers can connect (logon) directly to them. The purpose of most BBS's is to allow the transfer of files, other data, and typed communication. The graphics used on most BBS's is ANSI, a primitive form of graphics based on ASCII with color and shades codes added.

BIOS

Basic Input/Output System and a program code in the permanent memory (ROM) of a computer, which performs the self-test and several other functions during system startup. By changing values in the CMOS (see below), you can change how the computer deals with its peripherals, its hard drives, and many other things.

Bit

The smallest unit of memory in the computer is called a bit. A bit can be set to either on or off (1 or 0). Greater bit-depth (more bits per pixel being used) allows for more complex image information which can render a clearer image. However, more bits per pixel do create a bigger file even when scanning at the same resolution.

Bit-depth

The number of bits in pixel, the bit-depth is divided equally into the number of color channels.

Brightness

The balances of dark and light shades determine the intensity of an image.

CMOS

The setup of the computer's basic components stored in permanent memory (ROM). Some of the components governed by the CMOS are IDE controllers (hard drives and CD-ROM drives), serial and parallel ports, memory caching, etc.

CMYK or Cyan/Magenta/Yellow/Black

A color model for defining and representing colors consisting of four channels. Combining these four colors in various proportions generates color. Most often found in 32-bit color (8-bit channels).

Color Channel

Color is made up components of build up the image. Combinations of elements from the channels create the shades. Each bit in a channel can be combined with a bit from another channel to create a different shade. The more bits in each channel (the greater bit-depth), the more shades that can be produced. There are different types of channels that build up an image differently: RGB uses three channels and CMYK uses four.

Compression

Compression means the reduction of data needed to save information, especially image and sound data. There are lossless methods which only remove redundant data, and lossy methods which achieve extremely high compression rates at acceptable loss of information (such as JPEG and MPEG). A lossy format can alter an image's appearance.

Contrast

The range between the darkest and the lightest shades determine the number of shades in an image. An image with low contrast can look dull and flat.

CPU

Central Processing Unit, this is the main processor chip of a computer, for example a Pentium or a 486.

D/A Converter

Digital/Analog converter, a signal converter which converts a digital input signal to an analog output signal, for example the image data in the display memory of a graphics board to a video signal the monitor can display.

Descreen

Most printed material (such as magazine photos) commonly has a Moiré pattern across the image. The moiré is caused by the printing process and will often appear like a dirty screen has been placed across the scanned image.

Direct Color

Generic term for TrueColor, RealColor and HiColor. In these modes, the color information saved in the display memory is not translated by a look-up table, but passed directly to the D/A converter. This means that the full color information has to be saved for each pixel.

Dithering

Creating a special shade of color with a lot of near together grouped pixels of different colors. May be necessary at low color depth (e.g. 256 colors).

DMA

Direct Memory Access. This is a method of data transfer, where information is transferred directly between system components without the help of the CPU. Enhanced Centronics Ports use a DMA address as do most sound cards and some other peripherals.

DPI or Dots Per Inch

The resolution of images on the computer or from the printer is measured in how many dots (or pixels) there are in each inch of the image. The higher the DPI, the more precise the image can be. DPI also directly affects the size of the image file: the higher the DPI, the bigger the file.

Driver Software

The driver allows software to communicate with hardware. The scanners will only work with the computer if there is driver software installed.

E-mail

Electronic mail, text messages sent through a network, such as the Internet, to a specified individual or group. E-mail messages can carry attached files, such as word-processing documents or graphics. E-mail is sent and received with special software called an e-mail client: Eudora, MS-Exchange, etc. Some ISPs' logon program and many Web Browsers have e-mail clients built into them.

Error Diffusion

A single-bit scanning mode that uses the size of pixels to mimic grayscale imaging with good detail.

FAQ or Frequently Asked Questions

This is a listing of questions that are often asked of tech support and their answers. If you are having problems, if you look at the FAQ's first, you might be able to solve your own problem without needing to contact Tech Support. You can find Info's FAQ's on the Web site, the BBS, and through the fax-back system.

File Formats

Some programs allow you to save images or OCR text as a variety of file formats. Which formats are available depend on the program you are using. Some file formats are specific to individual programs and can only be used in that program. In which file format you save an image or OCR text file depend entirely upon your uses for the file.

Fax or Facsimile

This is a method to send digitized information from a computer to another computer or Fax device through the phone lines. Faxing requires the sending computer to have a fax-modem and faxing software installed and the receiver to have either a computer with a fax-modem and fax software or a dedicated fax machine.

Free Disk Space

This is the amount of space you have FREE on your hard drive, not to the total hard drive space. If you have a lot of programs and files on your hard drive, you may not have much free disk space.

Gamma

Changing the gamma allows you to alter the brightness of the middle range of tones without affecting much change to the shadows or highlights.

Graphics Formats

There are several graphics formats in which you can save a scanned image. The major differences between graphics formats is the way the image is stored (compressed vs. uncompressed), displayed (how you or someone else can view the image), or commonly used (some formats were designed with specific uses in mind). The appearance of any graphic differs from computer to computer based on the hardware and software used to view it.

Grayscale

An image made up of shades of gray, like a black and white photo. Generally, grayscale is either 4-bit, allowing 16 shades, or 8-bit, allowing 256 shades and providing a more photo-realistic quality.

Halftone

Halftone images are composed of a pattern of black dots that simulate grayscale, such as many newspaper photos.

HiColor or RealColor

HiColor designates a 15-bit or 16-bit (bits per pixel) graphics mode, 32,768 or 65,536 colors.

Hue

Hue provides the contrast between colors, what distinguishes one color from another.

Image Editing

You can take any image, either scanned or from a file and manipulate the image in a variety of ways, limited only by imagination and the limitations of the software. Many image editing software applications are also scanning applications. There is a wealth of 3rd party twain-compliant image editing software, much of it available through the Internet as shareware and freeware: Print Shop Pro, Corel, Fractal Painter, Paint, Paint Brush, etc. With imaging software, it is possible to save your image in a variety of file formats depending on the software you are using, see Graphics Formats.

Internet

A global Transmission Control/Internet Protocol (TCP/IP) networks linking millions of computers for communications purposes. The Internet originally was developed in 1969 for the US Military and later encompassed educational and research facilities as well. The Internet grew from this to now encompass commercial and individual use today. The most visual, and most popular, part of the Internet is the World Wide Web. The Web is a system of graphical or text files linked by the Hypertext Transfer Protocol and Hypertext Markup Language, allowing a person to simply click on

one page and end up on another which may reside on a completely different computer.

Interpolated Resolution

The software of the scanner driver enhances the resolution of an image. Optical resolution represents the true resolution of a scanning or imaging device. Interpolation takes the optical resolution and converts it to a higher value.

Invert

Reversing the color values in an image. Inverting a color image will yield something that has the appearance of a negative. Inverting a black and white image will reverse the black with the white.

Interlaced

A screen display is drawn in lines. In interlaced mode, in a first stage all the even lines are drawn, and in a second stage all the odd lines. This allows a higher graphics resolution, but produces more flickering than non-interlaced graphics modes.

Interpolation

A video image must be stretched or shrunk in order to fit into the display window. If pixels are simply multiplied (for example, a block of four equally colored pixels represents the original pixel), aliasing effects (“blocks” and “stairs”) will occur. This can be avoided by interpolation procedures (using average colors for inserted pixels). Horizontal interpolation (x filter) is relatively easy to perform, since the pixels are drawn to the screen in lines. Vertical interpolation (y filter) is more difficult and requires a complete pixel line to be buffered.

I/O Address/Port

Input/Output addresses or I/O addresses are physical addresses of hardware subsystems such as those for interface cards or parallel ports.

IRQ

Interrupt ReQuest lines are hardware connections which can transmit interrupt signals from hardware subsystems to the CPU to trigger certain procedures.

ISP

Internet Service Provider, these organizations or businesses allow individuals to logon on to their computers for the purpose of connecting to the Internet. There are primarily four types of ISP's. The direct connection to the Internet allows the use of your own Internet software but will often provide basic Internet software (i.e. a Web Browser and E-mail client) for free. The commercial online service, such as America Online (AOL) or CompuServe, requires you to use a specific type of software (proprietary) to connect to their service and browse the web or read and send email. Many colleges and universities allow their students and faculty to connect to various parts of the Internet for such things as email and web browsing. And, there are several companies that allow an individual to access email sending and receiving for free.

These free email ventures often use a proprietary email client and/or restrict the email in some way, such as not allowing file attachments or allowing only a maximum number (or volume) of messages per day.

Line Art

Images that are purely black and white, such as black type writing on white paper or many line drawings. Line Art is a single-bit mode.

Memory Manager

A program for handling memory above the 640 K barrier of DOS. DOS comes with its own memory manager, Memmaker, which can be run from a DOS-prompt (but not within Windows). Running a memory manager can free up conventional (the first 640K) memory for use by programs.

MIME

Multipurpose Internet Mail Extensions, a standard format that allows the attachment of graphics and other non-text files, such as programs, to text-based e-mail messages.

Moiré

Moiré is caused by the printing process of images in printed materials such as books or magazines. Moiré is caused by the resolution the original picture was scanned or digitized at in combination with the resolution the image was then printed. Descreening can often remove the moiré effect from an image.

MPEG-1

Video compression standard for consumer applications, developed by the Motion Picture Experts Group (ISO 11172). Good resolution and speed, VHS quality. Normally requires hardware decompression (e.g. ELSAmotion). It is designed for resolutions of 352 x 288 with 25 frames per second (PAL), or 352 x 240 with 30 or 24 frames per second (NTSC or motion picture) and for common CD-ROM transfer rates. Approx. 70 minutes of video can be saved on one CD.

MPEG-2

Broadcasting quality standard, for example for full CCIR 601 quality or HDTV (high-resolution 16:9 television). Requires considerably higher transfer rates and memory capacities than MPEG-1 and is therefore not suitable for the consumer market.

MPEG-3

This is a relatively new standard that compresses the image or audio (or both) without loss of quality. While MPEG-3 decoders/players are becoming more common, encoders/editors are not widely available.

OCR or Optical Character Recognition

The software will attempt to convert a scanned image of a document into editable text to be used in a word-processing program. If the software does not recognize a character shape, it will either make its best guess or will insert a null type character (differs program to program). Good OCR software can be quite expensive. Some OCR software is quite advanced & can convert a variety of fonts and page formats, including forms. There are several different twain-compliant OCR software packages that are available as 3rd-party

software, some even available from the Internet as shareware or freeware: Cuneiform, OmniPage, WOCAR, Textbridge and others. OCR relies heavily on the clarity of the document scanned. Documents printed on an inkjet or laser printer most easily converted with OCR. Documents that have been printed on a dot matrix printer or come as carbon duplicates may be difficult to OCR. Some OCR programs can only convert to ASCII, plain, or other forms of text, which usually will not retain format or fonts, found in the original. Most OCR programs are incapable of converting any item that was not scanned in LineArt mode (single bit, black and white).

OpenGL

3-D software interface (3-D API). Implemented, for example, in Windows NT and later releases of Windows 95. Based on Iris GL from Silicon Graphics and licensed by Microsoft.

Optical Resolution

The true resolution of the scanner determined by its hardware optics. The scanner driver yielding an interpolated resolution often enhances optical resolution.

Pixel

An abbreviation of Picture Element, this is the smallest possible element of an image on the screen, or a single dot of one color.

Plug and Play

Windows 95 and some motherboards support Plug and Play devices. The Windows 95 detects these devices or interface cards when it first boots after their installation. After Windows 95 detects a device, it will begin installing support for the device. Only devices or interface cards that Windows 95 has direct support for can be Plug and Play. Scanner support is not built into Windows 95; therefore, no scanner can be Plug and Play.

RAM

Random Access Memory, Chip memory of a computer or expansion board that can be read from and written to (unlike ROM = Read Only Memory).

Raster Graphics

A digital method for creating an image using a complex series of dots. Most graphics formats are based on raster graphics: BMP, GIF, JPG, TIF, etc.

Resolution

Resolution governs the clarity of the image and is measured in dots per inch (DPI). The number of pixels in horizontal and vertical direction on the screen, for example 640 horizontal by 480 vertical pixels (640 x 480). Note: High resolution images especially color images, create HUGE files and consume large amounts of resources to process. High Resolution images also requires the computer to have advanced Video capabilities.

RGB or Red/Green/Blue

A color model for defining and representing colors consisting of three channels. Combining these three

colors in various proportions generates color. On most graphics boards, color information is saved in the Red/Green/Blue color format.

ROM

Read Only Memory. Chip memory that cannot be written to, such as the BIOS of a computer or the firmware of an expansion board.

Saturation

The amount of color or intensity that is in a single hue.

SMTP

Simple Mail Transfer Protocol, a communications protocol that directs e-mail exchanges on TCP/IP networks.

TrueColor

Graphics mode with 16.7 million colors (24 or 32 bits per pixel). In this mode, the color information saved in the display memory is not translated by a look-up table, but passed directly to the D/A converter. This means that the full color information has to be saved for each pixel.

TWAIN

TWAIN refers to an industry standard that has been developed for scanning or other external imaging devices to communicate with the computer.

VGA

Abbreviation of IBM Video Graphics Adapter, a display adapter with a standard resolution of 640 x 480 with 16 colors.

VRAM

Video Random Access Memory, a fast type of RAM used as display memory on high-end graphics boards.

YCbCr

A color coordinate system used in the JPEG and MPEG standards. The color information is saved in the YCbCr format: Y contains the luminance (brightness) signal, Cb and Cr contain the chrominance (color) information. See also YUV and RGB. YCbCr and YUV are linked via the following equations:

$$Y = 0.3 R + 0.59 G + 0.11 B$$

$$Cb = (U/2) + 0.5$$

$$Cr = (V/1.6) + 0.5$$

Zoom

Changing the view of an image without changing its actual size.

File Formats

There are many different file formats both for graphics and for text. Each format has its own specific qualities and can be viewed or edited only with software that supports it. Merely renaming a file and changing its file extension (the three letters after the dot) won't enable you to open the file as that type. Below is just a sampling of the many file formats available in different programs; this is by no means a comprehensive listing.

AVI, Audio Video Interleaved

Full motion video format. File format developed by Microsoft for saving combined compressed video image and sound information.

BMP, Bitmap

An uncompressed format, the bitmap can take up a large amount of disk space. Windows bitmaps are can be used as Windows wallpaper if they are of the correct dimensions. Bitmaps can be edited and viewed with the Windows Paint or Paintbrush application. This format is supported by all imaging software packaged with your scanner.

CAD, Computer Aided Design

Designing and drawing, for example, machine parts or buildings with the help of computer graphics.

CUR, Cursor file format

Cursors are small image files that serve a specific function. These are the mouse pointers for Windows or other operating systems. A cursor file from one operating system may not work on another.

DOC, Document format

Several programs use this as their file extension. This does not mean every DOC file is compatible with every program that uses DOC. Some programs that use DOC include Microsoft Word, PageMaker, WordPerfect, WordStar, Microsoft WordPad, and many others.

GIF, Graphic Image Format

This compressed format is commonly used to pass images from one person to another across the Internet. Since the GIF format is not public domain and the owners of the format are beginning to charge royalties for viewers and editors, it is losing ground as a "standard" format. A GIF can only support a certain range of shades and so are not available for all images. GIF is available in many graphics programs.

ICO, Icon file format

Icons are small image files that serve a specific function. These images are commonly used to mark files and folders in Windows and other operating systems. An icon file from one operating system may not work on another.

JPG, JPEG

This compressed format is commonly used to pass images from one person to another across the Internet. All of the imaging programs packaged with your scanner support this format.

MOV, Quick Time video format

This is a full motion video format.

PCD, Kodak Photo CD

A proprietary graphics format for Kodak CDs.

PCX, PC Paintbrush format

An uncompressed format widely available on most PCs and all PCs equipped with Windows. PCX is generally more limited than BMP with regard to colors and resolution. Since it is an uncompressed format, it also can use a large amount of space.

RTF, Rich Text Format

This is a basic text format that does include some fonts and some other formatting commands. Many word processors support RTF and will allow you to migrate one RTF from program to program.

TIF or TIFF, Tagged Imaged File Format

Commonly supported for faxed images, this format can be used for a wide variety of images. Faxed images are black and white or gray-scale. Some software supports different versions of TIFF, so a TIFF saved in one program may not appear correctly in another program that supports TIFF.

TGA, Targa

One of the earliest PC graphics formats that was initially designed for a specific piece of hardware, support for which is now found in modern SVGA adapters. Targa files are rarely compressed. Targa supports image transparencies and overlays allowing the layering of images that can be seen through the various layers.

TXT, Text

This basic text format is generally available in any word processor program. This format does not allow

fonts or any other formatting commands. ASCII Text is the most basic of all the TXT formats.

WRI, Write

Microsoft Write supports this text format.

Specifications

All specifications are subject to change without notice.

Model: FB-OMP

Scanner Type:	Flatbed Scanner
Optical Resolution:	300 dpi * 600 dpi (H*V)
Maximum Resolution:	4800 dpi
Scanning Modes:	Black & White Line Art mode 10-bit gray scale (8-bit output) 30-bit color (8-bit output)
Scanning Area:	A4, 210mm x 297 mm
Interface:	Parallel port (supports SPP/EPP for PC)
Power Source:	100Vac~240Vac, 50~60Hz, external
Power Consumption:	12 watts (12Vdc,1A)
Dimensions: (WxDxH)	375 x 270 x 70 (mm)
Weight:	2.5kg

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 instruction manual, may cause harmful interference to radio communication. 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.

CAUTION: Any changes or modifications not expressly approved by the manufacture of this device could void the user's authority to operate the equipment.

EC Declaration of Conformity

According to EN45014

Manufacturer's Name: Info Peripherals, Inc.

Model Number : FB-OMP

Conforms to the following Product Specifications:

Emission: EN 50081-1 (1992)
EN 55022 (Class B)
(Conducted Radiated) (1994)
EN 60555-2 (Harmonics) (1987)
EN 60555-3 (Flicker) (1987)

Immunity: EN50082-1 (1992)
IEC 1000-4-2 (ESD) (1995)
IEC 1000-4-3 (RS) (1995)
IEC 1000-4-4 (EFT/Burst) (1995)
IEC 1000-4-5 (SURGE) (1995)

Date: December 1995



Info Limited Warranty

Info warrants this scanner to be free of manufacturing defects, both materials and workmanship, for a period of ninety (90) days 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 Merchandise Authorization (RMA) number. Info Technical Support staff will be the final arbiter in determining if an RMA is warranted or if any other solution is possible.

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 RMA number (only as issued by an Info technician), and a description of the scanner's defect. Enclose a copy of the original purchase receipt to verify warranty eligibility. Write the RMA number legibly on the outside of the package.

