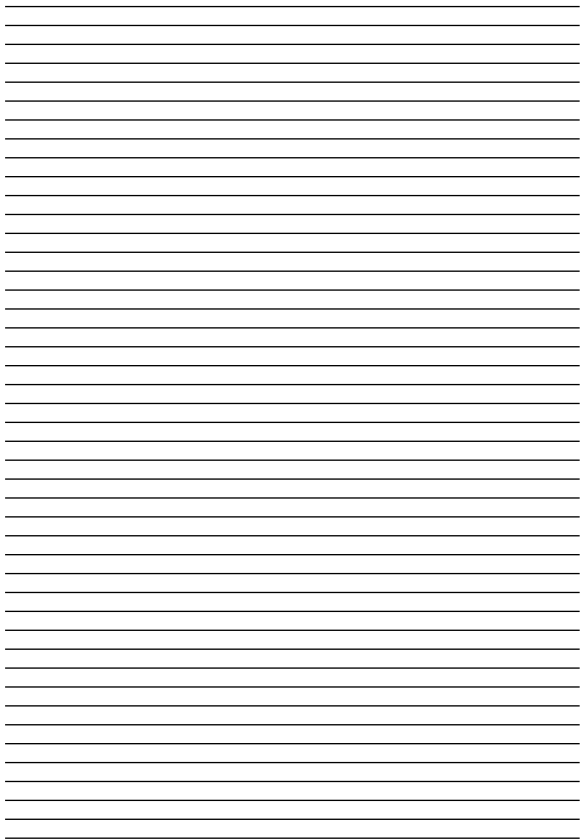


Color Image Processing Software

**ColorGenius EX 2.0-**

for Macintosh

**USERS MANUAL**



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## **Introductory Note**

ColorGenius EX (hereafter referred to as the “ColorGenius”) handles RGB or Grayscale images input from color scanners, or other devices, and processes them to obtain the optimum image data for printing.

This product is designed and manufactured solely for the above objective and should not be used for any other purpose. If this software is utilized for purposes or uses other than those described above, we shall bear absolutely no liability or responsibility for the consequences. This Users Manual describes the functions of each command and their actual operations. Before you use the ColorGenius, thoroughly read and understand this manual. Also place this manual nearby so that you can refer to it whenever necessary.

## **This manual contains the following sections:**

### **Chapter 1 Introduction to ColorGenius**

This chapter describes an outline of the functions in ColorGenius and the procedures for installing ColorGenius, and explains general concepts necessary when handling digital images.

### **Chapter 2 Operation environmental settings**

ColorGenius can be implemented in either of the following three environments: a client/server environment in which the FT-S5500 is connected to two computers (a client and a server), a multi-client/server environment in which multiple clients are connected to one server, and a standalone environment in which a single computer is used. The first part of this chapter illustrates the setting procedures for the network needed when implementing the ColorGenius in the client/server environment with the FT-S5500 or the multi-client/server environment. The latter part of this chapter describes the default setups and calibration settings of ColorGenius necessary in both standalone and client/server environments.

### **Chapter 3 Understanding basic setup procedures**

This chapter explains the fine adjustment procedures for images using Easy Setup in both the standalone and client/server environments.

With the Manual Setup, you can make precise parameter settings (types and values) for setup commands to achieve a refined-touch image processing. This chapter explains the commands and tools and their available usage in the Manual fine adjustment.

## **Chapter 4 Utilizing convenient functions**

This chapter explains the usage of various customizing functions, and the “recall previous setup” command, which is useful if you want to reuse the previous setup parameters. It also explains the setup procedure using the optional compound tray.

## **Chapter 5 Make Profile Tools**

Make Profile Tools is an utility software to create profiles which are used when ColorGenius inputs or outputs images from/to other devices. This chapter explains how to use ColorGenius Tools.

## **Chapter 6 Line Art Input**

ColorGenius allows you to input line art images in either transparent media or reflective media from the FT-S5500. This chapter explains the procedure for inputting line art images from the FT-S5500.

### **Note**

- This manual is basically intended for those using Mac OS 9.1. Those using Mac OS X require some different instructions and those instructions will be written additionally.
- This manual is basically intended for those using FT-S5500. Those using FT-S5000 require some different instructions and those instructions will be added.

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# Chapter 1 Introduction to ColorGenius

## 1. What is ColorGenius?

ColorGenius is an image processing software package that allows you to convert RGB images imported with a scanner into CYMK/grayscale images after adjusting the color tone and color density of images for optimum-quality output.

You can set up ColorGenius to output images as you want them to be. This is achieved simply by selecting the original input image type, the finished image style, and the output image mode. The Manual fine adjust command enables more accurate adjustments to be made, giving images a refined touch.

By using ColorGenius with our scanner, the FT-S5500, efficient scanning operations are achieved in a client/server environment.

Image files in the TIFF, EPSF and JPEG formats, captured (and saved) with hardware other than connected scanners, can also be imported directly to ColorGenius.

The features of ColorGenius are described in the following.

### **Easy Setup**

You can easily set ColorGenius by selecting the desired item for the following three options: the original image type to be input, the finished image style, and the output image mode.

The first option can be set by selecting either [General], [Portrait], [Machines], or [Scenery]. In [Portrait], more detailed settings can be made, i.e., either [Flesh intensive (Light)] or [Flesh intensive (Dark)] can be chosen. For the second option, you can choose from ten alternatives, such as [Bright], [Soft], [High Contrast], etc.

### **Manual fine adjustment**

With the Easy Setup, setup commands can be established simply by selecting keywords for the mode, type and finish of the individual images. The Manual fine adjustment, in contrast, allows you to create more precise setup commands (to determine suitable values and strengths for each parameter, i.e., color correction or sharpness) to be used for individual images.



## **AI Setup**

ColorGenius contains a feature called AI Setup, with which suitable highlight and shadow points in input images are automatically analyzed and set. In addition, common color components in the highlight and shadow areas can be analyzed and the color balance of entire images can be adjusted by removing the cast color.

In the Manual fine adjust mode, the settings for AI Setup can be corrected. Note that it is possible to perform the AI Setup without spoiling the impressions of the high/low key originals, and eliminating the large portions of cast in faded color originals can be achieved.

## **Color Mode Conversion**

RGB images input from a scanner are converted to CMYK/grayscale images. With CMYK images, it is possible to set the halftone dot sizes (%) at highlight/shadow points and the entry point density for K separation (K-shift). You can also set the ICR function and the UCR/UCA function. With grayscale images, it is possible to set mixing ratio to be applied when converting the R, G, and B tonal values for each pixel to grayscale values.

## **Line Art Input**

Line art (one-bit images), such as letters and logos, can be input to ColorGenius only when the FT-S5500 is connected. It is possible to input line art at any selectable resolution, and the threshold levels that distinguish between white and black portions of an image can be set individually according to the density of the original.

## **Calibration**

If you use different types of scanners, the color of the input images will differ even when scanning the same original.

In the same manner, if you use different types of monitors, the color of the images displayed on the monitor may differ even when using the same image file.

ColorGenius uses the ColorSync function of Mac OS, and this makes it possible to ensure color consistency between the original and the image displayed on the monitor. With this function it is possible to simulate the

final image color on the monitor, output the proof data from the color printer, and receive the RGB image from the scanner (excluding the FT-S5500) or the digital camera, with image color maintained.

### **Adjustment of parameters within the image processing command**

Commands for adjusting the color/sharpness in ColorGenius will allow you to generate miscellaneous effects in images by setting the parameters (appropriate content/amount) precisely.

By selecting [Setup parameter editing] , image processing settings, which match with the operating environment and the desired finishes, can be made by adjusting the parameter settings to determine the appropriate content/amount.

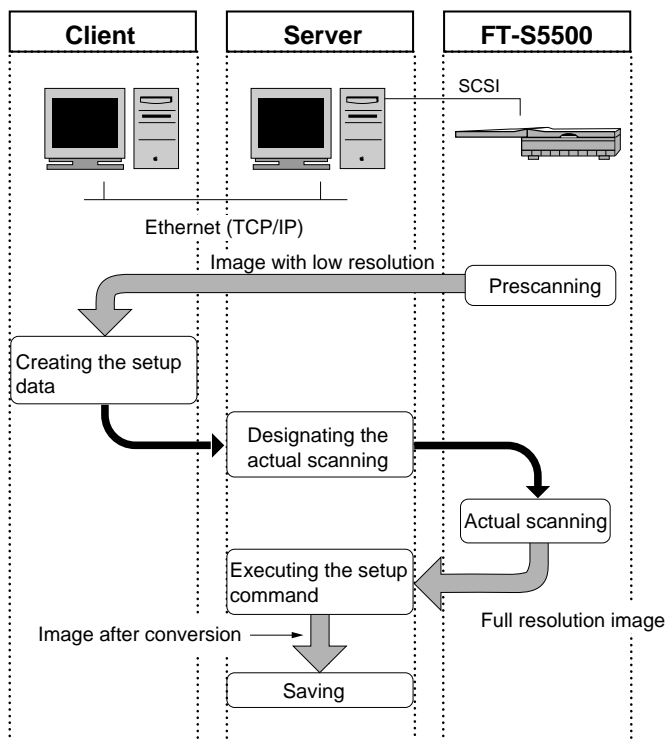
## **2. ColorGenius Operating Environment**

ColorGenius can be implemented in one of the following operating environments.

### **2.1 Client/Server Environment**

A Client/Server Environment is an operating environment in which two connected computers are used; one computer is designated as the server and the other as the client. In this client/server environment, ColorGenius implements scanning/setup operations for the image using the FT-S5500 scanner connected to the server through a SCSI interface.

After an original is pre-scanned with the FT-S5500, the client will first receive the image input via the server, and will then start the setup procedure on that (low-resolution) image. After the setup procedure for the image with low resolution is completed, a file containing the setup command and trimmed area data is transmitted to the server. Upon receiving this file, the server receives command from the client to start the actual scanning of the original with the FT-S5500, to execute the setup command for that (full-resolution) input image, and to save the image data in a specific location of the server.

**Setup sequence****\*Setup**

In ColorGenius, the setup involves a series of operations, beginning with the setting of the crop/rotation/color tone/color density/sharpness parameters and ending with the output of information to a file after conversion of an RGB input image to a CMYK/grayscale image.

**Client**

The client is a platform where the setup data is created. Images displayed on the client's monitor are low-resolution images (prescanned and enlarged). Therefore, the client allows simulations to take place before the actual scanning of (full-resolution) images on the server.

**Server**

The server is a platform to which images are input from a scanner at their full resolution. The setup command saved in the setup file for an image is executed on that image by the server. Each image whose setup is completed is saved in a specific location of the server.

### **Scanner (FT-S5500)**

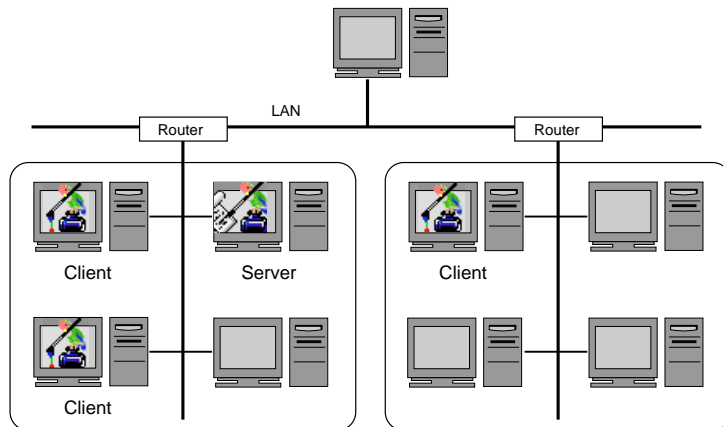
The FT-S5500 is the only scanner that can be connected with ColorGenius in a client/server environment.

As mentioned above, in a client/server environment, heavily-loaded operations, e.g., actual image input and setup command execution, are implemented on the server. Since the client is released soon after transmitting the setup file to the server, the setup operations for the next original can be commenced on the client while scanning is being performed on the server.

The execution of consecutive scanning operations is also possible in a client/server environment by implementing the execution of continuous setup operations for multiple pre-scanned originals on the client and transmitting the created setup files in a batch to the server. This method is called “batch scanning”. In batch scanning, the FT-S5500 implements the scanning not in the order the server receives files but in the order that allows the most effective scanning to take place, that is, through an analysis of the location/type/setup data contents of each original.

## 2.2 Multi-client/server environment

In the client/server environment described above, one of two computers is designated as the server and the other as the client. On the other hand, in a multi-client/server environment, several clients can be connected to a single server. Operational procedures in this environment are almost the same as in the client/server environment.



## 2.3 A client/server environment within a single computer

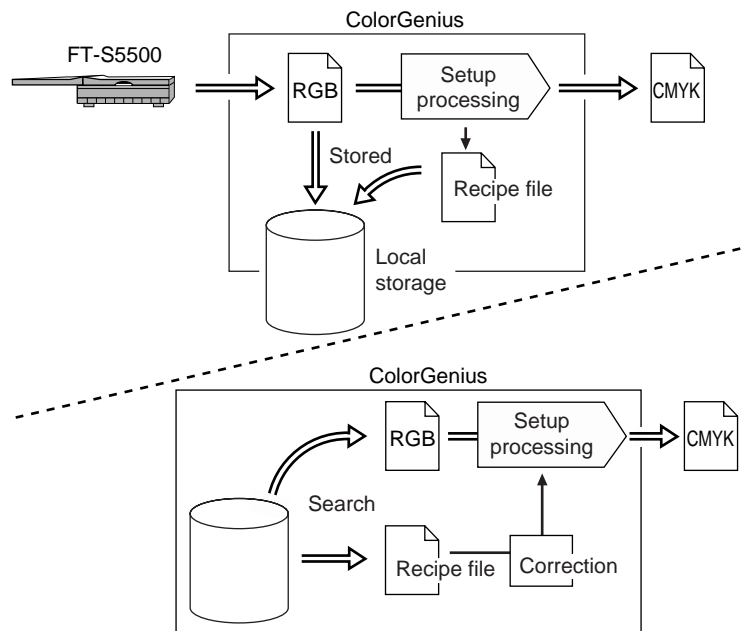
In a single computer, a “dummy” client/server environment can be established by running both client and server applications. The sequence concerning the setup operations on a single computer is basically the same as that for two computers. Background scanning and batch scanning are also available, Although background scanning and batch scanning are also available, slowdown/standby problems may occur on the client side if the computer’s capacity is insufficient. This is because a single computer performs both client and server operations.

## 2.4 Server assistant

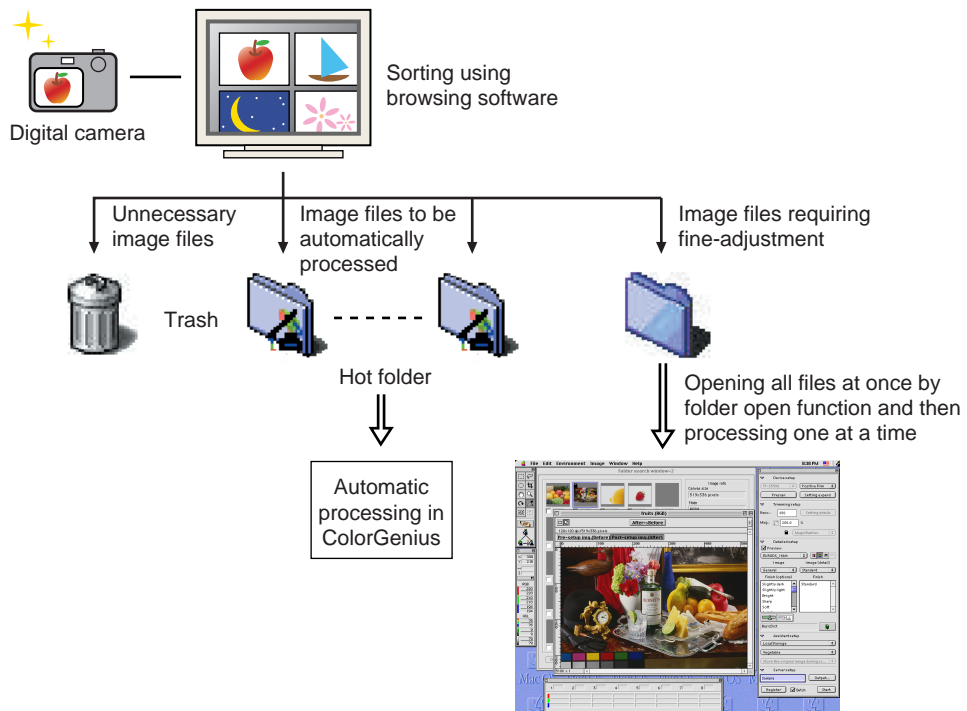
Server assistant is the software that supports the handling of image files that were scanned but not processed. The following functions are available after the server assistant is installed in a Macintosh already equipped with a server application.

- Storing and reusing RGB images

This function enables you to store the RGB images that were scanned but not processed in local storages (simple database) and to reuse the stored images. After storing these scanned images, the images can be reused without re-scanning their originals. When storing the images, keywords can be attached to them. The stored images can be easily searched using the keyword that is attached to each image.



- Automatic processing using a hot folder  
This function enables you to perform image processing automatically by simply moving RGB images to a specific folder (hot folder) that has been assigned a recipe file that contains a processing method. This function is useful when images photographed with a digital camera or some other such device are batch processed.
- Opening all image files in a folder at once (folder open function)  
This function enables you to open all RGB images in a specified folder at the same time; it is useful when manually processing images photographed with a digital camera or some other such device.



## 2.5 Standalone Environment

In the standalone environment, only the client is used. You cannot connect a scanner or the server assistant to a computer in this environment; only image files can be opened.

### 3. Image Types and Resolutions

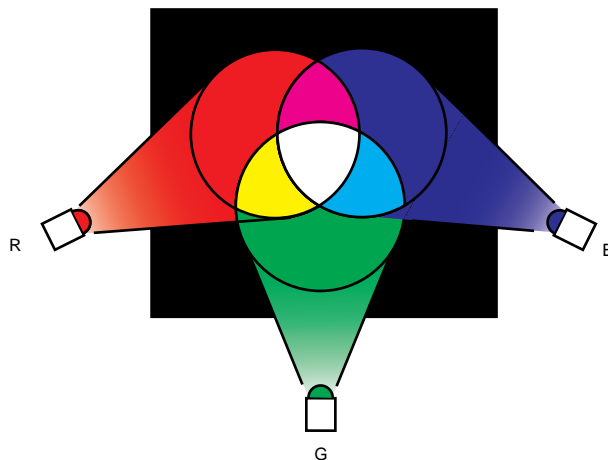
Knowledge on color characteristics/properties is essential when dealing with digital images. It is also important to have general knowledge on pixels and resolutions for digital images.

#### 3.1 Color Models

Several color models have been investigated to indicate colors numerically. The RGB/CMYK/HSL/L\*a\*b\* models are typical examples. An understanding of the theories behind the four color models is important before adjusting colors on images and/or converting input RGB images to other mode images using ColorGenius.

##### RGB Model

Most of the colors existing in the natural world can be reproduced by mixing and projecting the three red(R)/green(G)/blue(B) lights in various strengths. When each of these three colors applies an equal value of brightness, the white color is produced. When each of these applies a value of brightness of 0 (no brightness), the black color is produced. In this sense, in the RGB model, the method of producing color is called an “additive process” since colors are created by combining (mixing) different strengths of red, green, and blue lights. The RGB model is widely adapted to computer monitors and scanners.

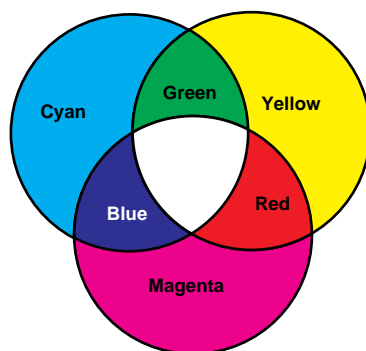




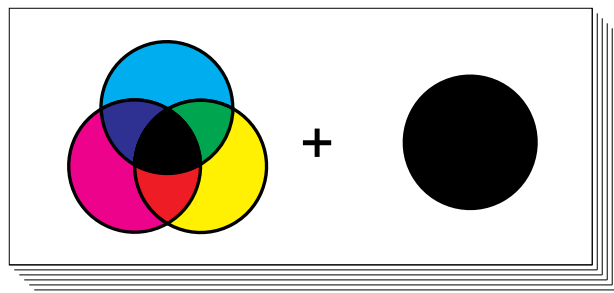
## CMYK Model

When a specific color component (e.g., red) is subtracted from white light, the color changes to another color (e.g., cyan). Other examples are as follows: subtracting green results in magenta and subtracting blue results in yellow. Subtracting all of the color components from white light results in black. In this sense, this method of creating color is called a “subtractive” process.

By piling transparent color layers over white paper, a new color is created since a specific color component (in the incident light) is absorbed by those piled layers.

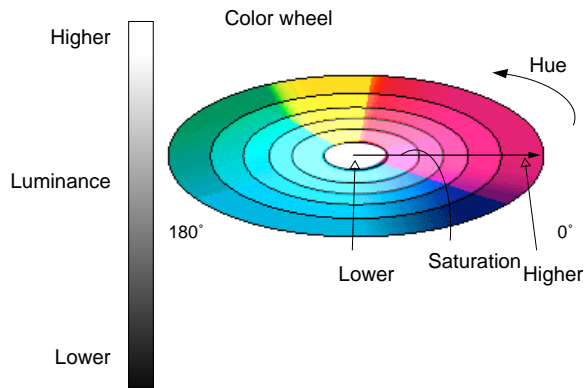


The CMYK model is widely used to specify the inks for printed material; color images are analyzed into four color separations. Four color inks (cyan, magenta, yellow, and black) are used for printing. Theoretically, the black color can be created by mixing cyan, magenta, and yellow; however, pure black cannot be created because of the density discrepancies between the three ink colors or mixture with foreign matter. Therefore, we also use black ink for printing.



## HSL Model

The HSL color model describes colors with the three elements of “hue”, “saturation”, and “luminance” based on the perceptions of humans.



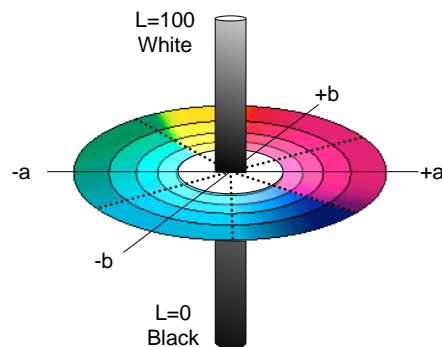
Hues are arranged around a standard color wheel, where each degree on the wheel (from 0 to 360 degrees) identifies a unique color, such as red, green, etc.

Saturation refers to the strength of a color from 0% (gray) to 100% (pure).

Luminance refers to the brightness of a color from 0% (black) to 100% (white).

## L\*a\*b\* Model

The L\*a\*b\* color model was standardized as an international color specification by the Commission Internationale de l'éclairage (CIE) in 1976. This model allows you to reproduce stable colors at any time independent of any monitor, scanner and/or I/O device.



In the  $L^*a^*b^*$  model, the  $L^*$  represents the luminance of an image ( $L^*=100$  represents white and  $L^*=0$  represents black) and both  $a^*$  and  $b^*$  represent all of the information on the hues and saturations. A positive direction (+) for the  $a^*$  value represents magenta while a negative direction (-) represents green. A positive direction (+) for the  $b^*$  value represents yellow, while a negative direction (-) represents blue. The larger the tonal value (absolute value), the higher the saturation and the smaller the tonal value (absolute value), the lower the saturation.

## 3.2 Pixels and Resolution

### Pixels

Images processed by a computer are made up of aggregated dots, each of which is called a pixel. The more image information a pixel has, the higher the potentiality for image reproduction. For example, if an image is based on the RGB model, the number of colors capable of being rendered depends on how many steps of each color the hardware can generate.

With the FT-S5500, an image can be input in either 8 bits/pixel (24-bit color) or 16 bits/pixel (48-bit color). In the former case, 256 (2 to the 8th power) steps can be expressed, and this means that 16.7 million (256 to the 3rd power) colors or more can be expressed with the FT-S5500. By applying 48-bit color, grand-scale colors (2 to the 48th power) can be expressed.

### Image Resolution

The image resolution indicates the fineness of pixels, by which images are created, and is expressed in pixels per inch (ppi) or dots per inch (dpi). The higher the image resolution, the more precisely the colors and shapes of an input image can be reproduced.

### Image Resolution and Image Size

Since the number of pixels in an image input from a scanner or retrieved from a file is predetermined, the image resolution can be changed by varying the image size. More specifically, enlarging the image size results in a decrease of the resolution since the size of each pixel is enlarged. On the other hand, reducing the image size results in an

increase of the resolution since the size of each pixel is reduced.

If the resolution of an image is decreased from 300dpi to 150dpi, the image size becomes twice (both horizontally and vertically) the size of the previous one. On the other hand, if the resolution of an image is increased from 150dpi to 300dpi, the image size becomes half the size of the previous one.

If the image resolution of an image is increased without changing the image size, new pixels are generated within the image. As a result, the image quality is decreased and the image may become unclear. On the other hand, if the image resolution of an image is decreased without changing the image size, some pixels are deleted. As a result, although this process is useful for decreasing the digitized dimensions of the image file, careful consideration of the image quality is necessary.

### **Relation between the image resolution and digitized dimensions of a file**

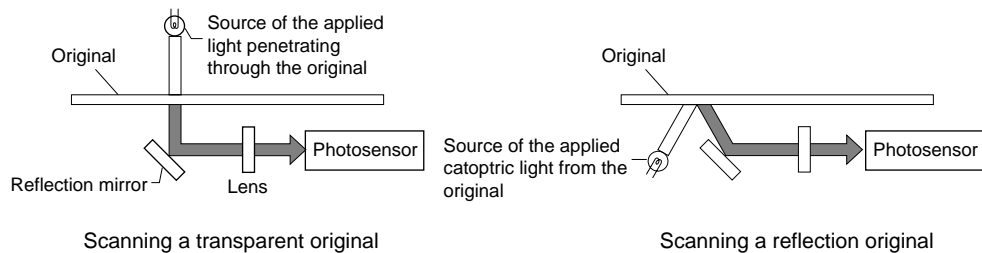
The digitized dimensions of an image file is proportional to the resolution of the image when the image size is fixed. As an example, an image with 300 dpi resolution has a digitized file size four times as large as the same size of image with 150 dpi resolution.

## **3.3 Types of originals that can be input**

Originals capable of being input to ColorGenius are categorized into four types: positive films (transparent originals), negative films (transparent originals), reflective originals (photographs, prints, etc.) and printed material (reflective screened originals). In addition, line art images (1-bit images) of either the reflective type or transparent type can also be input provided the FT-S5500 scanner is utilized.

### **Transparent/Reflective Originals**

Color photography originals are divided into two types: transparent originals (films, etc.) and reflective originals (prints from a photographic film, etc.). In the former case, an image is captured by reading the applied light penetrating through the original. In the latter case, an image is generated by reading the applied catoptric light from the original. The FT-S5500 scanner can perform scanning for both types of originals.



### Positive Conversion of Negative Originals

ColorGenius has a feature to convert negative images into positive ones. This positive conversion is executed by the conversion parameter file called “Nega AI Parameter File”. The parameters have been preset corresponding to specific commercial films so as to produce the optimum conversion results. By using the “Negative AI film parameter editing” function, these default parameters can be changed and new parameter settings for conversion can be created.

### Defocusing the dots on printed material

Reflective originals can be divided into two types: originals represented in a continuous tone, such as photographs, and originals represented by dots such as printed material.

With originals represented by dots, if the scanning is executed at full resolution, the dots may remain in the input image as they are. In such cases, you may decide to defocus the dots by scanning and inputting the image using the defocus filter and acquire a smoothed image. Selecting “Printed Material” from the “Original” pull-down menu will allow you to scan and input images using the defocus filter.

### Line Art

With the FT-S5500, not only color/grayscale images with tones but also line art (characters, logos, etc.) can be scanned and input. Like with color photography originals, both transparent originals (films) and reflective originals (mechanicals) can be scanned.

## 4. Installation

The procedure for installing ColorGenius is described in the following. Installation should be performed separately on the server and client in a client/server environment.

### 4.1 Cautions to be observed before installation

With the use of the Installer contained in the ColorGenius CD-ROM, you can install the following.

- “ColorGenius” as the client application.
- “Server” as the server application.
- “Assistant” as the server assistant application.
- “OtherTools : MakeProfile (for FT-S5500) : MakeProfile” as Profile Customization tool tools.
- Folders which contain files necessary for ColorGenius.
- “FT-S5500 Plug-in”, an import plug-in module with which the images scanned with the FT-S5500 can be used in PhotoShop. (The FT-S5500 Plug-in is only installed when Mac OS 9.X is used.)
- “FT-S5500 Maintenance” folder, in which maintenance tools for the FT-S5500 are included.

Be sure to install all of the files on the server by selecting “easy installation”. Server (a server application or server assistant) is not necessary on client machines, but it will not interfere with client operations if all files in Server are installed on client machines by selecting “easy installation”.

### Recommended Macintosh Environment

For best results when using ColorGenius, a Power Macintosh with the following specifications is necessary.

Computer:	Power Mac G3 or higher (Recommended : Power Mac G4 or higher)
System software:	Mac OS 9.1 or higher, Mac OS X 10.1 or higher
Hard disk:	5 GB, or five times the input image size required for storing the scanned image, is recommended. (Minimum 500 MB)

- Memory: 512 MB or more is highly recommended when using only one machine in a client/server environment.  
(Minimum requirement is 286 MB) \*1 \*2  
For a dedicated server machine, 384 MB or more is recommended. (Minimum requirement is 222 MB)\*1\*2  
For a dedicated client machine, 384 MB or more is recommended. (Minimum requirement is 160 MB) \*1  
If the machine only incorporates the Plug-in application, 224 MB or more is recommended.  
(minimum requirement is 196 MB)  
\*1 .... Using deMoire (option) requires another 32MB in the memory.  
\*2 .... Using DotFinder (option) requires another 32MB in the memory.
- CD-ROM drive: Built-in, or peripheral.
- Display: 21 inch full-color display
- Display Card: A display card (supporting monitors 17 inches or larger) with full-color (at least 32768 colors) support.

**Note**

- ColorGenius incorporates a network software license protection function, so it not possible for multiple Macintosh computers on the network to simultaneously use a single copy of ColorGenius which has been registered with only one serial number. Please purchase the desired number of ColorGenius software copies if you need to run more than one instance at the same time.
- Because the configuration of the recommended system varies in accordance with the model change of the Macintosh or upgrade of the OS, for the detailed information contact the personnel in advance.

## 4.2 Installation Procedure

Be sure to close all applications, if any are open, before commencing the installation procedure.

Select an OS (either Mac OS 9.X or Mac OS X) on which the ColorGenius is to be used, and start up the computer on the selected system.

- 1) Start up the computer and confirm the display of the desktop window.
- 2) Insert the installer CD into the CD-ROM drive.
- 3) Double click the “ColorGenius” icon.
- 4) Double click the “ColorGenius Installer” icon.

**Note**

In order to install the ColorGenius in Mac OS X, you must login at an administrator level. When installing the software, log into the Macintosh using the administrator's privileged user name. (The user name specified during the first start up of Mac OS X becomes the administrator name).

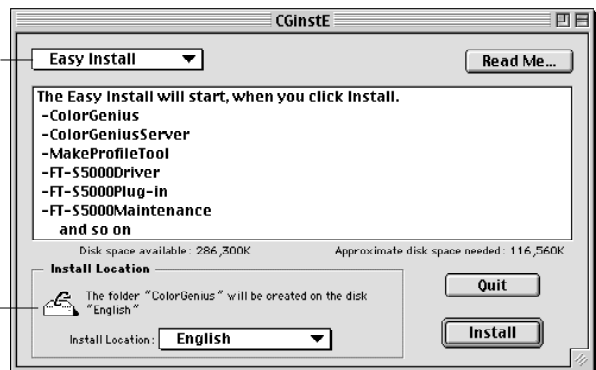


- 5) Click “Continue”.

The “ColorGenius Installer” window is displayed .

Select how to install ColorGenius.

Select the destination where the files of ColorGenius are to be installed.





- 6) Click “Install” after selecting how to install ColorGenius and its destination, to begin the installation process.

The dialog box, in which you can specify where to install the “FT-S5500 Plug-in” (module for inputting scanned images compatible with PhotoShop), appears.

- 7) Designate the “Import/Export” folder in the PhotoShop “Plug-ins” folder, and then click on “Select”.

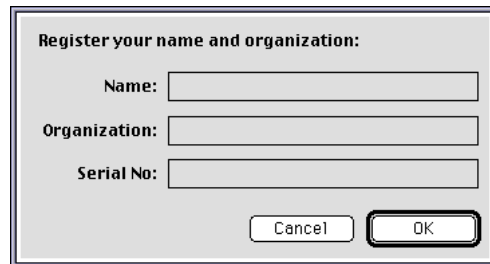
A dialog box that indicates the download status is displayed on the screen.

**Note**

The dialog box shown below appears only on Mac OS 9.X.



- 8) After the installation process is completed, a confirmation dialog box is displayed on the screen. Click “Quit” to quit the installer.
- 9) Double click the “ColorGeniusEX” (client application) icon. Enter the “Name”, “Organization” and “Serial No.” in the opened registration dialog.



The serial number is noted on the CD-ROM case.

- 10) In the same manner, double click the “Assistant” (Server assistant) and “Server” (Server application) icons.

Enter the “Name” , “Organization” and “Serial No.” in the opened registration dialog.

### **Initializing the ColorGenius Preference file**

ColorGenius has memorized the previously used environment in its ColorGenius Preference file in the Preferences folder (System folder). At any time when you re-install the application for some reason or delete the previously used profile, it is necessary to initialize this ColorGenius Preference file.

#### **To initialize the ColorGenius Preference file:**

Launch ColorGenius, the client application, while simultaneously holding down the Command and Option keys. The message of “Preference file is built again” appears. Clicking on “OK” will initialize the data in the ColorGenius Preference file, and then ColorGenius is launched.

<b>Note</b>
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Be sure not to delete the profiles installed when installing ColorGenius, because a profile will be loaded when launching the application, after the ColorGenius Preference file is initialized.

## Chapter 2 Operation environmental settings

ColorGenius can be used in the following environments.

- Client/server environment
- Client/server environment on one computer (hereafter referred to as the “Foreground/background environment”)
- Multi-client/server environment
- Server assistant

<b>Note</b>
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One of the following environments is required when using the server assistant.

- Client/server environment
- Foreground/background environment
- Multi-client/server environment
  
- Standalone environment

The operating environment setting depends on the configuration of the machines used at your site. Choose the environment best suited to your equipment and needs.

To use ColorGenius in the client/server environment or the multi-client/server environment, it is necessary to connect the client and server computers and perform the appropriate settings.

The first half of Chapter 2 describes the network setup and the default setup regarding FT-S5500 operation. The latter half explains the ColorGenius default setup and calibration method.

- If your ColorGenius will be used in the client/server environment, please refer to “1. Client/server environment setup”.
- If your ColorGenius will be used in the Foreground/background environment, please refer to “2. Foreground/background environment”.
- If your ColorGenius will be used in the multi-client/server environment, please refer to “3. Multi-client/server environment setup”.
- If your ColorGenius will be used in the server assistant environment, please refer to “4. Server assistant”.
- If ColorGenius is used in the standalone environment. Refer to only “6. ColorGenius default setup” and “7. Color calibration setup”.

## Memory requirements for the machine and memory allocation for applications

**Note** For Mac OS X, an application memory cannot be allocated. Therefore, the following operations are not necessary for Mac OS X users.

In ColorGenius, the default RAM size allocated for “Preferred Size” of ColorGenius Client (client application) and ColorGenius Server (server application) is the same amount as “Suggested Size”.

Since the ColorGenius Server performs calculations when images are scanned by the FT-S5500, when its setup parameters are set, and while saving image data temporarily into the ColorGenius Server’s application memory, sufficient RAM for handling this data is required.

If insufficient physical memory (RAM) is allocated to the ColorGenius Server application, this will cause a memory shortage when scanning images or setting up image parameters. If the ColorGenius Server runs short of memory, the deficit will be secured by creating a file on the scratch disk and then saving the image data temporarily into that file. However, this situation should be avoided if at all possible, because creating a file on a scratch disk causes the ColorGenius Server to frequently access the disk, reducing the speed of processing. This situation not only slows image parameter setup (since disk reads and writes are far slower than those to RAM) but will also periodically pause scanning from FT-S5500, due to the scanner’s “start & stop function”, resulting in extremely slow scanning operations.

If the ColorGenius Client’s RAM allocation is low, the prescanned images display speed may be reduced.

Moreover, in general, Macintosh machines use approximately 32 MB of memory for the operating system (OS). Therefore, the amount of memory to be installed in each Macintosh should be the sum of the memory to be allocated to the applications to be run, and the memory needed for the OS. Taking the above into account, install memory in the following minimum amounts and application allocations.

**When both Server and Client are run on one Macintosh (in a client/server environment)**

- Client application  
Recommended 64 MB.
- Server application  
Recommended 96 MB.
- Server assistant  
Recommended 30 MB.  
286 MB or more memory is required in total, including a maximum of 96 MB (approx.) for the OS.

**When the Server and the ColorGenius Client are run on separate Macintoshes (in a server/client environment)**

- Client application  
Recommended 64 MB.  
96 MB or more memory is required in total, including the 32 MB for the OS.
- Server application  
Recommended 96 MB.
- Server assistant  
Recommended 30 MB.  
222 MB or more memory is required in total, including a maximum of 96 MB (approx.) for the OS.

**Note**

Open the control panel/memory of the Mac OS, and turn OFF the Virtual memory.

## 1. Client/server environment setup

To use ColorGenius in the client/server environment where two computers are used, it is necessary to connect these computers to the network with a cable. In addition, the following setup information must be entered in order to link the server application on the server computer and the client application on the client computer.

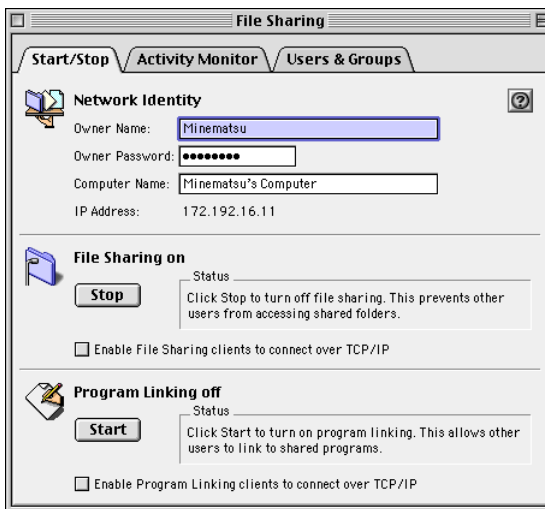
### 1.1 Server setup

In order to connect the client and server computers, the following setup information must be entered on the server computer.

- Network ID
- TCP/IP
- Scratch disk
- Disk for saving scanned images

#### Network ID setup (For Mac OS 9.1 users)

- Select “File Sharing” in the control panel.
- Fill in the columns for “Owner Name” and “Computer Name”. The “Computer Name” entered here will appear when connecting to the server computer.



- Select “Quit” from the File menu.

## Setting up TCP/IP

### TCP/IP background

ColorGenius transfers setup data or image data between the client and server computers using TCP/IP on an Ethernet network.

**Note** When both client and server applications run on a single computer, TCP/IP setup is not necessary.

Before utilizing TCP/IP, you must obtain an IP address for each Macintosh that will run the Server Application, Client Application.

Most Macintosh users are familiar with AppleTalk, a network protocol that ships with every Macintosh and is used whenever you connect to an AppleShare file server or print to a LaserWriter. TCP/IP is a protocol that is commonly used on cross platform networks or on the Internet. Like AppleTalk, it allows applications to exchange data over a network.

Every computer on a TCP/IP network must have a unique address, known as an IP address. An IP address consists of four numbers (each in four bits) separated by periods, for example, 192.168.6.187.

Subnets have a function on a TCP/IP network similar to that of zones on an AppleTalk network. A group of computers connected to the same TCP/IP network is known as a subnet. The subnet mask indicates how many digits of the IP address will change from computer to computer. Organizations with a subnet mask of 255.255.255.0 will only change the last number in each IP address, while ones with a subnet mask of 255.255.0.0. will change the last two numbers.

Routers play a similar role on TCP/IP and AppleTalk networks: they allow your computer to communicate with computers on other networks. The router address (also known as the gateway address) is the address that your computer will use when it needs to communicate with a computer not on the local subnet.

## Obtaining an IP addresses

How you obtain the IP addresses for computers on your network depends

on whether your organization currently uses TCP/IP and whether you have or plan to have a direct connection to the Internet.

- **If your business already uses TCP/IP on its network:**

Obtain the IP addresses and TCP/IP configuration instructions from your network administrator.

- **If your business is not using TCP/IP now, but has or plans to have an Internet connection:**

Ask your Internet service provider for a range of IP addresses and the appropriate TCP/IP configuration information.

- **If your business does not use TCP/IP now, and is not connected to the Internet:**

A range of IP addresses has been set aside for organizations not connected to the Internet. This range of addresses begins with 192.168 (class C). Organizations can then assign the other two numbers to each of their computers as needed. A valid address, for example, is 192.168.1.10. If you fall into this category, use the following to configure TCP/IP on your network:

IP Address (Server application) for a Macintosh that will run the Server application:

192.168.1.1

IP Address (Clients application) for a Macintosh that will run the Client application:

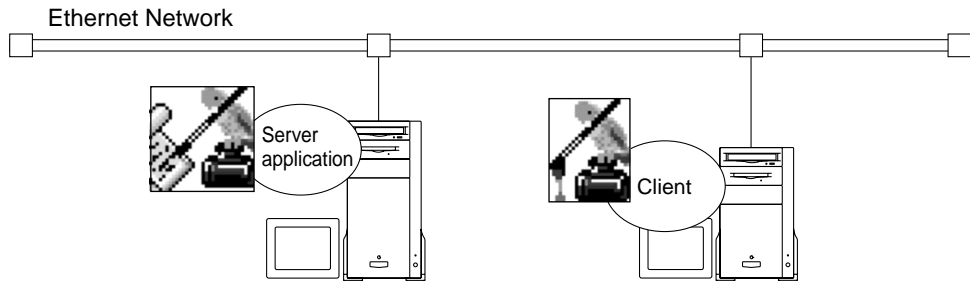
192.168.1.2, 192.168.1.3, etc.

(For each additional machine to be configured, increase the last number of the IP address by one.)

Subnet mask:

255.255.255.0





Example)

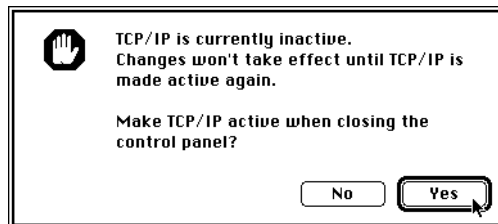
IP Address	192.168. 1.1	192.168. 1. 2
Subnet Mask	255.255.255.0	255.255.255. 0

**Note**

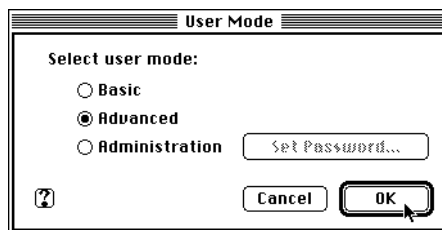
Before attempting the configuration below, please consult your network administrator. The following instructions are only for networks not currently using TCP/IP, which will not be connected to other networks, such as the Internet, in the future. In this procedure, the IP address of the Server application Macintosh is set to 192.168.1.1 and its subnet mask is set to 255.255.255.0 (class C). The IP address of the Client application Macintosh is set to 192.168.1.2 with its subnet mask set to 255.255.255.0 (class C). If your network administrator sets a different TCP/IP configuration, follow that designation.

### For Mac OS 9.1 users

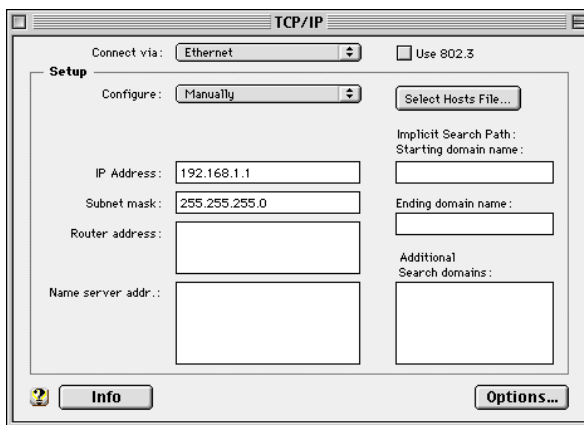
- 1) Open the TCP/IP Control Panel. If TCP/IP is not used, the following dialog box appears. Click "Yes".



- 2) From the "Edit" menu, select "User Mode" and set the user mode to "Advanced". Click "OK" button.

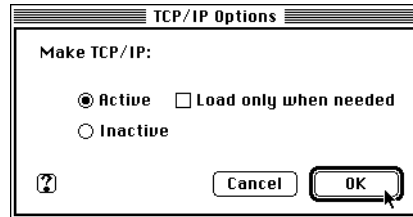


- 3) Choose your current network connection, for example, "Ethernet", from the "Connect via" pop-up menu.



- 4) Select "Manually" from the "Configure" pop-up menu.
- 5) Enter your IP address in the "IP Address" field in one-byte characters.
- 6) Enter your subnet mask (255.255.255.0) in the "Subnet mask" field in one-byte characters.
- 7) Enter your router address in the "Router address" field. If you have no TCP/IP router on your network, leave this field blank.

- 8) Click the "Option" button. Make sure that "Load only when needed" is unchecked. Click "OK" button.



- 9) Close the TCP/IP Control Panel. Click "Save" when the confirmation dialog appears. You do not need to restart your Macintosh.

### For Mac OS X users:

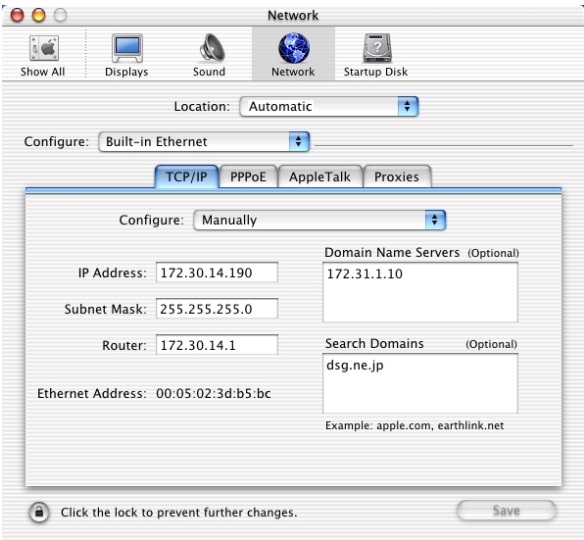
- 1) Click the "System Preference" icon on the dock.



- 2) Click the "Network" icon.



- 3) Set up TCP/IP. The setup procedure is same as the TCP/IP setup for Mac OS 9.1.



- 4) Click the “Save” button.

**Scratch disk setup**

In the server application, prescanned or processed image data are temporarily saved to a disk, called a scratch disk.

Set a server volume for the scratch disk.

While it is possible to use a mounted volume as the scratch disk (a volume of a computer on the network), processing time will be significantly increased. We therefore recommend that you use a server volume as the scratch disk.

Select “Preference” from the Preferences menu in the server application to setup a scratch disk.



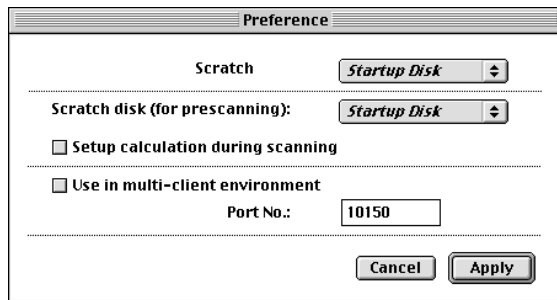
**Designating a RAM disk as a scratch disk**

With the ColorGeniusServer, prescanned image data are temporarily saved to disk. Setting a RAM disk as the scratch disk (for prescan) enables you to increase the write speed for the prescanned image, reducing scanner pausing, thus improving the speed for transmitting the prescanned image data to the client machine and displaying the image on

its monitor. If you have installed enough memory in your Macintosh, and 140 MB or more RAM is left unallocated (excluding 32 MB for the OS), then set this 140 MB or more up as a RAM disk.

**Note**

When you set up a RAM disk as a scratch disk, however, it is necessary to set the size larger than the prescanned image data maximum. With the 288 dpi resolution setting, the prescanned image data size can approach 140 MB (approximate maximum). You should therefore set the RAM disk for 140 MB or more memory for use as the scratch disk. If you allocate a portion of the RAM disk to scratch disk and the allocated memory is smaller than the prescanned image data, this will cause a “disk full” error.

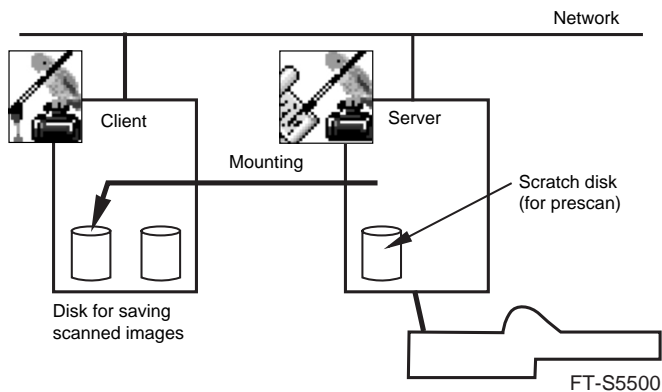


### Designation of a disk for saving scanned images

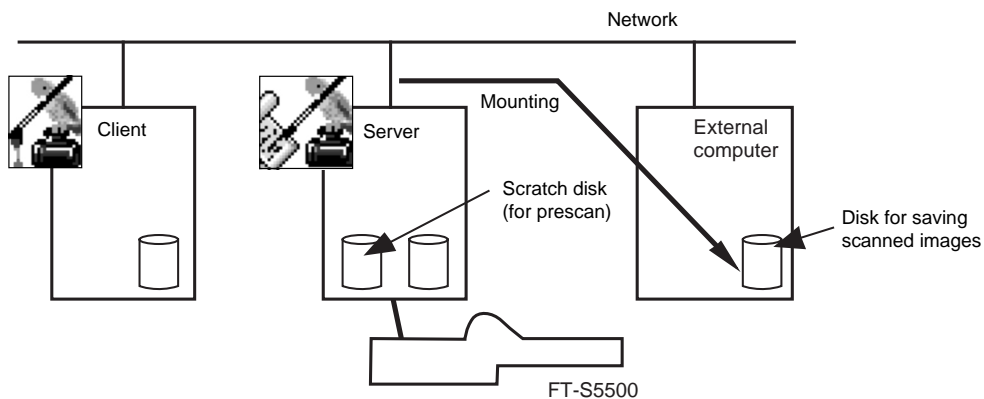
Scanned image files will be saved to the designated server volume or volume mounted on the server (a volume accessible from the server computer).

If you wish to save scanned image files to a computer volume on the network, mount the volume beforehand.

Example 1) When you want to save scanned image files to the client computer:

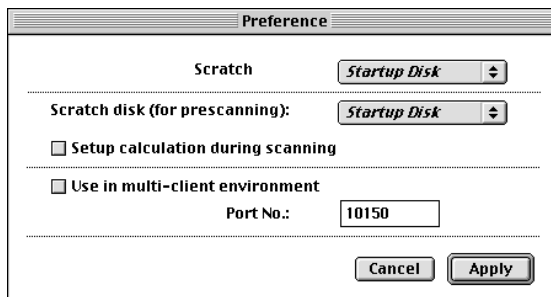


Example 2) When you want to save scanned image files to an external computer on the network (GTP):



## Server application setup

- 1) Start up the server application and select “Preference” from the Preferences menu.



- 2) Set the port number.  
Normally, it is not necessary to change the factory assigned default port number. If, however, the assigned port number has already been used for another network application, change the port number.
- 3) Click the “Apply” button..

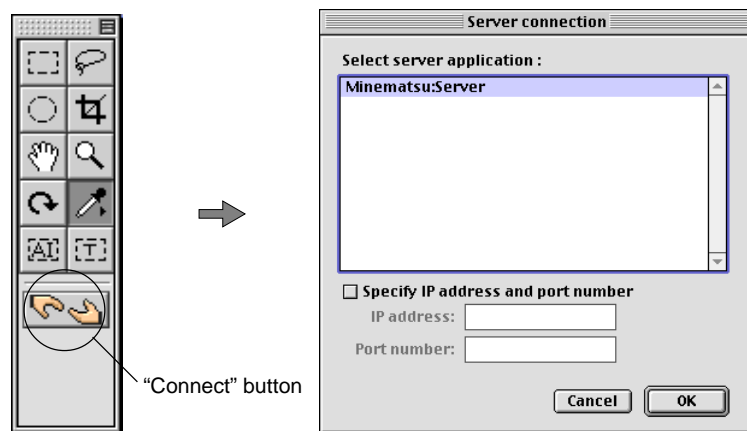
## 1.2 Client setup

The following setup information must be entered on the client computer in the same manner as in “1.1 Server setup”.

- Network ID
- TCP/IP

### Setup when connecting to the server computer

The following dialog box will appear as the client application starts up or when the “Connect” button on the tool palette is clicked.



If the server application and the client application exist either in the same Macintosh or the LAN sub-network, this information appears in the upper box.

If the server computer’s router address differs from the one for the client computer, place a check in the “Specify IP address and port number” check box and then enter the server’s IP address and port number.

**Note** Enter the same port number as the one set in “Preference” in the Preferences menu.

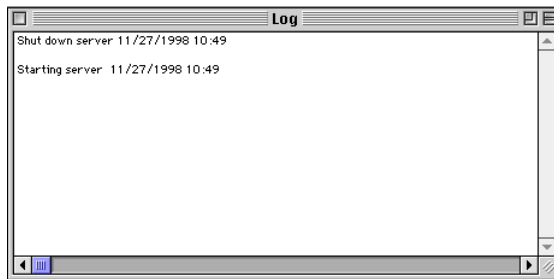


### 1.3 Linking the client and server computers

With the procedure explained above, you have now completed the setup for the server and client machines to use the network. Next, this section describes how to launch the ColorGenius server and client applications on the respective computers and link them together.

- 1) Launch the “Server” application in ColorGenius from the server machine.

When the application is properly launched, Log Window appears on the server monitor as shown below.

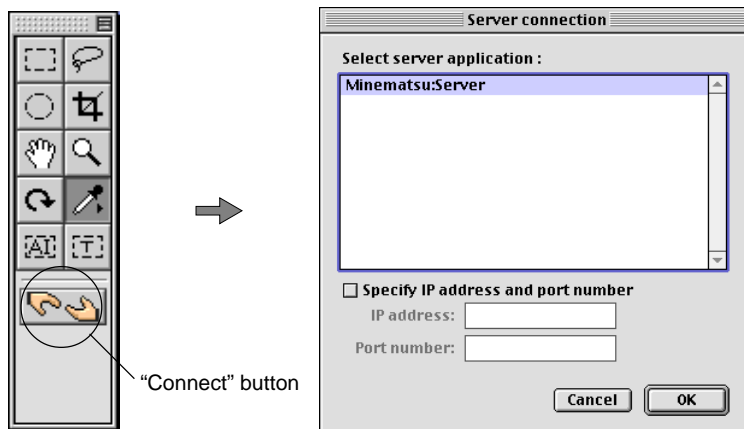


- 2) Launch the “ColorGeniusEX ” client application in ColorGenius from the client machine.

After the start-up screen, the initial display of ColorGenius appears.

- 3) Click the “Connect” button on the tool palette.

The dialog box for selection of the server machine and the server application is displayed.



If the server computer's router address differs from the one for the client computer, place a check in the "Specify IP address and port number" check box and then enter the server's IP address and port number.

Enter the same port number as the one set in "Preference" in the Preferences menu.

- 4) Click the "Server" (server application).  
If the "ColorGenius Server" (server application) is not listed, check if the correct IP address has been set and if the server application has been launched on the server computer.
- 5) Click "OK".

The server application in ColorGenius has now been linked with the client application.

## 2. Foreground/background environment

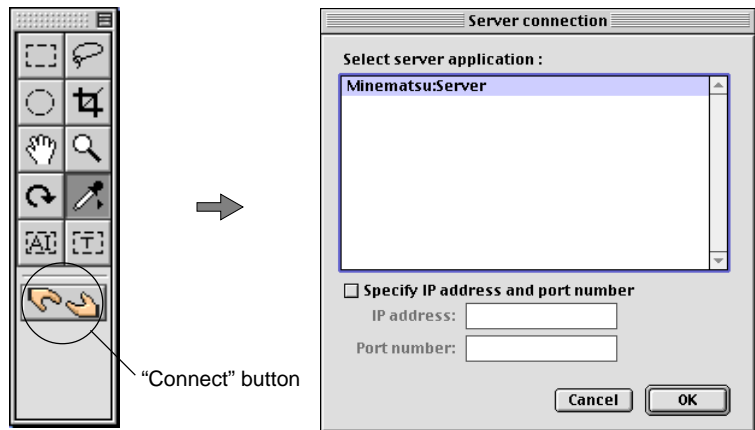
The following setup information must be entered.

- Network ID
- Scratch disk
- Disk for saving scanned images

Perform the setup in the same manner as for “1. Client/server environment setup”.

The TCP/IP setup is unnecessary.

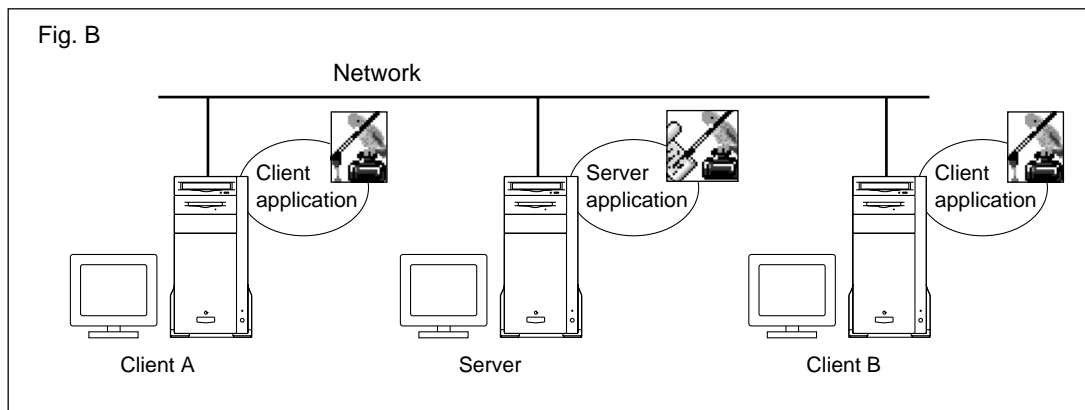
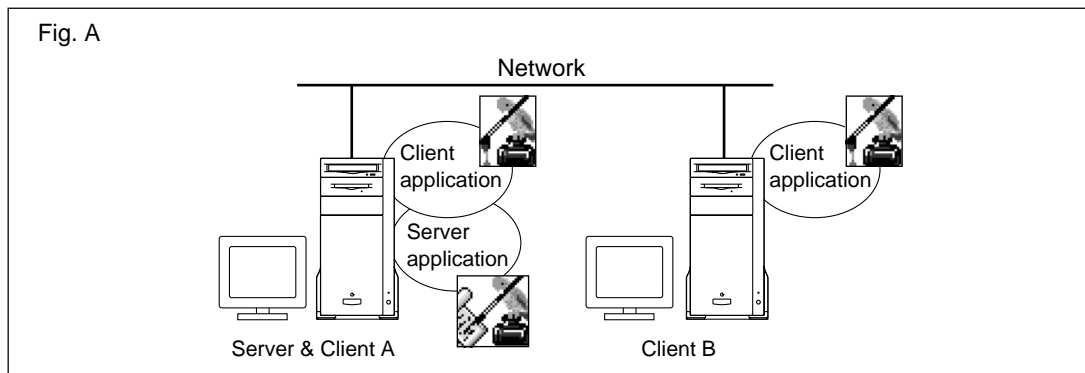
After all the above setup information has been entered, link the client and server applications, referring to “1.3 Linking the client and server computers”. Note that the “Specify IP address and port number” check box should be unchecked, when you see the dialog box that appears when connecting to the server.



### 3. Multi-client/server environment setup

With ColorGenius, multiple clients can be connected to one server.

The multi-client/server environment is effective in two configurations as described in the figures below.



- Note**
- A maximum of three clients can be connected to a server.
  - We recommend you use the configuration shown in the Fig.B, since the processing speed is faster.

### 3.1 Server setup

The following setup information must be entered.

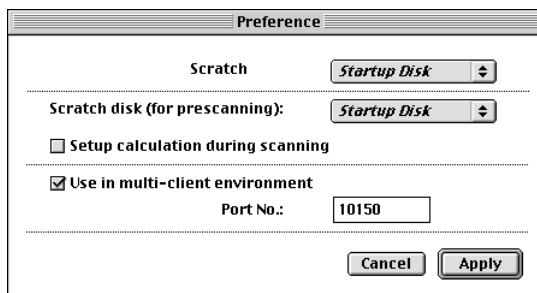
- Network ID
- TCP/IP
- Scratch disk
- Disk for saving scanned images

Perform the setup in the same manner as for “1.1 Server setup”.

#### Server application setup

Set the server application, following the explanation in “Server application setup” of “1.1 Server setup”.

- 1) Start up the server application and select “Preference” from the Preferences menu.
- 2) Place a check in the “Use in multi-client environment” check box.



- 3) Set the port number.

We strongly recommend that you not change the factory assigned default port number, if the server-client connection is operating properly.

If you have been using any other network application (e.g. a WWW browser, e-mail, etc.), be sure not to specify an already used port number when setting up the server application, or quit the other network application(s) before entering this data.

- 4) Click the “Apply” button.

### **3.2 Client setup**

The following setup information must be entered.

\_ Network ID

\_ TCP/IP

Perform the setup in the same manner as for “1.2 Client setup”.

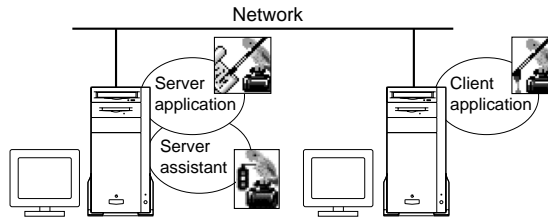
### **3.3 Linking the client and server computers**

Link the client and server computers referring to “1.3 Linking the client and server computers”.

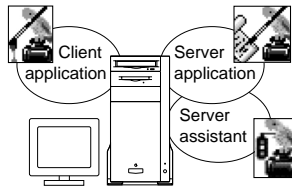
## 4. Server assistant

One of the following environments is required when using the server assistant. After setting up each environment, set up the corresponding environment for the server assistant.

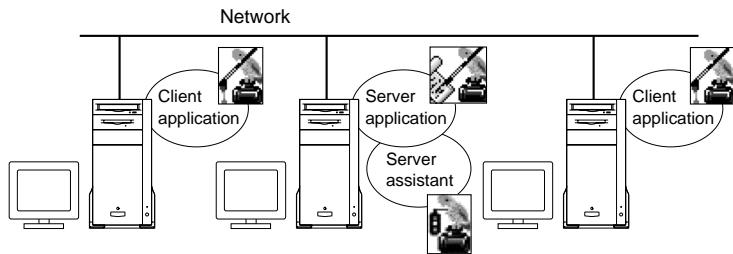
- Client/server environment



- Foreground/background environment



- Multi-client/server environment

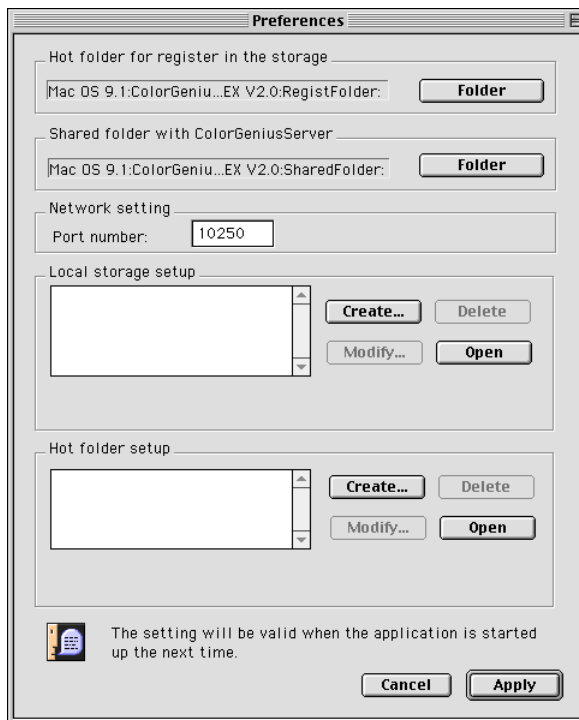


**Note**

Be sure to install the server assistant in a Macintosh in which the server application is already installed.

## 4.1 Server assistant setup

- 1) Launch the server assistant.
- 2) Select “Preferences” from the File menu.



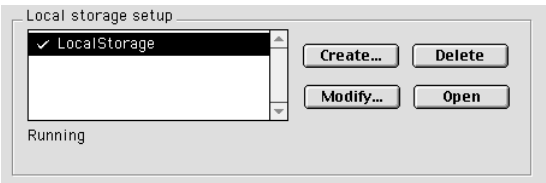
- 3) Set “Hot folder for register in the storage”.  
Use the default setting. From the client application, designate the folder that is to be the local storage where image files should be registered. When you wish to change the folder, click the “Folder” button and designate a new destination folder.
- 4) Set “Shared folder with ColorGeniusServer”.  
Use the default setting. Designate the folder where image files should be sent from the server assistant in the server application. When you wish to change the folder, click the “Folder” button and designate the new destination folder.



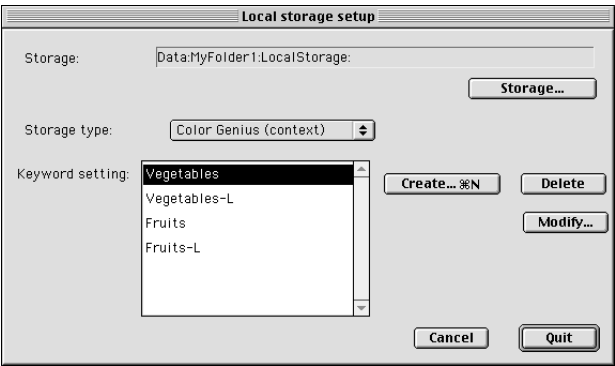
- 5) Set the port number. Normally, it is not necessary to change the factory assigned default port number. If you have been using any other network application for the port number (e.g., a WWW browser, server application), change the port number.

**Setting up a local storage:**

- 1) Set the local storage.  
Click the “Create...” button.



Button	Function
Create	Creates a new local storage.
Modify	Performs maintenance for the present local storage (e.g., keyword modification, image deletion).
Delete	Deletes the present local storage.
Open	Opens the separately created present local storage so that it can be operated.

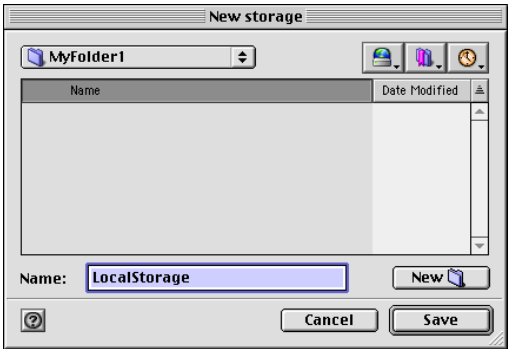


- 2) Click the “Storage...” button, and designate the location (folder) of the local storage and local storage name.

**Note**

Make sure not to create a local storage in the folder or sub-folders of the ColorGenius EX, as doing so may cause an operation error.

- 3) Click the “Save” button.

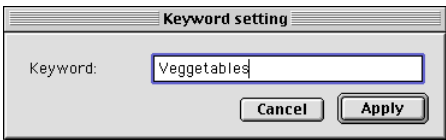


- 4) Set the keyword.  
Set the image-classifying keywords in the local storage.

Button	Function
Create	Creates a new keyword.
Delete	Deletes the present keyword.
Modify	Modifies the present keyword.

When creating a new local storage, delete or modify the preset default keywords, if necessary.

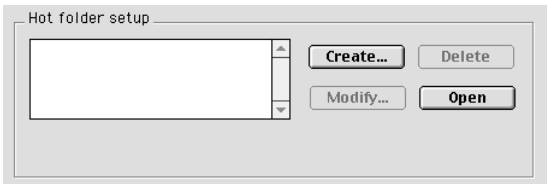
- 5) Click the “Create...” button.



- 6) Enter a keyword and click the “Apply” button.  
7) Click the “Quit” button.

**Setting up a hot folder:**

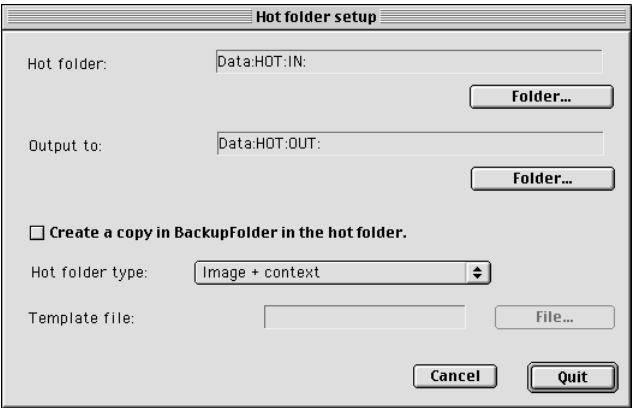
- 1) Set the hot folder.  
Click the “Create...” button.



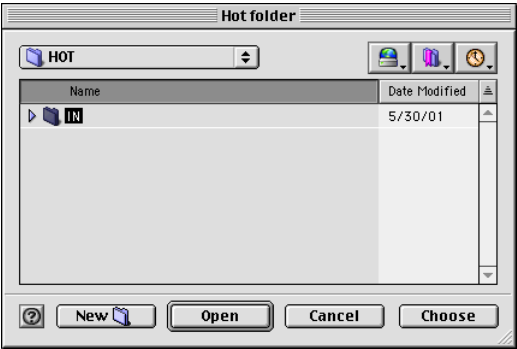
Button	Function
Create	Creates a new hot folder.
Modify	Modifies the present output destination folder and the present hot folder type.
Delete	Deletes the present hot folder.
Open	Modifies the present location (folder) of the hot folder.

- 2) Designate the location (folder) of the hot folder.  
Click the “Folder” button and designate the folder.

**Note** Make sure not to create a hot folder in the folder or sub-holders of the ColorGenius EX, as doing so may cause an operation error.



- 3) Click the “Choose” button.



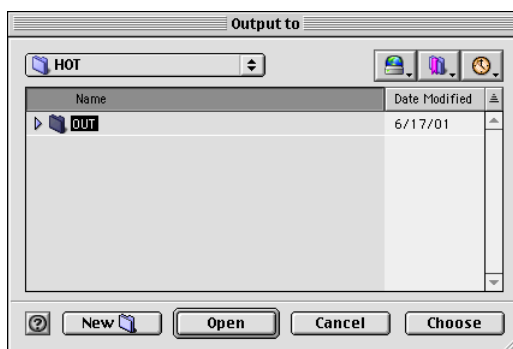
- 4) Designate the folder where image files, which have been automatically processed and output from the hot folder, should be stored.

Click the “Folder” button and designate the folder.

**Note**

Make sure not to create a hot folder in the folder or sub-holders of the ColorGenius EX, as doing so may cause an operation error.

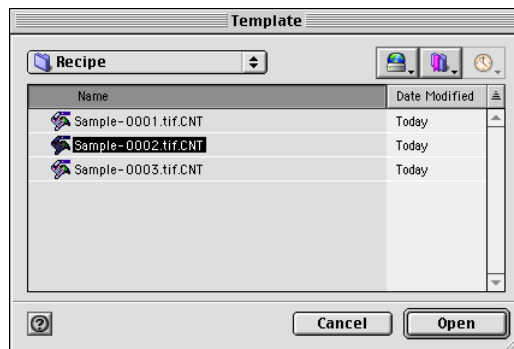
- 5) Click the “Choose” button.



- 6) When you wish to store image files that have not been processed, check the “Create a copy in BackupFolder in the hot folder.” check box.
- 7) Select the hot folder type to be used from the “Hot folder type” pop-up menu.

Button	Function
Image + context	Performs image processing by dragging and dropping a folder that contains an image file and a recipe file onto the hot folder.
Image + ICC-Profile (folder)	Automatically performs calibration by dragging and dropping a folder that contains an image file, which is embedded an ICC profile (source profile), and destination profile onto the hot folder.
Image + context (template) or Image + ICC-Profile (template)	Automatically performs image processing by just dragging and dropping an image file onto the hot folder. This requires associating a recipe file and destination profile with a hot folder beforehand.

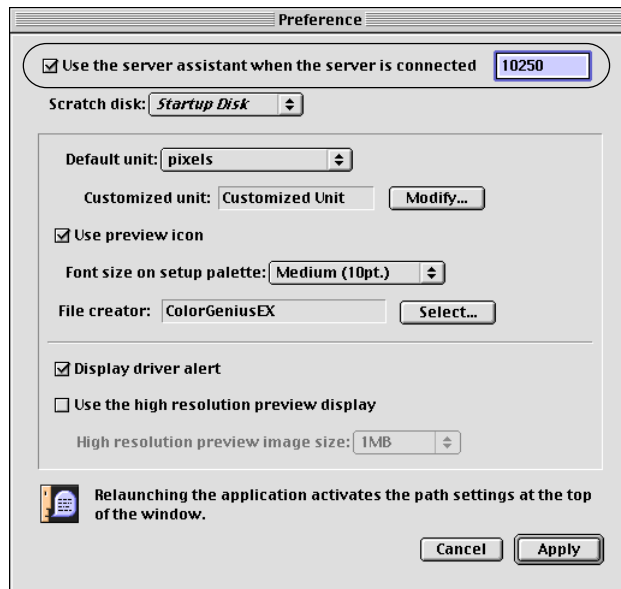
- 8) When you select “Image + context (template)” or “ICC-Profile (template)”, designate the recipe file or the destination profile to be associated with the hot folder.  
Click the “File” button.
- 9) Select the file and click the “Open” button.



- 10) Click the “Quit” button.

## 4.2 Client setup

- 1) Launch the client application.
- 2) From the “File” menu, select the “General setup” sub-menu under “Preferences”.
- 3) Check the “Use server assistant when the server is connected.” check box.



- 4) Set the port number.  
Specify the same number as you set for the server assistant.
- 5) Click the “Apply” button.
- 6) After restarting the server assistant, server application and client application (following the order as described here), link the server assistant application and the client application to the server application. For detailed information, refer to “1.3 Linking the client and server computers”.

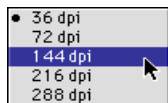
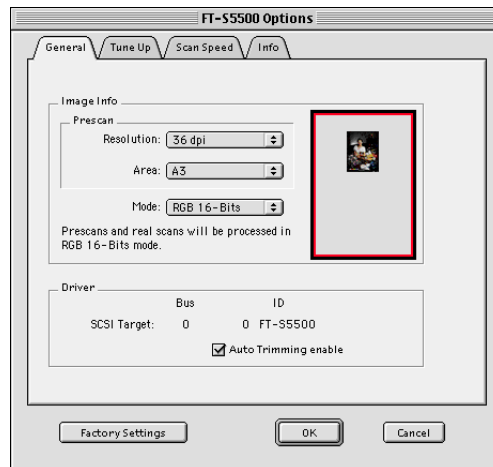
## 5. FT-S5500 setup

Clicking the “Settings” button in the setup palette window displays the FT-S5500 Options window for the FT-S5500 scanning operation setup. In this window, the resolution used during prescanning and the image quality during scanning can be adjusted.

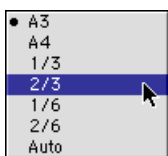
### Setup regarding prescanning

This section describes how to set the resolution, image mode, and scanning area used during prescanning.

- 1) Click the “Setting expand” button in the setup palette window. The “FT-S5500 Options” window appears.
- 2) Click the “General” tab.



- 3) Select the resolution to be used for prescanning with the Resolution menu.  
You can select the resolution from 36, 72, 144, 216, and 288 dpi.
- 4) Select the image mode from the Mode menu.  
Select the image mode for the images that are to be input into ColorGenius from a scanner. Usually, select “RGB (16 bits)”



- 5) Select the scanning area to be used for prescanning with the Prescan Area menu.

If you select A3, prescanning is performed over the entire area of the scanning glass. Besides A3, you can choose A4, 1/3, 2/3, 1/6, 2/6 or Auto, and prescanning is performed respectively on the area as shown below. If you select Auto, after the positioning and sizes of the originals are recognized, prescanning is performed on the minimum rectangular area that encompasses all the originals.



A4



1/3



2/3



1/6



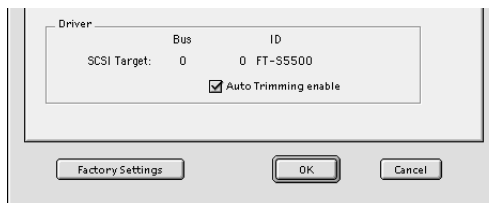
2/6



Auto



- 6) Click the "OK" button and close the "FT-S5500 Options" window.

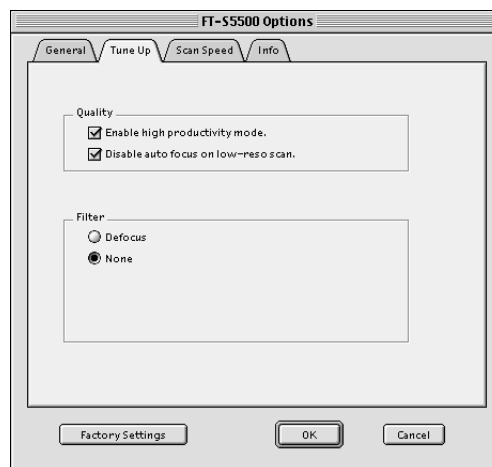


- 7) If the "Auto Trimming enable" check box on the right bottom side of the window is not checked, the automatic trimming setting is invalid.

## Setup regarding the image quality when scanning is performed

By changing the scanning speed for scanning, you can select whether priority is given to image quality or processing speed. In addition, the strength of the filter effect that is used during Manual Setup can be adjusted.

- 1) Click the “Setting expand” button in the setup palette window. The “FT-S5500 Options” window appears.
- 2) Click the “Tune Up” tab.



- 3) Clicking and selecting the “Enable high productivity mode” box.  
If you check this box, scanning is performed with a faster scanning speed allowing you to reduce the scanning time, but with a lower quality image. If this check box is not marked, although scanning is performed with a slower scanning speed, it will allow you to obtain a higher quality image.
- 4) Select the “Disable auto focus on low-reso scan” box.  
If you check this box, focus adjustment is not performed before scanning when the input resolution is 800 dpi or lower. If this check box is not marked, focus adjustment is always performed before scanning regardless of the resolution setting.

- 5) Select the type of the filter to be used during scanning, and specify the filter effect strength.

Select the type of filter from “Defocus” or “None (no filter to be used)”. When you select “Defocus”, adjust the filter effect strength with the slider.

FT-S5000 allows you to select “Smoothing” in addition to “Defocus”.

Filter	Contents
Defocus filter	When scanning a screened original like printed material in high resolution, ColorGenius may reproduce the image preserving the clarity of the dots. Using the defocus filter to the image will reduce the clarity of individual dots and produce a smoothed image by defocusing the pixels in the overall image.
Smoothing filter*	Reduces film graininess or noise that is generated during scanning at a high resolution.
*: Only for FT-S5000	

- 6) Click the “OK” button, and close the “FT-S5500 Options” window.

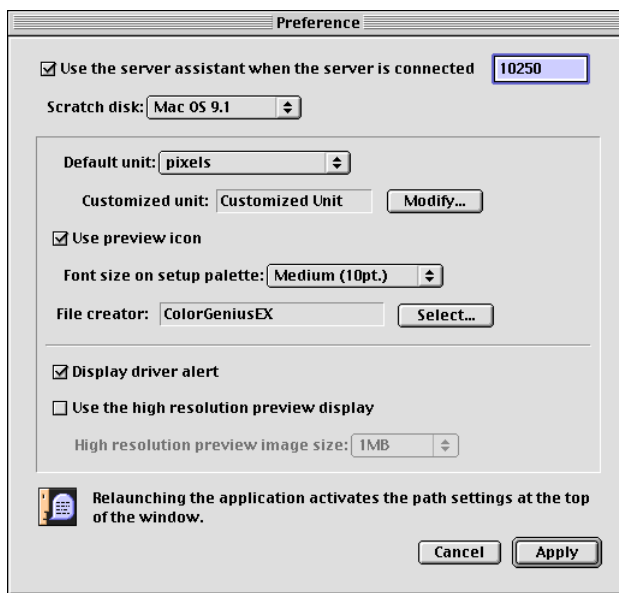
## 6. ColorGenius default setup

In the Preferences dialog box, you can specify the Scratch disk to be used when an image of a large amount data is handled, the file for storing the parameter files and profiles that are used for setup, and also the default unit.

Moreover, you can choose whether or not to use ColorSync, to display the simulation window(s), to use window animation, and whether or not to display the driver alert.

### 6.1 General setup

- 1) Launch ColorGenius.
- 2) From the “File” menu, select the “General setup” sub-menu under Preferences”.



### Scratch disk setup

The Scratch disk is a disk space to which data is temporarily saved when there is not sufficient RAM memory to handle a large image or other data intensive file. The Scratch disk pop-up menu displays other volumes besides the launched disk. Select a volume with a high processing speed and large capacity for the Scratch disk.

**To set up the Scratch disk:**

Select the disk you wish to use as the Scratch disk from the Scratch disk pop-up menu.

**Default unit setup**

Select the default unit in which the size of the image is inputted as mm, inches, or customized unit.

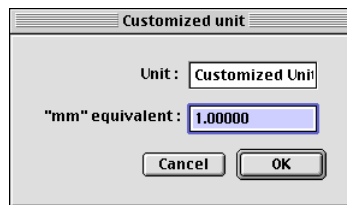
Units specified here will be applied to values in the file information and rulers displayed in the image window and values in information palettes.

**To select the unit to be used:**

Select the unit to be used from the “Default unit” pop-up menu.

**Customized unit:**

Select “customized unit” when you wish to use a unit other than mm, inches, or pixels. Then, enter the value of the customized unit in terms of mm units in the “mm equivalent” box.

**Note**

The unit to be selected here is the unit displayed as the default. You can change the unit as you wish with the “Unit” sub-menu of the “Image” menu after the Image window appears.

**Use preview icon**

If you check this box, the image preview icon is used for newly saved image files.

**Font size in Setup Palette**

The font size for the Setup Palette can be set at 12, 10 or 9 points.

**File creator**

If you check this box, an application you select can be set as the creator for newly saved image files. Accordingly, double-clicking on a saved file will open it with the application set as the creator.

**Display driver alert.**

If you check this box, the contents of an error that has been generated with the FT-S5500 is displayed on the client machine.

**Use the high-resolution preview display.**

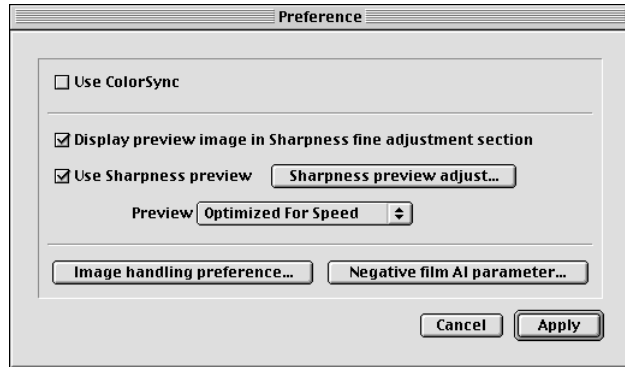
If you checkmark this box, the preview window displays a high-resolution image.

The digitized dimensions of an image are set in “High resolution preview image size” and this image appears in the preview window. The higher the set value is, the finer the displayed image will be.

This function is useful when you scan a small original such as a 35 mm film.

## 6.2 Setup environment

- 1) Launch ColorGenius.
- 2) From the “File” menu, choose the “Setup environment” sub-menu under “Preferences”.



### Use ColorSync.

To use ColorSync, “ColorSync Extension” of the System Folder’s Extensions and “ColorSync” of the Control Panels must be activated.

**Note** Refer to the next section, “6. Calibration,” for ColorSync setup.

ColorSync Ver.2.1 or higher must be installed in the system.

### Display preview image in sharpness fine adjustment section.

If you check this box, the simulation window(s) for displaying the sharpness effect will appear in the Sharpness tab of the Easysetup: Fine adjustment dialog box.

### Use Sharpness preview

If you check this box, the effect of sharpness settings (sharpness preview) is shown in the edit window when the “Preview” option is checked in the setup palette window.

Clicking “Sharpness preview adjust” opens a dialog box where the settings for the sharpness preview display can be adjusted.

Sharpness preview adjustment

Target input device name FT-S5500

View magnification	Mask size adjustment (0 ~ 5)	Gain adjustment (0% ~ 100%)
16/1	3	16
8/1	3	18
4/1	3	20
2/1	3	25
1/1	3	45
1/2	3	40
1/4	3	30
1/8	2	25
1/16	2	20

Reset All

Save

Close

When the display magnification of the edit window is changed between 16 times magnification and one sixteenth size reduction using the zoom tool, the effect of sharpness settings can not be accurately previewed for such different magnifications when using the same setting for the sharpness preview. In such cases, the sharpness preview setting should be adjusted in this dialog box.

Specify the mask size and gain value for each magnification setting, from 16 times larger to one sixteenth smaller. The mask size adjusts the image outline width affected by the sharpness function, and the gain value adjusts sharpness strength.

Clicking the “Save” button stores the sharpness preview settings  
Clicking the “Reset All” button restore all settings to their default values.

Preview accuracy

The speed and quality of the preview display can be selected here.

Optimized for speed	The preview is displayed more quickly though its quality is lowered.
Normal	The preview quality becomes higher though the display speed is slower.

Image handling parameter preference

For detailed information, refer to “1.3 Editing image handling parameter preferences” in chapter 4.



## Editing Negative AI film parameter

For detailed information, refer to “1.4 Negative AI film parameter edit” in chapter 4.

## 6.3 Setup customize

Sharpening effects can be adjusted depending on the settings for magnification and resolution.

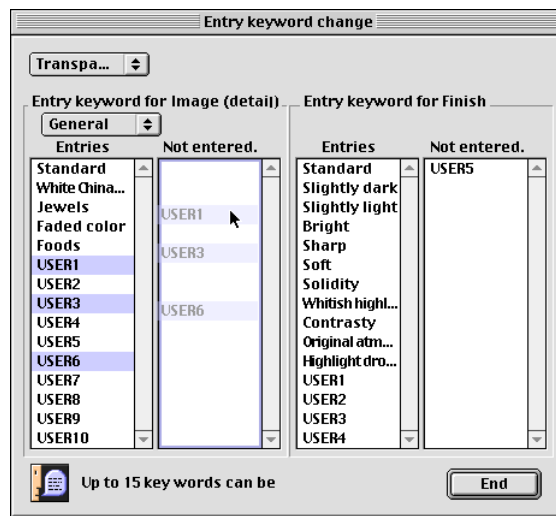
(For more detailed information, refer to “1.5 Sharpness customization” in chapter 4.)

## 6.4 Entry key word

Select a keyword for Easy Setup.

Using the entry key word setting window, you can hide the key words that are not used very often or show only the key words that are frequently used on the setup palette.

- 1) From the “File” menu, choose “Entry keyword change” sub-menu under “Preferences”.
- 2) Drag and drop each key word to be displayed on the setup palette from the “Not entered” list to the “Entries” list, or drag and drop each one to be hidden from the setup palette from the “Entries” list to the “Not entered” list.



## 7. Color calibration setup

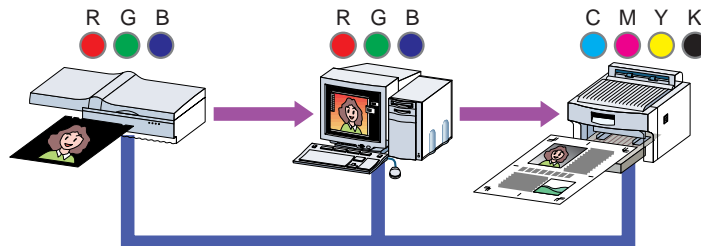
### 7.1 About ColorSync

ColorGenius supports the color matching system by using ColorSync.

#### What is color matching?

If color management is not performed, when the color original read by a scanner is displayed on a monitor or output to a printer, colors appearing on the output image could differ from the ones on the original. This is because each input or output device (i.e., scanners, monitors and printers) uses a different color space (RGB, CMYK, etc.) and has different characteristics for reproducing colors.

Color matching is a way to ensure consistent color between the devices by assimilating the differences in color spaces and color reproduction characteristics in each device.



Color matching is a way to ensure consistent color reproduct between all devices in the chain from input to output

#### Color Management System

In the computer world, where digital data is used, Color Management System (CMS) application programs are becoming the prominent method for achieving color matching. The CMS called ColorSync is preinstalled as standard on the Macintosh OS, while ICM is preinstalled on the Windows OS, and most application software which utilize color image data also aim at facilitating color matching using such CMS.

## ColorSync color management

To comprehend the function of ColorSync, it is necessary that the user understands the following two keywords: device-independent color and device profiles (ICC profiles).

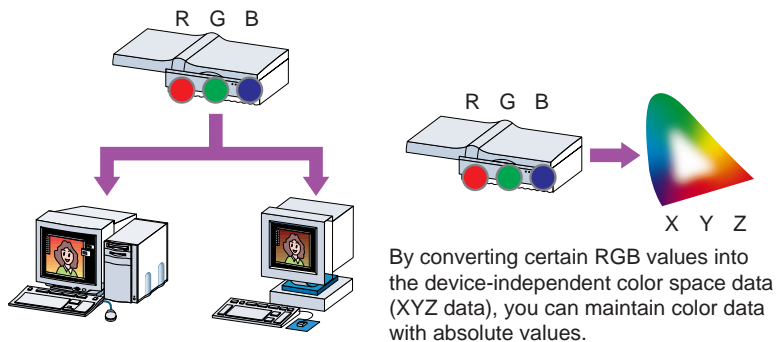
ICC is an abbreviation for International Color Consortium®.

### Device-independent color

Device independent color aims at reproducing colors using a color space that is not dependent on any device. The CIE XYZ (Lab) color space defined by CIE (in English: The International Commission on Illumination) is the standard device-independent color space used internationally in color management. When transferring color data between the input/output devices (i.e., scanners, monitors and printers), a consistent color reproduction can be made by first translating color data into the XYZ data that is not dependent on any device. (Refer to Chapter 1.)

#### Note

Conventionally, the XYZ-dimensional representation of a color is used to express the light emitting colors on a monitor; while the Lab representation of a color is used to express the physical colors on a reflective or transparent original. Because the color representing values between these two systems are interchangeable, both can be used as equivalents by utilizing a simple formula.



Even when a color is represented using the same RGB values, the color appearing on each device may vary due to the unique characteristics of color reproduction of each device.

## ICC profile

An ICC profile is a file in which the characteristics of color reproduction for each unique input or output device (i.e., a scanner, monitor or printer) are described.

ICC profiles, in addition to being preinstalled in the Mac OS, are generally attached to the products of input/output device manufacturers, and their latest information is available to the public on the Internet.

ICC profiles can be created and customized using LabFit.

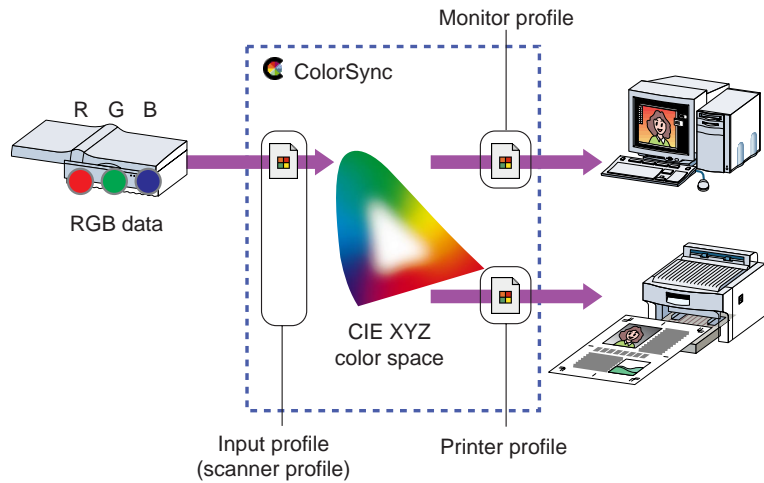
ICC profiles can be classified according to the following three types:

- **Scanner profile:** The scanner profile is a file that stores information pertaining to the range of colors and output characteristics of the RGB data input from a scanner. With regard to the scanner profile, ColorSync converts the input RGB data into the Lab data.
- **Monitor profile:** The monitor profile is a file that stores information pertaining to the range of colors and output characteristics of the monitor. ColorSync converts the Lab data into the RGB data that matches the characteristics of the monitor.
- **Printer profile:** The printer profile is a file that stores information pertaining to the range of colors and output characteristics of the printer or the printing machine. Before displaying the finished image of printed material on the monitor, select the printer profile that matches the printing conditions.

## Functions of ColorSync

When importing color image data from a scanner, for example, ColorSync will convert the scanner's RGB data (device color) into the XYZ data by referring to an appropriate scanner ICC profile. To output the XYZ data into the printer, ColorSync will then convert the data into the printer's CMYK data (device color) by referring to an appropriate printer ICC profile.

In this manner, ColorSync maintains color consistency between the input/output devices by using an ICC profile (that matches with each input/output device) during conversion when importing the device color from the input device (converting it into the XYZ data) or when exporting this XYZ data to other devices (after converting it into the appropriate device color.)



## Features of color matching

Even if a color matching system is used, the color of printed materials (or originals) and their images on the monitor cannot be fully matched due to the limitation of the color reproduction range (gamut), which differs according to the device used. Within this limited range, a perfect color matching is unattainable.

Also, even if an accurate ICC profile is used, the result depends to some extent on room environment and adjustment status of device; in some cases, an accurate color matching result is not possible. Arrange your room environment and adjust your device as follows:

## Room environment

### Effects of exterior daylight

..... To perform a color proof for printing materials on a monitor, perform the operation under conditions that reduce the effect of exterior daylight as much as possible. If there are windows, use curtains to shield the exterior daylight, and cover the monitor display with a monitor hood to further decrease the effect of room light.

### Illumination

..... It is very important to perform the color proof operation in a room where constant brightness and color temperature are always maintained. We also recommend that you use quality fluorescent lamps with the best possible fidelity for interior lighting (equivalent to an AAA daylight color regulated by JIS). When you compare the image colors on the printed materials with the ones on the monitor, we recommend that you use a merchandised viewer.

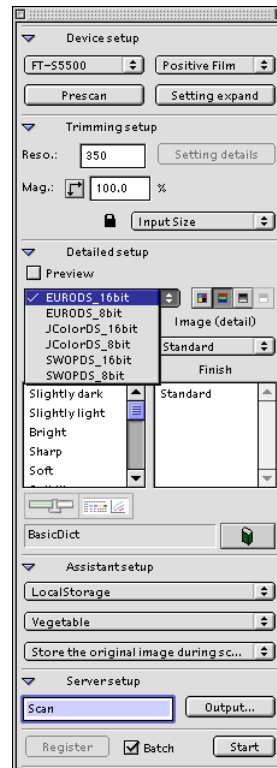
### Device adjustment

Color reproduction by devices is unstable due to wear and tear over time and to differences among devices. We recommend that you periodically adjust (calibrate) devices using colorimeter; printers, in particular, need to be adjusted at least once a day.

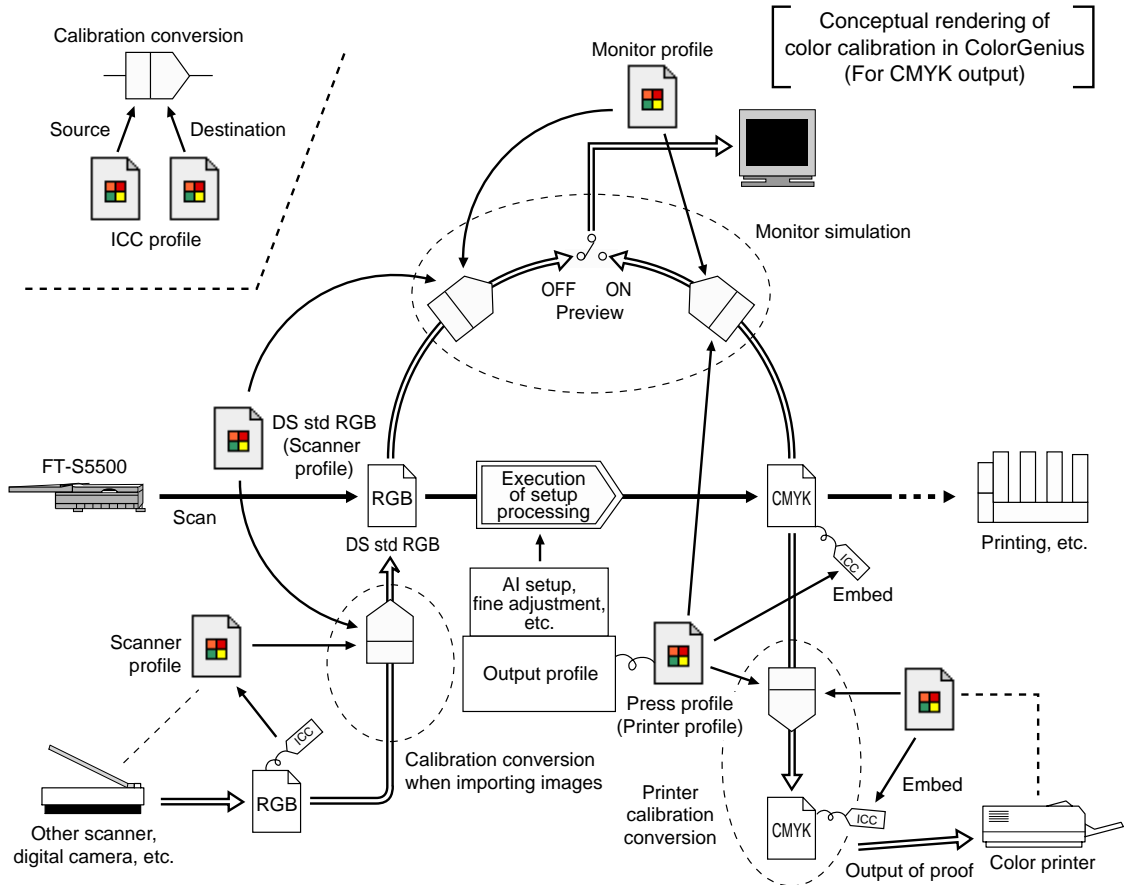
## 7.2 ColorGenius's color calibration

In ColorGenius, DSStdRGB is used as an RGB color model that is suitable for image processing.

The DSStdRGB data is directly input from the FT-S5500 and converted into CMYK (or RGB, or Grayscale) data, according to an “output profile” (This is a dedicated profile of ColorGenius and is different from ICC profiles.), for printing. There are several “output profiles,” depending on the original type and output condition, and these profiles can be selected from the setup palette window.



The basic characteristics of color reproduction is determined by an “output profile.” AI Setup and other fine adjustments follow after this. An “output profile” can be customized to conform to printing conditions. (Refer to Chapter 5 “Using the Make Profile Tool”.) In ColorGenius, in addition to the above conversion, the following operations are available using ColorSync:



### To perform simulation on the monitor

- The color of scanned originals can be reproduced in the preview window.

When the “Preview” check box is not checked in the setup palette window, the scanned images are displayed as accurately as their originals in the preview window after the characteristics of the monitor

are calibrated according to the designated monitor profile. Select the monitor profile which matches the monitor to be used from the profiles installed in your Macintosh.

- The FT-5500 has been calibrated using a commonly available type of positive film and printing paper (photo). Therefore, accurate reproduction cannot be achieved in some cases, depending on the original type.
- Finished images of printing results can be simulated in the preview window.

When the “Preview” check box is checked in the setup palette window, the setup processing is simulated and the color of the printing result and the characteristics of the monitor are calibrated using the press profile (printer profile for output is referred to as “press profile” in this manual), and then images are displayed in the preview window.

A press profile is linked to an “output profile.”

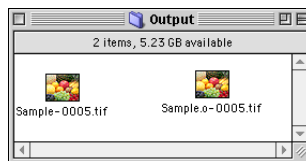
### **To execute calibration when importing image files**

When importing image data with a scanner other than the FT-S5500 or a digital camera, a scanner profile is used to convert the RGB data to D5stdRGB data, which is as accurate as the original color. This conversion is required because the correspondence of color data values and actual colors are different from the FT-S5500.

Select the scanner profile from the profiles installed in the Macintosh or use the profile embedded in the image. (Embedded profile is only available with TIFF format file.)

### **To create a printer-calibrated image for proofing**

When executing setup processing, in addition to the usual output image, a calibrated image can be created for a specific printer. For the file name of the image, “.o” is added and saved.



Sample-005.tif ..... Usual image file

Sample.o-005.tif ..... Printer calibrated image file



The image is converted so that it reproduces the color of the printing result using the press profile and printer profile, which is to be used for the proof printer.

Select the printer profile from the profiles installed in the Macintosh.

A printer profile can be embedded in an output image. (Embedded profile is only available with TIFF format file.)

The following ICC profiles are to be installed in the ColorSync Profiles folder when installing ColorGenius.

ICC profile	File name	Contents
Scanner profile	5000stdRGB	Profiles required to convert the D5stdRGB data into the L*a*b* data.
Printer profiles	JapanColorDS	Profiles required to convert the CMYK data into the L*a*b* data with the assumption that the printing will be implemented with inks commonly used in Japan for printing.
	EuroDS	Profiles required to convert the CMYK data into the L*a*b* data with the assumption that the printing will be implemented with inks commonly used in Europe for printing.
	SWOPDS	Profiles required to convert the CMYK data into the L*a*b* data with the assumption that the printing will be implemented with inks commonly used in the U.S.A. for printing.
	GDM2000TC	
Monitor profile	PressView21	
	BARCO	
	PCD321	

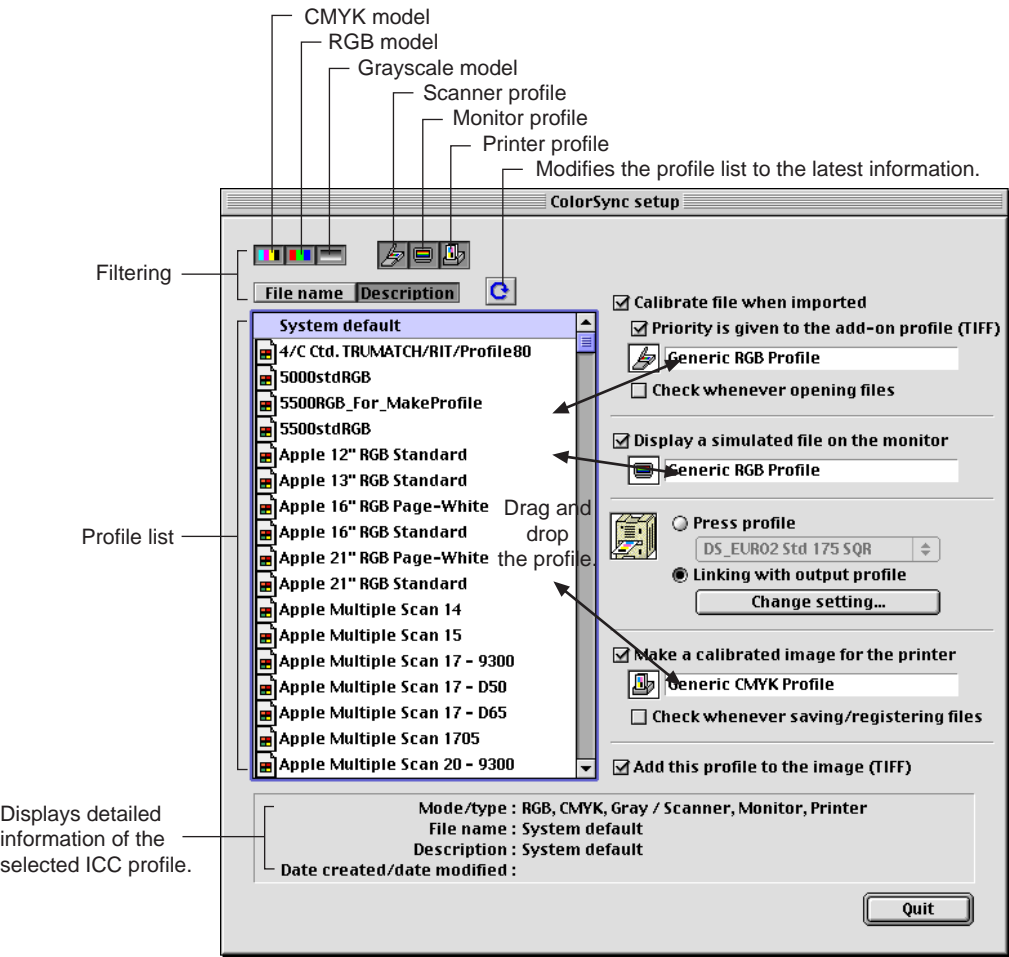
7.3 Settings of ColorSync

If you check the “Use ColorSync” check box within the “Preferences: Setup environment” dialog box, you can display the calibrated image on the monitor using the functions in ColorSync and you can calibrate image file.

Selecting profiles

Select the profile to be used in the “ColorSync setup” window.

- 1) Select “ColorSync simulation...” from the Environment menu. ICC profiles in the ColorSync folder are displayed on the profile list.

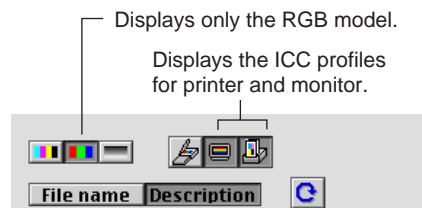


- 2) Drag and drop the scanner profile, monitor profile and printer profile that are displayed on the profile list to the corresponding “Input calibration conversion” “Monitor simulation” and “Printer calibration conversion” boxes.
- 3) Click the “Quit” button.

### To use the filtering function:

The filtering function allows you to group the ICC profiles stored in the “ColorSync profile” folder into the following groups on the profile list. A certain grouping of profiles is activated when the button is selected and deactivated when the button is deselected. Click the button to switch between activating and deactivating the function.

- Device type ..... Displays the ICC profiles related to the scanner, monitor or printer when the corresponding button is selected.
- Color model ..... Displays the ICC profiles related to the CMYK, RGB and grayscale models when the corresponding button is selected.
- File name ..... Displays the ICC profiles as file names when this button is activated.
- Description ..... Displays the ICC profiles as the descriptions saved in the ICC profiles when this button is activated.

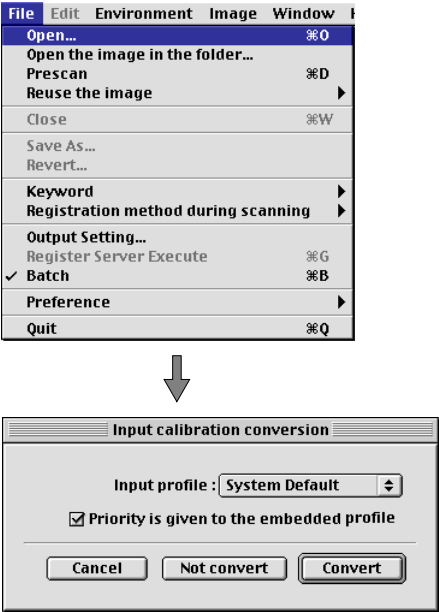


### Calibrate file when imported

When importing RGB images with a scanner other than the FT-S5500, calibration is executed according to an ICC profile.



When the “Check whenever opening files” check box is checked, the dialog box, which enables you to select the scanner profile, will appear whenever opening image files.



When the “Priority is given to the add-on profile. (TIFF)” check box is checked, the embedded scanner profile in the TIFF file is forcefully converted.

Performing monitor simulation

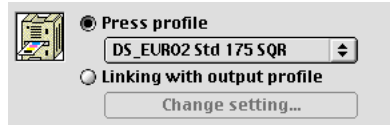


Enables you to perform monitor simulation by simply checking the check box. The simulation target varies as follows depending on the status of the “Preview” check box in the setup palette window.

Preview check box	Simulation target
ON	Simulates the output status on the monitor.
OFF	Simulates the color characteristics of the scanner.

**Note** When simulating the color characteristics of the scanner, whether the correct color is reproduced depends on the type of original document.

### Press profile



Sets the color characteristics (ICC printer profile: To distinguish this profile from the profile for printer calibration described below, this profile is referred to as “press profile”.) for printing of images output from ColorGenius. A press profile is referred to during such operations as monitor simulation and printer calibration.

The ICC profile can be set by the two setting methods described below.

- To always use the same printing condition
- To link to the ColorGenius conversion profiles (An ICC profile is linked to an output profile.)

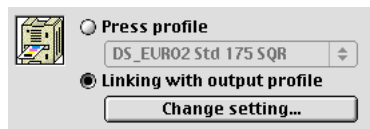
#### To always use the same printing condition:

- 1) Click the “Press profile” radio button.
- 2) Select the press profile.



#### To link to the ColorGenius output profile:

- 1) Click the “Linking with output profile” radio button.

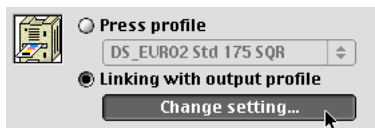


**To change the link with the press profile:**

When you wish to change the link between the ColorGenius output profile and the press profile, follow the procedures described below.

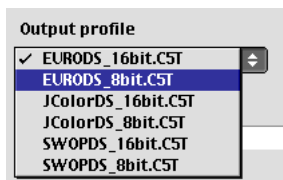
- 1) Copy the press profile to the “ColorGenius ICC” folder.
- 2) Click the “Linking with output profile” radio button.
- 3) Click the “Change setting...” button.

The “Link between the mode profile and the ICC” will appear.

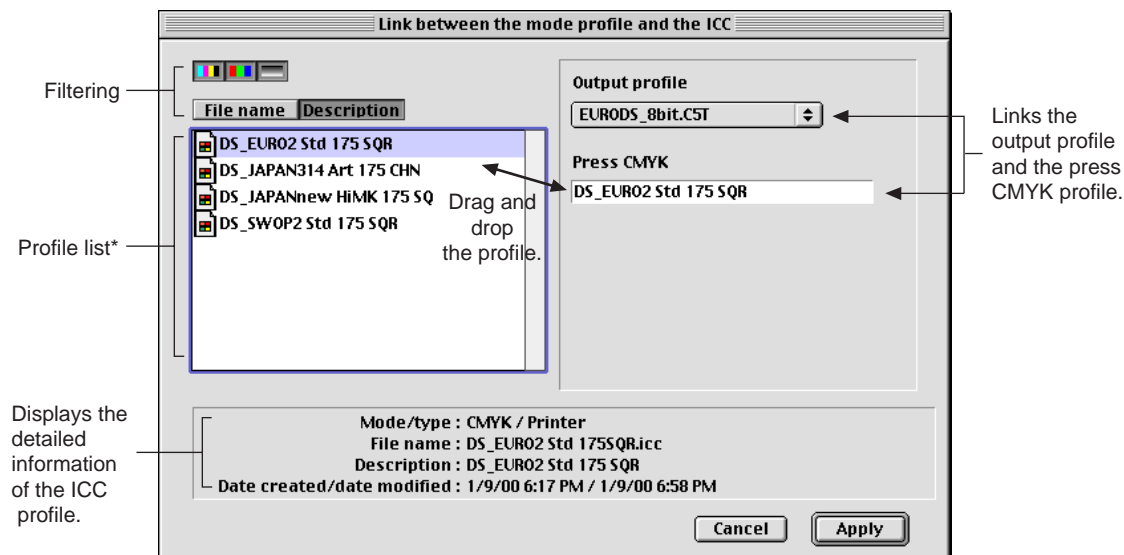
**Note**

Clicking the “Change setting...” button while holding down the Option key enables you to specify the ICC profiles for RGB output and grayscale output in the “Link between the mode profile and the ICC” window.

- 4) Select the output profile.



- 5) From the profile list, drag and drop the press profile onto the “Press CMYK” box.



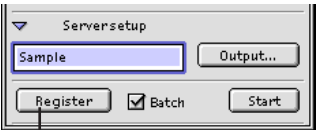
\* ..... Displays the ICC profiles included in the “ColorGenius ICC” folder except for the profiles that are included in the ColorSync Profiles folder in the System folder.

Creating a printer-calibrated image for proofing

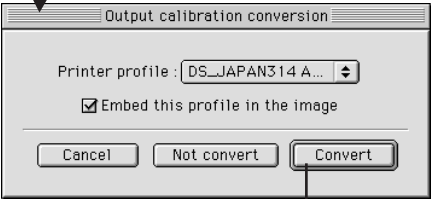


Checking the check box enables you to output, in addition to the usual output image, a calibrated image file that is matched to the color characteristics of the printer specified. “.o” will be added to the file name of the additional printer-calibrated image file. You can output the image with a color printer and use it for proofing.

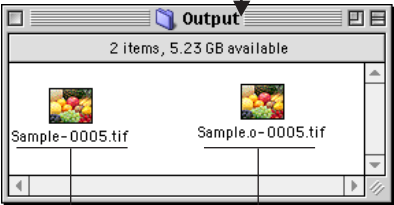
When the “Check whenever saving/registering files” check box is checked, the dialog box, which enables you to specify the ICC profile, will appear whenever you save the image files. The printer profile can be changed when you save the image files.



Clicking the “Register” button displays the dialog box for the conversion. In the standalone environment, this dialog box is displayed when selecting “Save as...” from the File menu.



Clicking the “Convert” button outputs a calibrated image file, in addition to the usual image file.



Printer-calibrated image file (“.o” is added to the file name)  
Usual image file

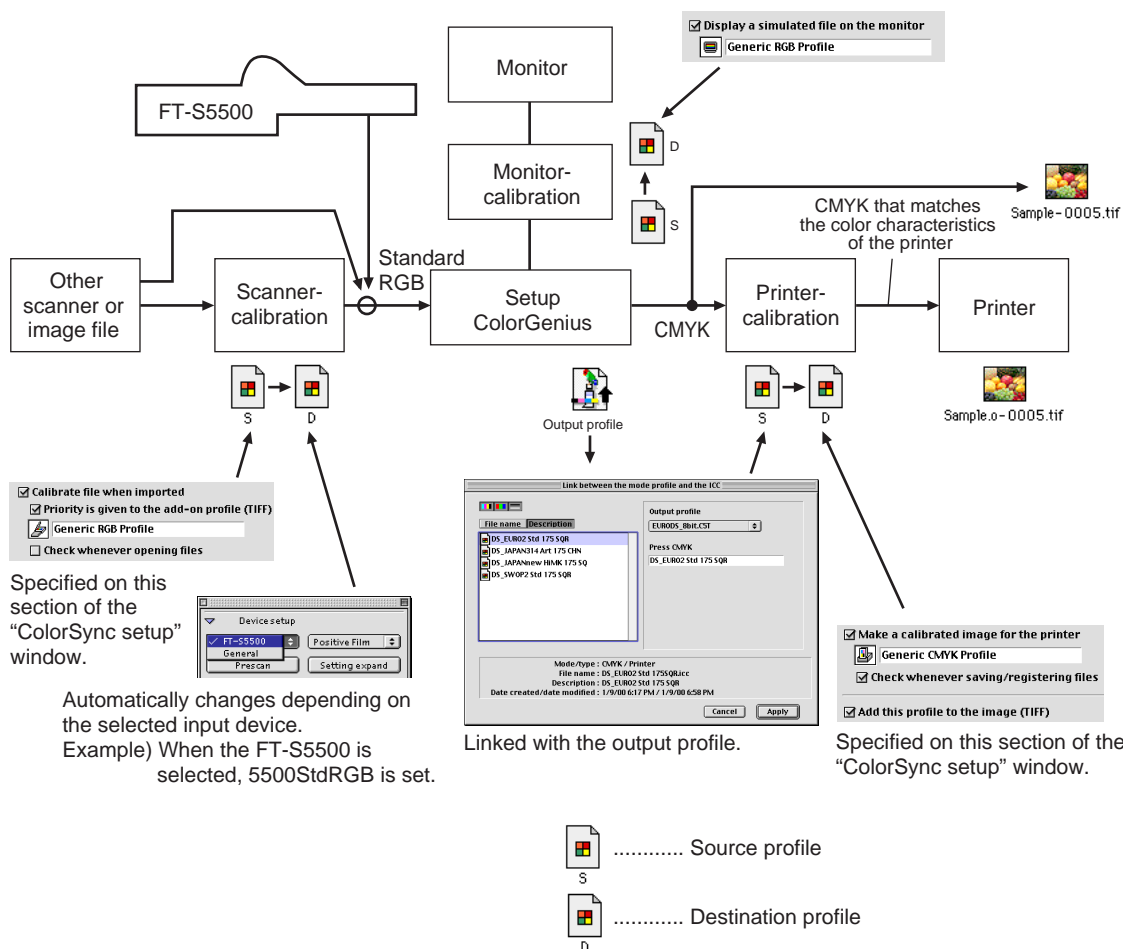


### Add this profile in the image. (TIFF)

Checking the “Add this profile in the image. (TIFF)” check box embeds the printer profile in the output image file. The printer profile can be embedded only in TIFF image files and not in other file formats.

### Relation between the windows and the profiles

The figure below indicates the relation between the windows and profiles. Please refer to the figure when setting the profiles.



## 8. Setting for performance improvement

When multiple originals are processed, the “scanning => execution of the setup calculation => saving” sequence is repeated between the ColorGenius and the FT-S5500.

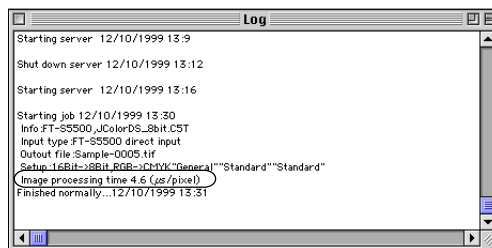
The processing performance (productivity) will improve if the setup calculation is executed during scanning.

This function can be set with the setting method described below.

### Note

Do not use this function when your Macintosh provides low throughput, the network traffic (data transmission speed) is extremely low, or you output data to a low speed volume like an MO.

- 1) Perform scanning, then note down the processing time per pixel, which is displayed in the Log window on the server application.

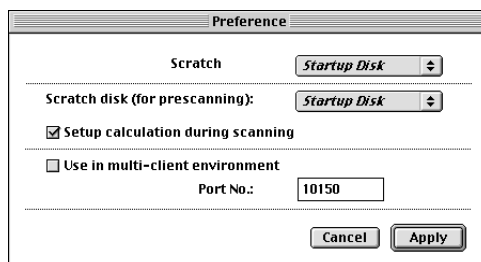


### Note

This function is inactivated when the following operation is executed. At this time, the processing time will not be displayed.

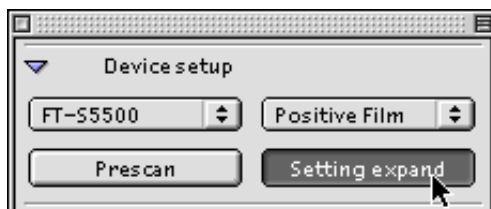
Rotate, Resize, Crop, Selected color modification, Custom sharpness, Line art, Dot Finder (option), deMoiré (option), Server assistant operation and Printer calibration image creation.

- 2) Choose “Preference” from the “Preference” menu.
- 3) Checkmark the “Setup calculation during scanning” box.



Restart the server application.

- 4) Click the “Setting expand” button in the setup palette on the client



application.



- 5) Click the “Scan speed” tab.
- 6) Round off the value noted down in step 1) above and input this value for “ColorGenius process per 1 pixel” field.
- 7) Click the “Update” button so that the appropriate value will be set as the “Scan speed down-ratio”.
- 8) Click the “OK” button.

If the FT-S5500 operation repeatedly starts and stops during scanning, set a smaller value as the “Scan speed down-ratio”.

If the FT-S5500 operation still repeatedly starts and stops even after setting the smallest possible value as the “Scan speed down-ratio”, deactivate the setting in step 3) above to cancel this function.

## Chapter 3 Understanding basic setup procedures

There are two methods for setting up input images with ColorGenius - Easy Setup and Manual fine adjust. Using the Easy Setup method, images can be optimally processed simply by selecting the desired properties from each of the three categories: image type, appearance and color mode.

This chapter describes how to use the Easy Setup method. The use of Easy Setup in a client/server environment or a multi-client/server environment is described in section 1, while section 2 explains its use in a standalone environment. In section 3, fine adjustment procedures using the Easy Setup palette window are described.

Section 4 explains the fine adjustment procedure using manually entered values.

### **1. Easy Setup in a client/server environment or a multi-client/server environment**

The following explains the setup procedure when computers (client and server) are networked together and an FT-S5500 scanner is connected to the server using a SCSI interface. Before starting this operation, make sure that the settings for the client/server environment and the network have already been completed. For detailed information, refer to the following sections in Chapter 2: from “1. Client/server environment setup” to “3. Multi-client/server environment setup”.

#### **1.1 Starting the program**

##### **Linking client and server**

Launch the server application on the server computer and the client application on the client computer, and link these applications.

For details on how to link client and server applications, refer to the following sections in Chapter 2: from “1. Client/server environment setup” to “3. Multi-client/server environment setup”.

##### **Use of originals**

Open the top cover of the FT-S5500 and place the original on the glass. For more information concerning the use of originals, refer to the FT-

S5500 Users Manual.

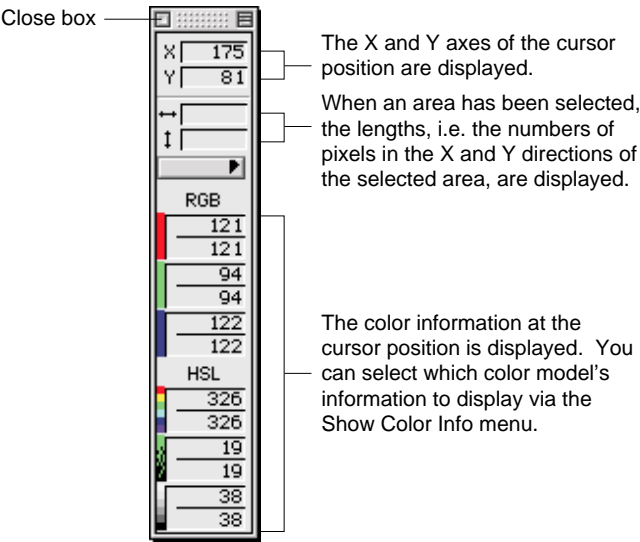
Configuration of ColorGenius screens

Note

- Select whether or not to display any of the palettes, i.e. the information palette, setup palette, or server management palette, that can be selected under the “Window” menu.
- e.g.)
- If you want to display the information palette windows, select “Show info” from the “Window” menu.
  - If you want to hide the information palette windows, select “Hide info” from the “Window” menu. (Or click the close box on the upper-left corner of the palette window.)

Information palette window:

While the Image window is displayed, the cursor position in the image, the selected area’s X and Y axis information, and color information are displayed.

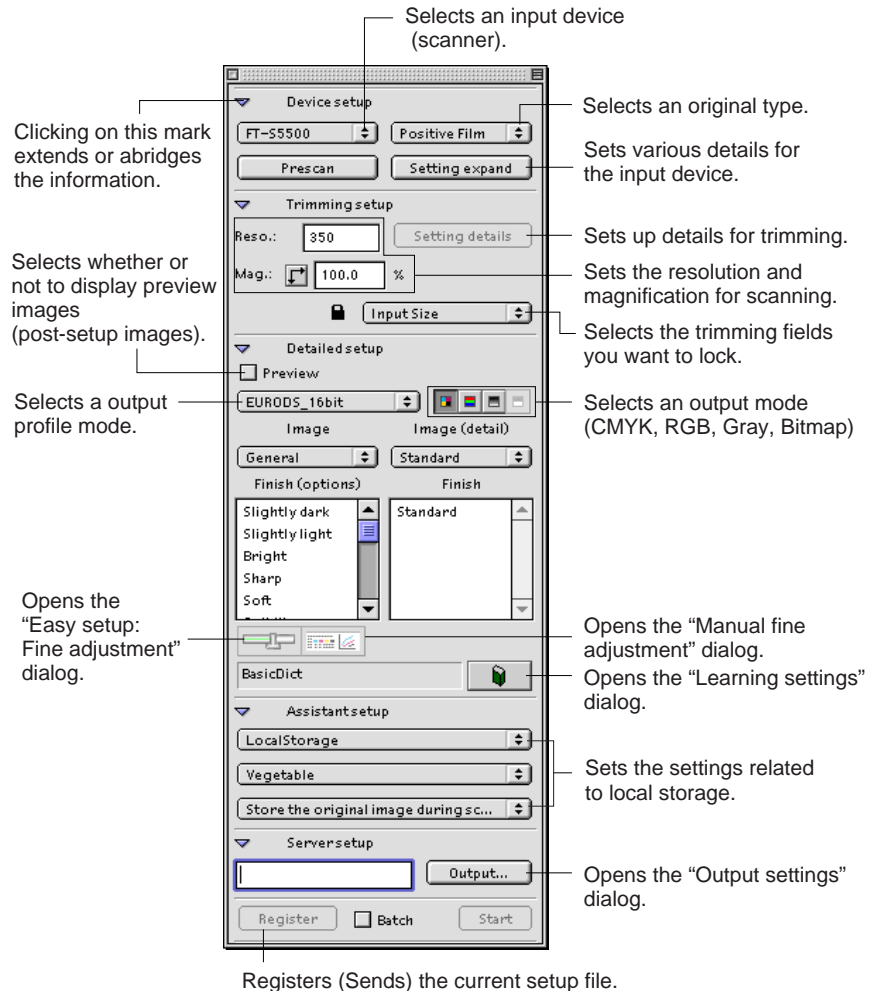


Note

For information on color models, refer to “Processing images with tools” in the “1.4 Setup essentials” section.

**Setup palette window (Easy Setup palette window):**

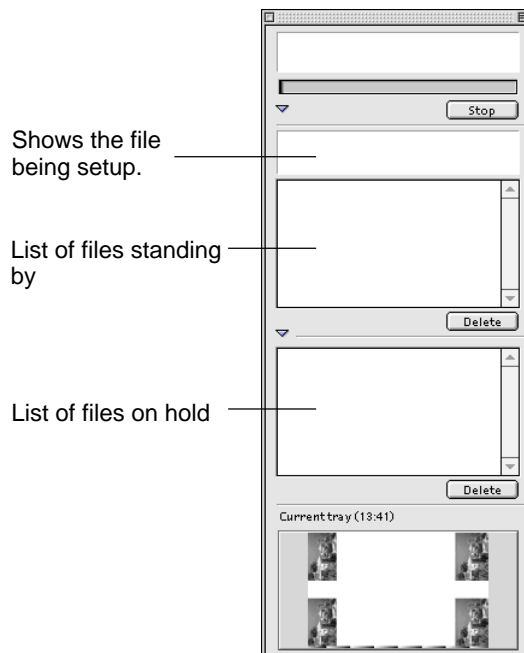
This is used to enter choices concerning the image type, appearance and color mode categories.

**Note**

These setup settings can also be chosen on the prescan window, but the preview function can not be used.

**Server Management palette window:**

After you decide the setup method, this palette window allows you to check the state of file already sent to the server and monitor standby information.

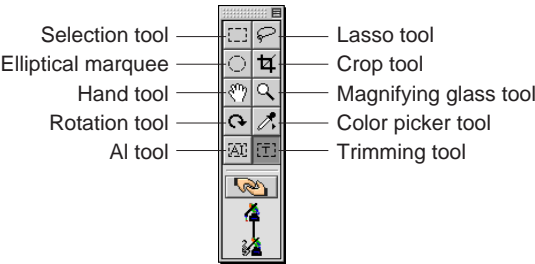




**Tool box**

When the Image window is active, the following tools are contained in this box:

**Note** Refer to “Processing images with tools” in the “1.4 Setup essentials” section for information on using the tools.



(When using client/server environment)



(When using server assistant environment)

## 1.2 Inputting images

The following shows how to input images to ColorGenius after prescanning originals with the FT-S5500. Prescanning means that the Original Tray on the FT-S5500 is scanned at low resolution (selected from 36/72/144/216/288 dpi). You can check where the originals are positioned on the scanning glass, by viewing them on the client via the server.

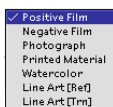
In addition to using images input from the FT-S5500, it is also possible to open image files input or saved from another scanner.

**Note** For how to set the resolution for prescanning, refer to “Setup regarding prescanning” in the “4. FT-S5500 setup” on Chapter 2.

### Selecting the type of input original

Before starting prescanning, you must choose the input type. There are six types of originals; Positive film, Negative film, Photograph, Printed material, Water color, Lineart (reflection), and Lineart (transparency) and so on.

The light source used for scanning by the FT-S5500 will be determined by the type of input original chosen. If Positive film, Negative film, or Lineart (transparency) is selected, scanning is performed using the transparency light source. If Photograph, Printed matter, or Lineart (reflection) is selected, the reflection light source is used. Note, if the type of input original is set incorrectly, a proper scan is impossible.



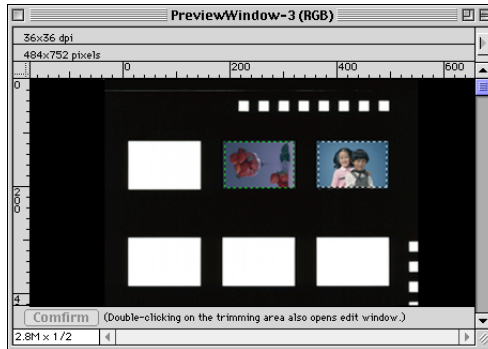
#### To select the type of input original:

Choose one of the original types from the “Original” menu in the setup palette window.

**Note** For details on inputting linework, refer to Chapter 6 “Line Art”.

## Starting prescanning

Click “Prescan” in the setup palette window. The FT-S5500 starts prescanning, and when it is finished, the Prescan window appears.



### Note

If you change the type of original to be scanned from transparency to reflection (or vice versa), ColorGenius will need approx. a 3-minute standby before stabilizing the light amounts from the new light source. In such a case, the Standby dialog box, in which real time is indicated, appears, and prescanning is performed when the light amounts become stabilized.

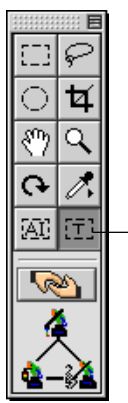
If you click on the “Enforce” button while selecting the Standby dialog box, you can execute prescanning even when the light amounts have not been stabilized yet. However, if you execute prescanning just after the alternative light turns on, you cannot acquire a high quality image.

### 1.3 Trimming

FT-S5500 has the ability to recognize the position of the input original automatically from the received amounts of applied light penetrating through the original or the applied catoptric light from the original during prescanning. With this feature, if you set multiple originals on the FT-S5500, trimming for these originals can also be done by recognizing the positions of each of the originals automatically. However, in some cases, since the trimming area may contain unnecessary portions around the original, you are required to modify the trimming to the individual original so as to acquire an exact trimming area. The areas specified in this trimming will be the areas that are actually scanned.

Two trimming methods can be used: the Trimming tool, or values directly input to each relevant field in the detail trimming setting dialog.

#### Modifying a trimming area



Trimming tool

If you set multiple originals, trimming areas for each of these originals are displayed in the Prescan window. Choose the trimming tool and click the original for which you want to modify the trimming area. The color of the dotted line indicating the trimming area turns green. When you point the cursor to any corner or side of the rectangular box, the shape of the cursor will change and you can then modify the selected area. Dragging the mouse with the cursor in the center of the selected area allows you to move the entire selection in any direction.

If you want to modify the trimming area of other original, select the original (the area will be shown in a green dotted line) and modify the position of the selected area following the same procedure as the above.



**Note**

In the prescanned image, you can enlarge or reduce the image (with the magnifying glass tool), scroll the visible

portion of the image (with the hand tool) or modify the color information of the pixels in the image (with the color picker tool). For details, refer to the “Processing images with tools” in the “1.4 Setup essentials”.

You cannot use the trimming/lasso/clip/rotation/AI tools in the Prescan Window.

### **Add or delete the trimming area**

You can add a new trimming area other than the area which has been recognized automatically or delete unnecessary portions of the trimming area.

#### **To add a trimming area:**



If you position the cursor in a place other than the trimming area in the Prescan Window, the cursor changes to a cross-hairs cursor with a + mark next to it. In such a case, positioning the cursor at a start point, dragging the mouse to the desired point and releasing it will allow you to set a new trimming area.

#### **To delete a trimming area:**



If you press the Option key, the cursor changes to the cross-hairs cursor with a - mark next to it as seen on the left.

In such a case, clicking the mouse while placing the cursor within the trimming area will allow you to delete the selected trimming area.

#### **Note**

Note that if you click the mouse when placing the cursor within an area other than the trimming area while holding down the Option key all trimming areas are deleted.

## Trimming by inputting values

Click the “Setting details” button in the setup palette window. A dialog box appears and displays a number of fields for inputting the start point, input size and output size.

Clicking on the right-angle arrows icon displays a dialog box for inputting the horizontal or vertical magnification values individually.

If you enter a value directly into the locked field, the lock is released and one of the other previously unlocked items becomes locked.

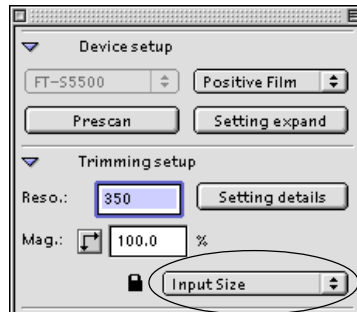
In the “Start point” field, the distance between the origin on the Original tray glass and the start point (upper left corner of the trimming area) is displayed. In the “Input size” field, the distance between the start point and the end point (lower right corner of the trimming area) is shown. The measurement units of the start point and input size can be either “mm”, “inches” or “Customized Unit”. However, the measurement units of the output size can be selected from among “mm”, “inches”, “pixels” or “Customized Unit”.

At right of the individual “Magnification”, “Input size” and “Output size” fields, lock icons are displayed, and one of them is shown locked. If you do not want to change the value in the field, lock it.

When you enter a value into either of the two unlocked fields, the other value is automatically calculated and input while the value in the locked field remains unchanged. However, if you enter a value directly into the locked field, the field becomes unlocked and one of the fields previously unlocked becomes locked.

**Note**

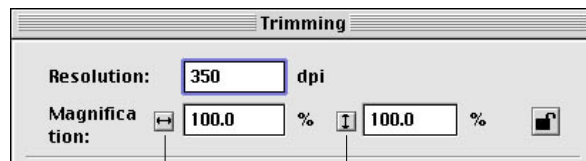
You can also specify the trimming fields you want to lock from the setup palette window.



### To lock/unlock the horizontal to vertical ratio:

Clicking the perpendicular double arrow icon to the left of the “Magnification” field displays an area with separate fields for horizontal and vertical magnification, which you can then set individually.

An area with separate fields for entering horizontal and vertical magnification individually.



Clicking on either of the double arrow icons changes the values for both horizontal and vertical magnification to the value of the chosen icon.

This shows the display area for individually setting both the horizontal and vertical magnifications. To apply different horizontal and vertical magnification ratios, leave this area displayed after the desired ratios are entered in the respective fields.

If you subsequently click on either of the double arrow icons, it will change this area back to the previous unified display and enter the value to the right of the clicked icon for both the horizontal and vertical magnification ratios.

In other words, leave the display area for individual magnification settings open to apply different horizontal or vertical ratios, or click on either double arrow icon to apply its value to both horizontal and vertical magnification.

**When the magnification has been locked:**

- If the start point is changed, the trimming frame will move.
- If either input or output size is changed, the other will change in proportion to the magnification.

**When the input size has been locked:**

If you lock the input size while the horizontal to vertical ratio has been locked, a chain icon will appear. The horizontal to vertical ratio for the output size won't change.

- If the start point is changed, the trimming frame will move.
- If either the magnification or the output size is changed, the other will change in proportion to the input size.

**When the output size has been locked:**

When the horizontal to vertical ratio has been locked and you lock the output size, a chain icon will appear. The horizontal to vertical ratio for the input size won't change.

- If the start point is changed, the trimming frame will move.
- If either the magnification or the input size is changed, the other will change in proportion to the output size.

**Edit window**

When trimming is finished, click the "Confirm" button at the bottom of the "Prescan" window or, click the "Confirm" button or double-click on the trimming area in the Prescan window to enlarge the trimmed area.

This Image window is called the "Edit" window. A lock mark appears in the upper-left of the trimmed area on the prescan window to indicate that the trimming area can not be modified. At this point, you can create setup data in the Edit window.

**Note**

The setup can also be performed on the prescan window (without pressing the "Confirm" button after the trimming area is set), but the preview function. Also, it is not possible to setup the AI analysis area, or rotate, crop, or change the image size. can not be used.





### Display in the Edit window

File information are displayed at the top and bottom of the window, as are rulers at the top and the left sides. The file size is shown at the bottom of the window, while the image dimensions are shown at the top. This information can be shown or hidden, using menu commands accessible via the button at the extreme right of the top ruler.

### Overlap display and line-up display

In the edit window, the pre-setup image (reference image) and post-setup image are displayed at the same time. Therefore, setup can be performed while comparing those two images.

Clicking either of the two buttons (shown below) in the edit window switches the conditions for two image display, between having the images overlap or line up.



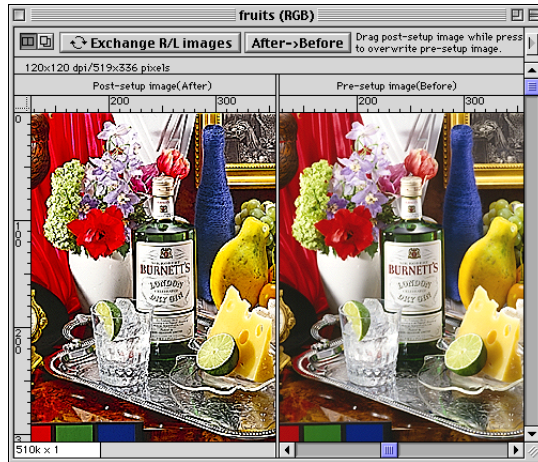
### Overlap display:

The pre-setup image and post-setup image overlap each other in the edit window.

Clicking the "Pre-setup img.(Before)" button brings the pre-setup image to the front.

Clicking the "Post-setup img.(After)" button brings the post-setup image to the front.

Clicking the "After→Before" button replaces the pre-setup image with the post-setup image.

**Line-up display:**

The pre-setup and post-setup images are lined up on the right and left in the edit window.

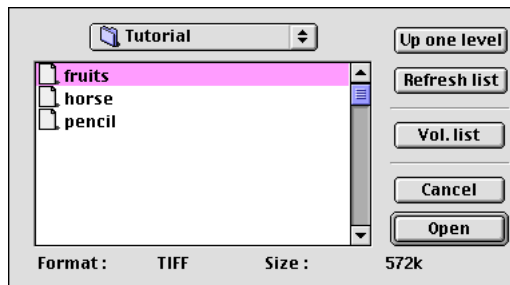
Clicking the “Exchange R/L images” button switches the position of these two images.

Clicking the “After→Before” button, or dragging and dropping the post-setup image to the pre-setup image while pressing the control key, replaces the pre-setup image with post-setup image.

**Opening an image file**

You can also process image files in which images input from another scanner are saved. However, when setting up the image by opening the file, the full setup commands are only used for the RGB image.

- 1) Select the “Open” command from the “File” menu.

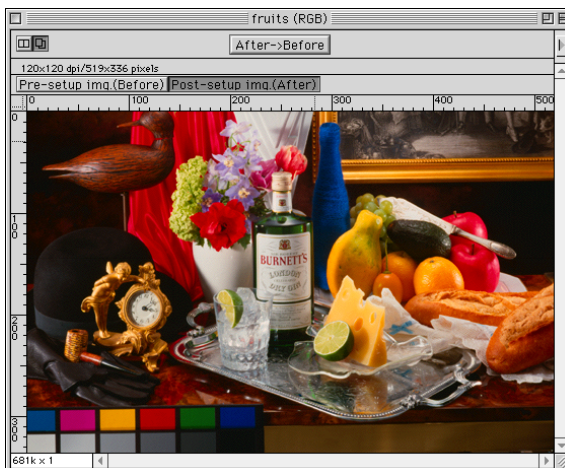


**Note**

In the client/server environment, pressing the Option key switches the “Prescan” button to the “File input” button in the setup palette.

It is also possible to open an image file by clicking the “File input” button.

- 2) Select a file and then click “Open”. The image file will be opened.



**Note**

When opening an image file in a client/server environment, its low resolution image is displayed on the client as also occurs when inputting the image from the scanner.

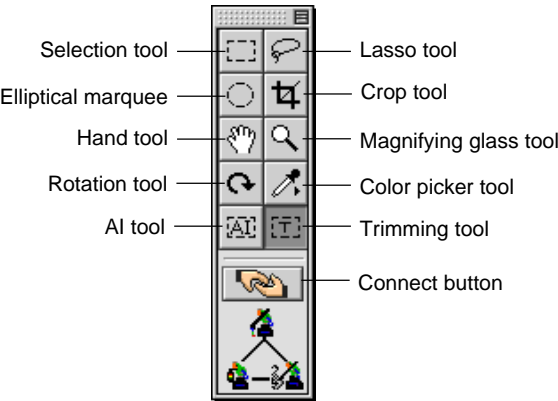
If the file contains more than 1MB of data, the number of pixels in the image is reduced to 1MB or less, regardless of the digital dimensions of the file.

1.4 Setup essentials

When the trimming has been completed and the Edit window is displayed, creation of setup data begins. When trimming multiple originals sequentially in the Prescan window, click inside the image you want to start setup on (the outer edge of the trimming area turns green), and then click the “Confirm.” button. The Edit window is displayed.

Processing images with tools

Using the tools contained in the Tool box, you can perform image selection, cropping, magnification/reduction, scrolling, color selection, rotation, trimming and setting the area for AI analysis.




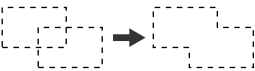

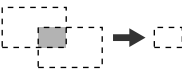


Selection tool:

Selects a rectangular area. Selecting this tool changes the cursor to a cross-hairs cursor in the Image window. Placing the cursor at a start point and dragging the mouse in any direction displays a rectangle with a dotted line. When you release the mouse button, the area in the rectangle will be selected. After selecting an area, when you move the cross-hair cursor into the area, you can drag the area in any direction. Commands for rotating the image can be executed after selecting the area with this tool. Commands for rotating the image can be executed after selecting the area with this tool.

You can draw a square area by dragging this tool while you are holding down the shift key.

The table below lists the keys that are held down while you drag this tool and the respective results.

Key to be held down	Cursor shape	Result within the area
Option key		The area where the currently selected area overlaps the previously selected one will be deleted. 
Command key		The currently selected area will be added to the previously selected one. 
Option + Command keys		The area where the currently selected area overlaps the previously selected one will be selected. 



If you select “Target reverse area” from the “Edit” menu, the area outside of the previously selected area will be selected.

**Lasso tool:**

Allows you to designate a selected area freehand. Selecting this tool changes the cursor to a lasso in the Image window.

Placing the cursor at a start point and dragging the mouse displays dotted lines which track the movement of the cursor. When you release the mouse button after drawing an arbitrary shape and returning to the start point, the enclosed area will be selected. (If the area is not closed, a straight line between the start point and the end point will be drawn.)

After selecting an area, when you move the lasso cursor into the area, the cursor will turn into an arrow, which allows you to drag the selected area in any direction.

Note

With this tool, you can add and delete selected areas as performed with the selection tool.

**Elliptical marquee:**

Selects an elliptical or a circle area.

You can draw a circle area by dragging this tool while you are holding down the shift key.

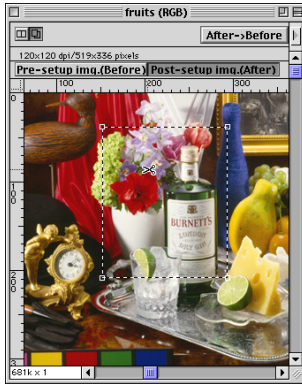
Note

The area modification methods are the same as for the selection tool.

**AI tool**

Selects an AI analysis area.

The AI analysis area will be displayed in the red frame.

**Crop tool:**

Selects a part of the image and discards the rest. After choosing an area you want to crop (in the same manner as the selection tool), a small square box appears at each corner of the selected area. Placing the cursor on one of these marks and dragging the mouse changes the cropped area. When you move the cursor into the selected area, the cursor turns into a pair of scissors. Then, when you click the mouse button, the area outside the selected area will be erased.

**Hand tool:**

Scrolls the visible portion of an image when a magnified image is not contained within the Image window. Selecting this tool changes the cursor to a hand. Scrolling is possible by dragging the hand in any direction within the image.

**Magnifying glass tool:**

Enlarges or reduces an image. Selecting this tool changes the cursor to a magnifying glass, showing a “+” mark inside. Placing the cursor in the image and clicking it enlarges the display. Press the Option key and the magnifying glass will show a “-” mark. Then, when you click the mouse button, the image will be reduced. Each click will double or halve the magnification.

Note that the center of magnified view will display the area where the cursor was located when clicked. The image can be magnified a maximum of 16 times, or reduced to 1/16th of its original size. When the enlargement/reduction rate reaches its limit, the magnifying glass will be blanked out.

When displaying an enlarged (or reduced) image, double-clicking the magnification glass in the tool box restores the image to the default size.

Drag the square box in the direction you want to rotate.



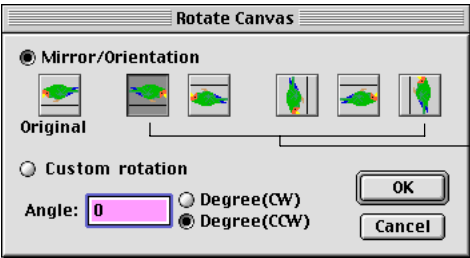
**Rotation tool:**

Rotates an image an arbitrary angle. When you choose this tool, two perpendicular lines with small square boxes at either end are displayed in the Image window.

Place the cursor on any of the boxes and drag it in the direction you want to rotate the image. The cross formed by these perpendicular lines shows the direction and angle of rotation. After the angle of this cross mark matches the intended degree of rotation, position the cursor near its center. When its shape changes to a gavel or hammer, clicking the mouse will finally rotate the actual image in the specified direction and angle. The “Orientation” command mirrors the image vertically or horizontally, or rotates the image by a specified angle.

**To use the “Orientation” command:**

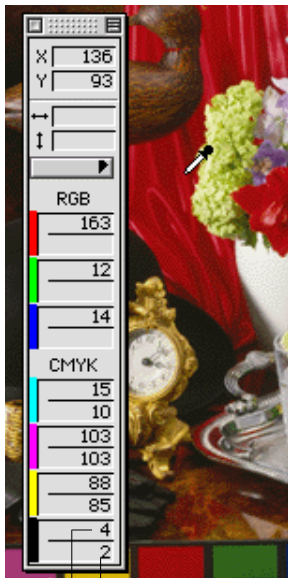
Choose “Pre-setup/Rotate Canvas...” from the Image menu.



These icons indicate an image's possible orientations (mirrored and/or rotated).

Using “Mirror/Orientation”, you can mirror the image or rotate it in 90-degree increments. The bird icon indicates that an original has been either flipped or rotated. Click the icon indicating the direction you want to rotate or flip the image. Selecting “Custom rotation” allows you to rotate the image simply by setting the angle and direction of rotation.





Color information after setup  
Current color information

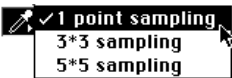
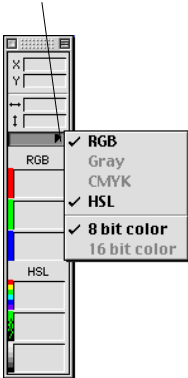
### Color picker tool:

Displays color information about the pixel in the image that the cursor is placed on. The color information (both current information and after setup) is displayed on the Information palette window. The Color picker tool is mainly used when setting the sharpen/unsharpen selected colors during Manual fine adjustment, when measuring color information for a multi-point palette, and when setting the “HD”/”SD” density during Manual fine adjustment.

The information concerning the selectable color models is displayed on the Information palette window. Clicking the triangle mark on the color information displays the selectable color models, and the color information on the selected color models is displayed.

Color model	Description
RGB	R, G, and B separations are described in terms of tone values ranging from 0 to 255 (for 8-bit color images) or from 0 to 65535 (for 16-bit color images).
Gray	The K separation is described in terms of density values ranging from 0 to 100%.
CMYK	C, M, Y, and K separations are described in terms of density values ranging from -750 to 850%.
HSL	Hue (H) is expressed as an angle on the standard color wheel ranging from 0 to 360 degrees, saturation (S) by a percentage ranging from 0 to 100% (gray to pure color), and luminance (L) by a percentage ranging from 0 to 100% (black to white).

The following items can be chosen.



Displays color information.

- For CMYK or Grayscale images

Choosing any other mode is not allowed. For a CMYK image, only “CMYK” can be selected, and “8-bit color” or “16-bit color” can not.

- For RGB image

When outputting an image in CMYK mode, “RGB” or “CMYK” can be selected.

When outputting an image in Grayscale mode, “RGB” or “Gray” can be selected.

When outputting an image in RGB mode, “RGB” or “HSL” can be selected.

For 48-bit RGB images (16-bit color depth for each R, G and B), “8-bit color” or “16-bit color” can be selected.

Clicking the Color picker tool displays the following menu, so that you can change the sampling area. 3\*3 sampling has been set by default. Selecting 3\*3 or 5\*5 sampling displays the mean value of 9 or 25 pixels, respectively, calculated from the center of the cursor position.

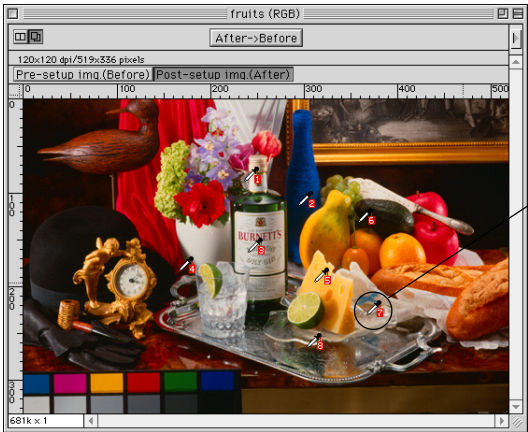
## Adding/deleting sampling areas

### Adding sampling areas



Selecting the Color picker tool displays the multi-point palette and the cursor changes to the color picker cursor, with a + mark next to it.

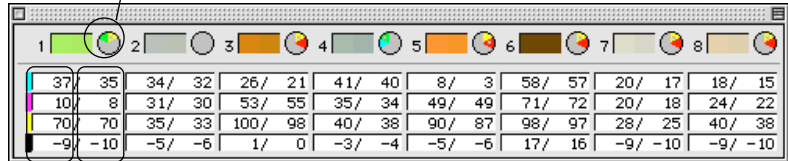
By clicking an area with this cursor, up to 8 areas can be selected as sampling areas.



A number is shown to the lower-right of the image picker cursor.

**Multi-point palette**

Displays the hues that can be corrected with CMYK color correction. (This palette will not be displayed for the RGB or Grayscale color correction.)



Shows color display and color information after modification

Shows color display and color information before modification

**Deleting the sampling area**

To delete sampling areas, press the option key. The cursor will change to the image picker cursor with the mark shown left. Click a sampling area you want to delete with this cursor.

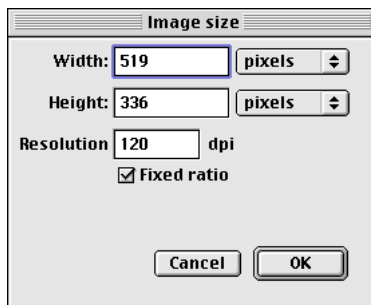
**Changing the image size and resolution**

The input image's resolution and size (width/height) can all be changed. The relations between image size, resolution and file size are explained below:

- Enlarging the image size (without changing the resolution) creates new pixels based on the color information on the image, and thus increases the file size.
- Reducing the image size (without changing the resolution) deletes pixels from the image, and thus reduces the file size.
- Changing the resolution also changes the image size proportionally, but does not affect the file size because the number of pixels remains the same.

**To change the image size and the resolution:**

- 1) Choose “Pre-setup/Image Size” from the Image menu.



- 2) Choose the desired measurement unit from the Unit menu.
- 3) Input the new values for width, height and resolution.

Checking the “Fixed ratio” option allows you to change the image size while maintaining the same horizontal to vertical aspect ratio. If you subsequently enter a value into either field (width or height), the other value is automatically calculated and input based on the specified ratio.

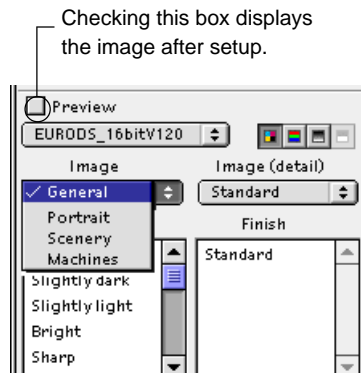
**Note**

When the image is input from the FT-S5500, you cannot change the resolution of the images (the resolution field doesn't appear in the dialog box).

## Selecting the image

Choose items from the “Image” menu in the Setup palette window which correspond to the image in the original. The choices in the “Image” menu differ depending on the type of input original selected in the setup palette window. When the type of input original is other than Negative, you can choose either General, Portrait, Scenery or Machines the “Image” menu to the left. More detailed setting can be selected from the menu on the right.

When the type of the input original is Negative, the “Image” menu is changed to the name of the film. Select the film name from the menu to execute the setup according to the film properties.



**To check the image after setup:**

Checking the “Preview” box in the Setup palette window displays the image that will be executed by the selected setup commands (image type, appearance and output image mode).

**Image keywords and descriptions**

Image keyword		Description
General	Standard	Sets the highlight and shadow points to standard values, and corrects the color cast if one appears in the image. This is the standard setup function, which should best preserve the tone and range of the original.
	Foods	Removes the somberness of hue (red or green) that meat or vegetables often suffer from, finishing foods more brightly, while maintaining most of the standard settings.
	Jewels	Provides corrections so that jewels will have a three dimensional effect and the highlight areas will become more glossy, by using a sharpness correction in addition to the standard settings.
	WhiteChinaware	Sets the highlight point so that white chinaware will look whiter, while adjust sharpness so that the smoothness of the surface will be enhanced.

General	Faded color	Extracts unnecessary colors at the highlight/shadow point, and corrects the color cast by broadly removing these color components.
Portrait	Standard	Since human flesh is comparatively pale, if this is processed with standard settings, the skin may become grayish. This function invokes a color replacement process for flesh areas to reduce such color casts and finish the image with brighter flesh colors.
	Flesh intensive (Light)	Slightly reduces highlight lightness from the standard setup, and finishes so that flesh colors won't become pale. As with the standard portrait setting, a color replacement formula is used for flesh areas.
	Flesh intensive (Dark)	Removes the color cast in a way similar to the standard portrait setup, and lightens mid-tones. This function also adjusts the sharpness to prevent roughness of the flesh. As with the standard portrait setting, a color replacement formula is used for flesh areas.

Scenery	Standard	Removes the blue cast from the image, since originals of scenery are, in most cases, cast in blue. The blue in leafy scenery and the sky are clearly represented using the color collection function.
	Night scenes	Finishes the highlighted portions (such as lights) slightly brighter while maintaining the darkness of the images. However, since a night view is illuminated by colored light, too much whitening shall also be avoided.
machines	Standard	Sets the sharpness so that the edges in the image are clear. However, to produce the sharp, cold feeling of machines, this function adjusts the thickness of the edges to create fat, bold lines around edges in the image.
	Domestic appliances	Retouches the surface of white/pale domestic appliances to smooth them to avoid a rough appearance.

**Note**

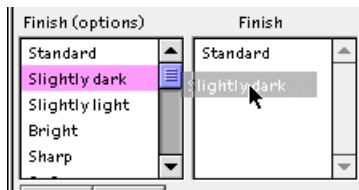
“USER: 1”, “USER: 2”, etc in the “Image (detail)” menu are spare keywords. The settings for these items are the same as those set for “Standard” before shipment.



## Selecting the finish

Drag and drop the keyword you wish to use from the “Finish (options)” box to the “Finish” box in the Setup palette window.

- Note**
- Several keywords can be selected from the “Finish (options)” box. Even if conflicting keywords are selected at the same time, such as “Slightly dark” and “Slightly light”, an appropriate process will be carried out.
  - If you register settings with the server and execute a setup without selecting a keyword, the scanned image will be saved without any finish processing. The image will be output in RGB mode.
  - You cannot select “Standard” and other keywords simultaneously.



**Finish styles and description**

Finish style	Description
Standard	Does not add any correction.
Slightly dark	Slightly darkens the mid-tones.
Slightly light	Slightly lightens the mid-tones.
Bright	Removes the somberness of the image, and raises the saturation.
Sharp	Strengthens the sharpness correction level.
Soft	Weakens the sharpness correction level.
Solidity	Darkens the mid-tones, and widens the sharpness mask to thicken the contrast boundaries.
Whitish highlight	Finishes the highlights brighter.
Contrasty	Emphasizes the contrast.
Original atmosphere	Reduces the color-cast correction level to leave the original pale colors. This function is suitable for originals taken under candle light or special lighting sources.
Highlight dropout	This raises the reference density of the highlight. Therefore, select this item, for example, when scanning printed material and you want the dots in blank sections of the paper to be eliminated.

**Note**

“USER: 1”, “USER: 2”, etc in the “Finish(options)” menu are spare keywords. The settings for these items are the same as those set for “Standard” before shipment.

**Selecting the output image mode**

Choose the mode that the scanned image will be converted to. When the input image is set to RGB mode, it can be converted to CMYK, RGB or grayscale mode.

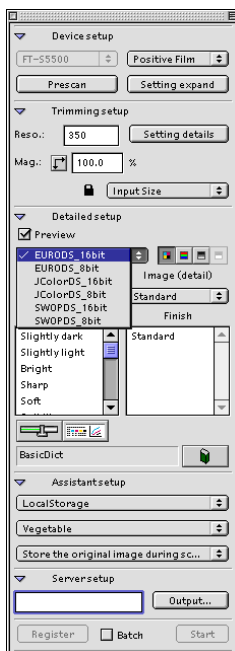
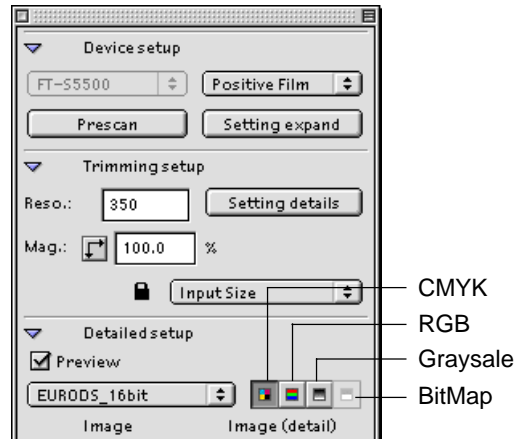
**To select the output image mode:**

Choose any image mode from the “Mode” menu in the Setup palette window.

**Note**

When the original type is set to “Line Art” or “Dot Finder (option)”, “Bitmap” is selected here.

When the input image is set to RGB mode, “CMYK”, “RGB” or “Grayscale” can be selected for the output image, but when set to CMYK or Grayscale mode, only the same mode can be selected.

**To select the output profile:**

In ColorGenius, DSstdRGB data, which is an RGB color model optimized for image processing, is converted to the CMYK data (or RGB or Grayscale) according to the "output profile" (This is a dedicated profile and different from ICC profiles.).

Choose any output profiles that match each original type and output condition.

**Note**

The "output profile" can be customized using the Make Profile Tool. (Refer to Chapter 5 "Using the Make Profile Tool".)

It is also possible to reflect the settings specified by the manual setup on the output profile (refer to “4. Manual fine adjustment”).

The profiles shown below will be installed during ColorGenius installation. Choose the optimum profile for your type of printing ink.

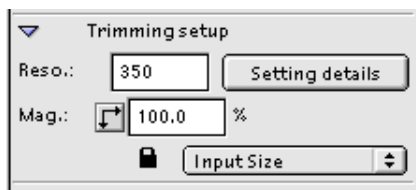
Profile name	Contents
• JColorDS_8bitV120.C5T	A profile compatible with Japanese printed materials. Use this profile when outputting 8bitRGB-format images. This is the default profile.
• JColorDS_16bitV120.C5T	A profile compatible with Japanese printed materials. Use this profile when outputting 16bitRGB-format images.
• EURODS_8bitV120.C5T	A profile compatible with European printed materials. Use this profile when outputting 8bitRGB-format images.
• EURODS_16bitV120.C5T	A profile compatible with European printed materials. Use this profile when outputting 16bitRGB-format images.
• SWOPDS_8bitV120.C5T	A profile compatible with North American printed materials. Use this profile when outputting 8bitRGB-format images.
• SWOPDS_16bitV120.C5T	A profile compatible with North American printed materials. Use this profile when outputting 16bitRGB-format images.

## Setting the resolution and the magnification

Set the resolution and the magnification for scanning. Set the values of the resolution and magnification (100%=1) individually so that the product of these values remains within the range from 20 to 20000. For example, if you set the resolution to 400dpi, the potential magnification within which you can set the value is 5 to 5000%. In addition, since the number of pixels which can be contained in each primary and secondary scanning direction for the output image ranges from 16 to 30000, and from 16 to 30000, respectively, please note that the resolution and magnification must be set so that the result will not exceed the allowable range.

### To set the resolution and the magnification:

Directly enter the values in the boxes in the setup palette window.

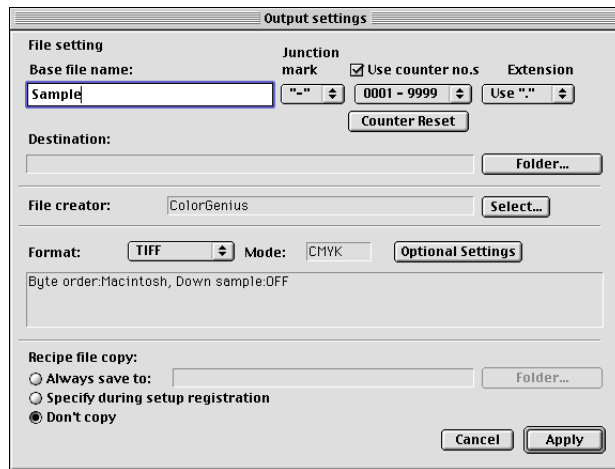


## Setting file output

Set the name, destination, and other setup items for image files to be output after scanning and setup are executed.

After the settings described below are all completed, click the “Apply” button.

Click the “Output” button in the setup palette window. The following dialog box will appear.



### File name:

Enter a file name in the “Base file name” box.

### Counter number:

Checking the “Use counter no.s” check box puts a counter number at the end of the file name.

The junction mark between the file name and the counter number can be selected from among “-”, “.”, “+” and “\_”.

Select the counter number range from among “0001 to 9999”, “1 to 9999”, “001 to 999”, “01 to 99”, or “1 to 99”.

e.g.) When the base file name is “abc”, the junction mark is “-”, and the counter number range is “0001 to 9999”.

1st file: “abc-0001”

2nd file: “abc-0002”

3rd file: “abc-0003”

If you want to return the counter number to 1, click the “Counter Reset” button.

**Extension:**

Set whether or not to apply an extension to saved file names.

Select one from among “None”, “Use “.” ”, and “Use “\_” ”.

e.g.) When the base file name is “abc”, the file format is “TIFF”, and the extension is “Use “.” ”.

File name: “abc.tif”

**Output destination:**

Click the “Folder...” button and designate the folder where output files should be stored.

The server’s storage device (hard disk) should generally be designated as the destination. When you wish to save a file on a storage device of a different computer on the network, first mount the other computer’s storage device on the server computer.

- Note**
- For the setting for the destination disk, refer to “1. Client/server environment setup” in Chapter 2.
  - Make sure not to select a folder or sub-holder of the ColorGenius EX for the output destination.

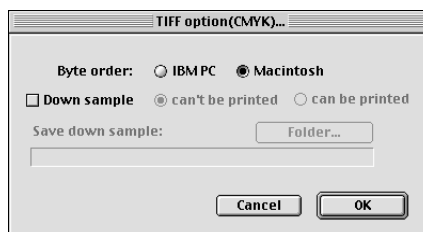
**Format:**

Select the file format from among “TIFF”, “EPSF”, “JPEG”, “Scitex CT”, and “Taiga,SPACE”.

**Optional settings:**

When “TIFF”, “EPSF”, “JPEG”, or “Taiga,SPACE” is selected for the file format, the corresponding optional settings become available.

- Note**
- “TaigaSPACE” is only available when the “DotFinder” option is selected.

**For TIFF format**

Byte Order

IBM PC	This box should be checked when the saved image file is to be used with an IBM PC.
Macintosh	This is the default setting in this dialog box.

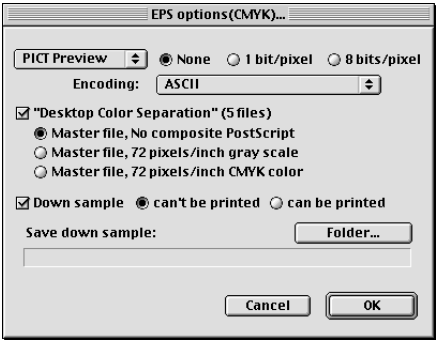
Down sample

If the CMYK mode has been specified as the mode after conversion, the Down Sample option appears. By checking this option, the image file is created in a low resolution so that another image database application will be able to read the file.

Can be printed	The image file is created in a resolution with which the image can be printed.
Cannot be printed	The image file is created in a comparatively low resolution for display on any monitor.

After making your selection, clicking “OK” sets the file name and destination.

For EPSF format



Preview

The settings concerning the data for preview are set. Select the image format from either the PICT or TIFF for preview.

None	Does not create PICT files for preview.
1 bit/pixel	Creates PICT files for black and white preview.
8 bits/pixel	Creates PICT files for 256-color or grayscale preview images.

Encoding

Select the encoding format from either the “ASCII”, “binary” or “JPEG”.

ASCII	Encodes the image data in the ASCII format.  If you will use the saved image with Windows, choose ASCII. However, if you choose ASCII, the digital dimensions of the output file become larger.
Binary	Encodes the image data in a Binary format.  The digital dimensions of the output file are rather compact compared with the one encoded in ASCII.
JPEG (Minimum quality; highest compression) JPEG (Fair quality; better compression) JPEG (Good quality; good compression) JPEG (Best quality; lowest compression)	Choose a compression setting from the four on the left. The lower the compression, the better the image quality will be. However, as the compression rate is reduced, more disk space will be required.

Desktop Color Separation

Desktop Color Separation (DCS) is an image format developed by Quark. If you check this option, the image is saved into five different EPS files (one master file and four CMYK color separation files are created in the EPS format).

The master file contains image data in low resolution with which the application where the file is transferred can preview the image and the link information for the master file and the 4 CMYK color separation files.



**Master file, No composite PostScript**

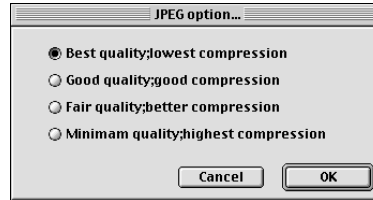
No image data in low resolution is contained in the master file.

**Master file, 72 pixels/inch gray scale**

72dpi grayscale images are contained in the master file.

**Master file, 72 pixels/inch CMYK color**

72-dpi CMYK images are contained in the master file.

**For JPEG format**

Best quality; lowest compression

Good quality; good compression

Fair quality; better compression

Minimum quality; highest compression

Choose a compression setting from the four on the left. The lower the compression, the better the image quality will be. However, as the compression rate is reduced, more disk space will be required.

At this point, scanning will start as soon as the file is registered in the server from the Server palette window. The Prescan window reappears and you can create setup data for another original. The settings of the previous original have been saved.

Therefore, it is possible to create setup data for multiple originals while switching between the Edit window and the Prescan window; you need not worry about saving the setup data.

**Note**

Even when the output settings or server registration haven't been set, the setup data will be saved.

**Recipe file copy**

The recipe file will be stored in the "ColorGenius: recipe" folder, and also can be copied to another folder. (Two identical recipe files can be saved in different locations.)

Always save to:	Click the “Folder” button and designate the folder where the copied recipe file will be stored. The recipe file will always be copied to the designated folder.
Set during setup registration	Each time, during server registration (when clicking the “Execute”, “Scan”, and “Register” buttons), the destination folder for the copied recipe file can be designated.
Don’t copy	The recipe file will not be copied.

1.5 Server registration

When the output settings are finished, register the settings with the server. When you registered them with the server, the queued files containing the setup data on the client will be sent to the server. The server lets the FT-S5500 start scanning when it receives the queue, and the settings of the scanned images are executed. The set images will be saved according to the set file name in the destination specified under “Output”.

Let us summarize the operations performed so far. The following are saved as setup data and then sent to the server.

- The trimming position specified in the prescan image
- Image processing (cropping, rotation, area selection)
- Selected image type
- Selected finish
- Selected color mode
- The file output destination and file name

Batch process ON/OFF



After entering the output settings, register them with the server. The setup file will be sent to the server and processing will begin. Three methods are available for processing, i.e. “Batch process” can either be enabled or disabled, by setting “Batch” on or off in the setup palette window.

When the batch process is deactivated (off):

Note

This operation cannot be performed in the multi-client/server environment.

The “Batch” check box should always have a check placed in it.

Clicking the “Scan” button (“Start” button for file processing) in the Server palette window sends the setup file to the server. When the server receives the setup file, scanning with the FT-S5500, processing the scanned images, and saving the results to the output destination will be immediately started as a batch process.

The client is freed from file processing after the setup file has been completely sent, so you can then start to create setup data on the next original.

The server will let the next setup file stand by while it is processing the setup file just sent (the next file is displayed in the standby list). When the current setup file has been completely processed, the processing of the next setup file will begin.

In such client/server environments, setup data for the next original can be created on the client while processing is being performed on the server. This feature is called “background scanning” and dramatically reduces waiting time by allowing efficient simultaneous setup preparations.

**When the batch process is activated (on):**

The name of the “Scan” button on the Server palette window changes to “Register.” Clicking this button sends the setup file to the server. The server does not start the processing immediately but displays the received files sequentially on the list.

When you click the “Start” button while multiple files are standing by, processing begins. The files are not executed in the order the server received them but in the order that allows the most effective scanning (the least scanner operation) with reference to the optical conditions set for scanning (scanning position, resolution, and magnification).

This method of first sequentially performing setup data creation for multiple files and then executing the files in a batch is called “batch scanning”.

**Note**

The check-mark in the “Batch” check box remains after the batch process is completed.

**When changing “Batch” from ON to OFF after the setup data has been registered on the server:**

**Note** This operation can not be performed in the multi-client/server environment. The “Batch” check box should always have a check placed in it.

Check the “Batch” check box, and register the setup data in the server management palette. Under this condition, removing the check-mark from the “Batch” check box starts the batch process.

The “Batch” check box remains unchecked after the batch process is completed.

**Sending the setup file**

To send the setup file from the client to the server, activate the Edit window for the original to be processed. When the Prescan window is displayed, click the desired original (the trimming frame color turns green) and click the “Confirm” button. The Edit window for the selected image will appear.

Sending the setup file via the Setup palette window. When the output settings have been completed, the setup file is sent to the server and the files are displayed on the server palette's standby list. You can then continue to create setup data for another original on the prescan window or edit window.

In the Server palette window, the list of transmitted files is displayed.

When the batch process is deactivated and there is no file currently being processed, the processing of the transmitted files will be started.

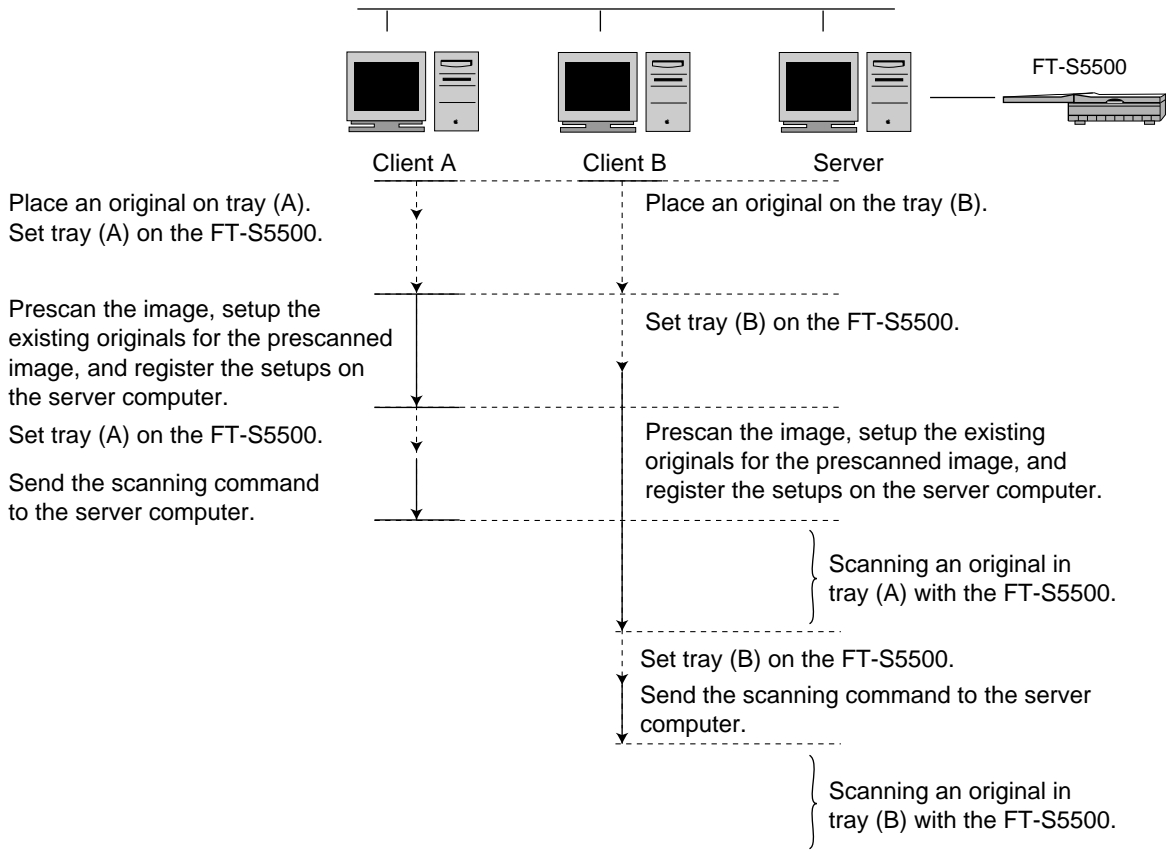
**Note** It is not necessary to click the “Confirm” button to register the setup file, but is necessary to preview it.

**Work example in a multi-client/server environment**

By using ColorGenius in a one server/two client computers (A and B) environment using multiple trays (A and B) as shown in the figure below, you can perform two operations simultaneously, and efficiently utilize one FT-S5500.

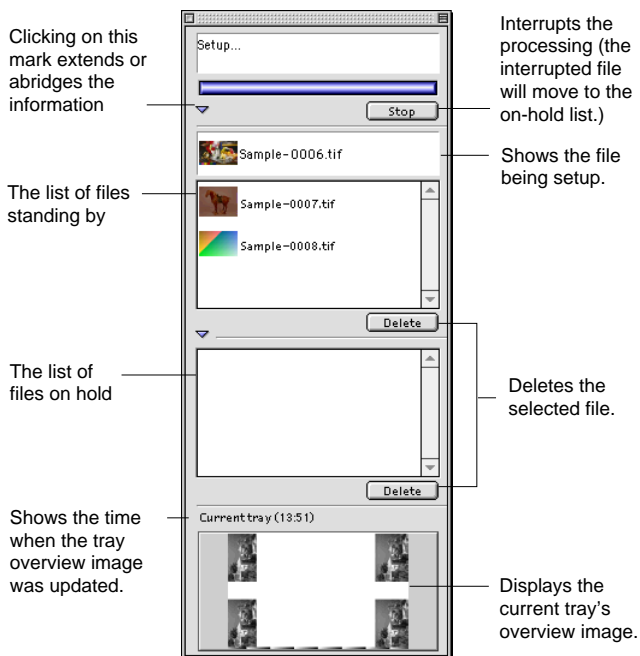
**Note** Before sending a prescanning or scanning command to the server computer from client computer A as shown in the

figure below, confirm that tray (A) has been set on the FT-S5500 by checking in the overview image in the Server Management palette. Likewise, before sending a prescanning or scanning command to the server computer from client computer B, confirm that the tray (B) has been set on the FT-S5500.



## Operating the Server Management palette

You can check the state of queue processing on the server and view the names of the files already sent to the server by using the Server Management palette. It is also possible to delay the execution of queue processing or delete files already sent to the server.



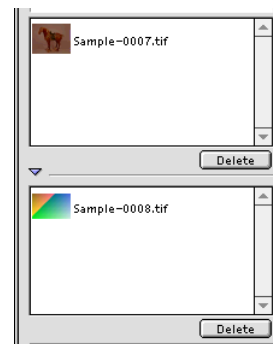
**Note** The overview display will automatically be updated whenever the FT-S5500's upper cover is opened or closed.

### To delay execution of a queue:

Drag the file you want to put on-hold from the standby list and drop it into the on-hold list.

The selected file is moved into the on-hold list and the execution of its processing is set to on-hold status.

To execute the processing of an on-hold file, move the file to the standby list with a drag & drop operation as above.



**To delete a queue:**

Click the file you want to delete in the standby or on-hold list (the name will be displayed in reverse video), then click the “Delete” button at the bottom of the appropriate list. The file will be deleted.

**To interrupt processing:**

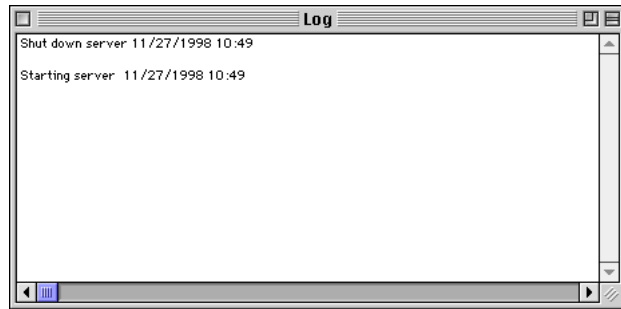
Click the “Stop” button to interrupt the processing during the execution of a setup. The interrupted file will be moved to the on-hold list.

**Note**

If you interrupt processing by clicking "Stop", all the scanned image files will be moved to the on-hold list. For opened and registered image files, only the selected files will be moved to the on-hold list.

**About Log Window (on the server)**

In the server’s Log Window, a variety of information on the processing state of the server, setup data description, and processing start and end times is displayed.

**To hide the Log Window display:**

Select “Hide Log” from the Preference menu. When the Log Window display is deactivated, select “Show Log” from the Preference menu if you want the Log Window to appear.

**To delete the log file:**

Select “Clear Log” from the Preference menu.

### **Quitting ColorGenius**

When quitting the application, first quit the client and then the server. Turn the power to the computers and the FT-S5500 OFF in the reverse order of launching (i.e. turn off the client first, then the server, and the scanner last).



## 2. Settings for using ColorGenius in a standalone environment

Using only the client application of ColorGenius, you can import and process image files.

- Note**
- In the standalone environment, actual images other than coarse images are displayed on the monitor and processed.
  - You cannot import image data from the scanner and perform batch processing in this environment.

### 2.1 Booting the computer

- 1) Turn the power to the computer ON.
- 2) Launch ColorGenius.

After the initial screen is displayed, the screen for the standalone environment appears.

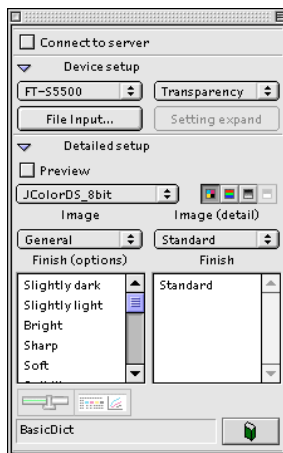
- Note**
- When a dialog box for selecting a server appears, click "Cancel".

## About the screen configuration

The following areas of the standalone environment have different screen configuration than the client/server environment. The other parts are the same as in the client/server environment.

**Note** For the screen configuration in the client/server environment, refer to “Configuration of ColorGenius screens” in the “1.1 Starting the program” section.

### Setup palette (Easy setup palette):



After selecting the setup commands (image type, finish, and color mode) and choosing “Save as...” from the “File” menu, the setup processing is executed at the full image resolution.

No parameters for resolution or magnification are displayed.

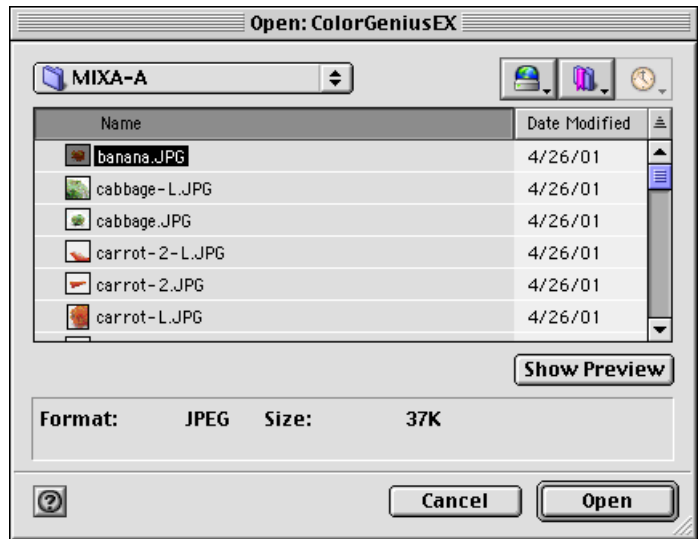
The Information palette, Profile palette is the same as in the client/server environment.

**Note** There is no Server Management palette window in the standalone environment.

## 2.2 Opening an image file

This section explains how to import images into ColorGenius in the standalone environment.

- 1) Select “Open” from the “File” menu, or click the “File input” button in the setup palette window.
- 2) Select the file and click the “Open” button.



## 2.3 Starting Easy Setup

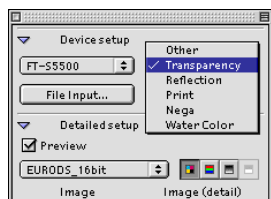
The operation above imports images into ColorGenius, but differs from similar operations in the client/server environment in that the actual full resolution images are displayed. That is, in the standalone environment, the setup commands are executed directly on the full resolution images.

### Selecting the type of input original

From the menu, choose the type of input image to select the original type in the setup palette window. The items in the Setup palette window's "Image" menu differ depending on the original type.

The original types are:

- Transparency
- Reflection
- Printed matter
- Negative
- Water color
- Others



### To select the type of input original:

Choose the desired original type from the "Original" menu in the setup palette window.

### Processing the image

If image processing is required, after the image is prepared (selected, cropped, etc.), use the various tools in the tool box to modify the image.

**Note** Use of all the tools is explained in "Image processing with tools" in the "1.4 Setup essentials" section.

### Selecting the image type, finish, and color mode

Choose the image type, finish, and color mode for output.

Note that the items in the "Image" menu differ depending on the type of original selected in the setup palette window.

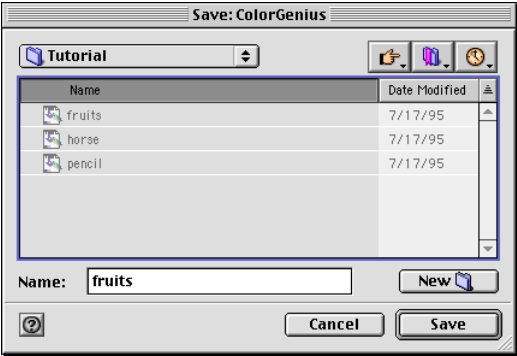
**Note** For more details on: image selection, see "Selecting the image type"; finish selection, see "Selecting the finish"; and the output image mode, see "Selecting the output image mode" in Section "1.4 Setup essentials".

### Saving the image

Save the setup image.

**To save the image:**

- 1) Choose “Save as...” from the “File” menu.



- 2) Designate the destination disk or folder.
- 3) Enter the file name.
- 4) Choose the format of the image file from the “Format” menu.  
Supported formats include “TIFF”, “EPSF”, “JPEG” and “ScitexCT”.
- 5) Choose “Continue editing after saving file” or “Close document after saving file”.

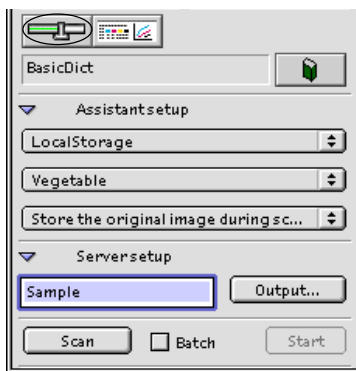
Continue editing after saving file	After the setup and file save are executed, the image affected by the setup is displayed in the edit window.
Close document after saving file	After the setup and file save are executed, the edit window is closed.

- 6) Click “Save”.
- When you select a file format other than “ScitexCT”, a format-specific dialog box is displayed. After entering the desired setting(s), click “Save”.

**Note** For details on the Save dialog box for each format, refer to “Setting file output” in section “1.4 Setup essentials”.

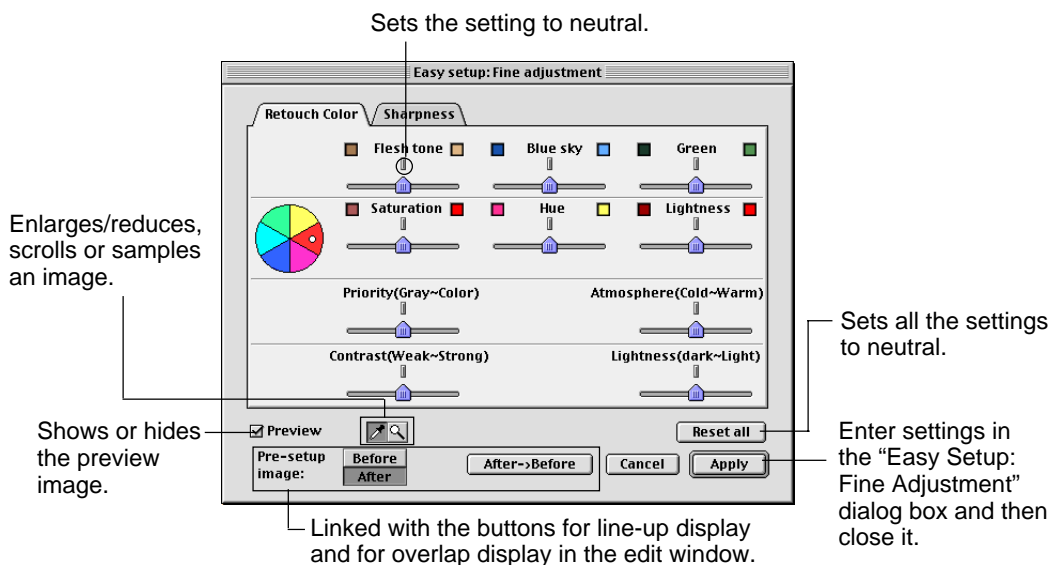
### 3. Fine adjustment with Easy Setup

Clicking the button shown below (called the “Easy setup: Fine adjustment” button hereafter) on the Setup palette, or choosing “Easy setup: Fine adjustment” from the “Image” menu, opens the “Easy Setup: Fine Adjustment” dialog box in which you can make more precise settings for color correction and sharpness.



#### 3.1 Opening the “Easy Setup: Fine Adjustment” dialog box

When the Image window (Edit window) is open, clicking the “Easy setup: Fine adjustment” button on the Setup palette opens the “Easy Setup: Fine Adjustment” dialog box.



### 3.2 Adjusting the overall contrast and lightness

The contrast (weak or strong) and lightness (dark or light) across the whole image can be adjusted with these sliders.



#### To adjust the contrast:

Moving the slider to the right raises the contrast level, and moving it to the left lowers the contrast.

#### To adjust the lightness:

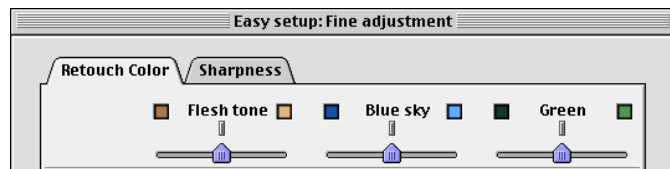
Moving the slider to the right lightens the image, and moving it to the left darkens it.

When adjustment is completed, click “Apply”.

### 3.3 Correcting colors

Correcting areas containing flesh tones, blue sky, or greens

Portraits or landscapes are occasionally used in input originals. When an original contains such images, the hues of a portrait’s flesh tones or the sky’s blue or landscape greens are important factors in the finish.



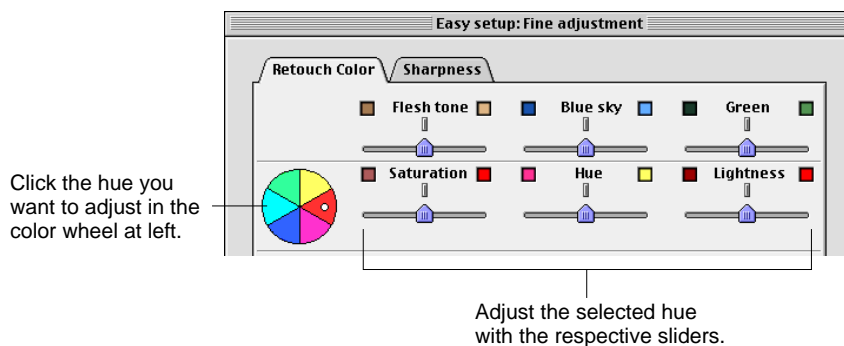
Using the sliders for flesh tone, blue sky or green allows you to brighten or darken only the areas containing such hues, while scarcely affecting areas containing other hues.

Moving these sliders to the left only dims the areas containing these hues, while moving them to the right brightens only these areas.



When moving the "Flesh" slider to the right (Bright).

## Correcting each hue



Choose a hue you want to correct from the color wheel in the dialog box, and you can correct the area containing this hue using the saturation, hue and/or lightness sliders.

Clicking the hue you want to change in the color wheel displays a round mark. When you operate the saturation, hue and/or lightness sliders, only the selected hue will be changed.

### To adjust saturation:

Moving the slider to the left increases the amount of complementary color in the selected color (the color opposite to it in the color wheel) and thus dims the selected color. When you move the slider to the right, it decreases the admixture of complementary color and thus brightens the selected color.





When moving the “Saturation” slider to the right (Increase) for the selected red hue (on the color wheel).

### To adjust hue:

Moving the slider to the left brings the selected color closer to the next hue in the color wheel in the clockwise direction. Moving it to the right brings the selected color closer to the next hue in the color wheel in the counterclockwise direction.

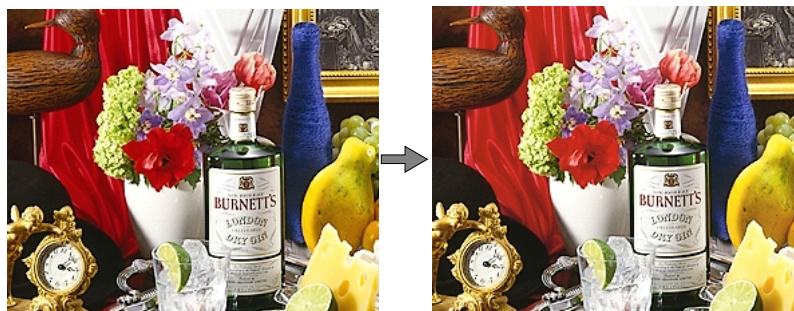
For example, if you choose red from the color wheel and move the slider to the left, the red hue in the image is gradually replaced with magenta. Conversely, if you move it to the right, the red hue is gradually replaced with yellow.



When moving the “Hue” slider to the right (toward the yellow) for the selected red hue (on the color wheel).

**To adjust lightness:**

Moving the slider to the right increases the R, G, and B tone curves in areas containing the selected color. Moving it to the left decreases the R, G, and B tone curves in these same areas.



When moving the "Lightness" slider to the right (Increase) for the color selected red hue (on the color wheel).

## Reducing the influence of color correction on gray areas

If a color is changed to another with the color correction commands, gray areas in the image may be muddled or otherwise affected and consequently distort the gray axis. To prevent this impurity problem, move the “Priority (Gray <-> Color)” slider to the left (Gray), and grayish areas (where the R, G, and B tone curves are similar) will be replaced with true gray. Note, however, that this replacement reduces the saturation level, and thus can add a gray cast to the pale colors in the image.

If you move the slider to the right (Color), it will inevitably distort the gray axis, but it will also increase the saturation of grayish parts, which will allow a brighter overall finish.

When moving the “Priority (Gray <-> Color)” slider to the left (Gray).



When moving the “Priority (Gray <-> Color)” slider to the right (Color).



## Changing the overall tone to a colder/warmer feeling

Images that contain mainly reddish hues look warm, while those that mainly contain bluish hues look cold. The “Atmosphere (Cold<->Warm)” slider allows you to correct the overall tone to a colder or warmer color. When correcting an RGB image, moving the slider to the right (Warm) increases the R tone curve and reduces the G tone curve. Conversely, moving it to the left (Cold), reduces the R tone curve and increases the G tone curve.

When correcting a CMYK image, moving the slider to the right (Warm) increases the M density and reduces the densities of C and Y.

Conversely, moving it to the left (Cold), increases the C and Y densities and reduces the M density.

When moving the “Atmosphere (Cold <-> Warm)” slider to the left (Cold).



When moving the “Atmosphere (Cold <-> Warm)” slider to the right (Warm).

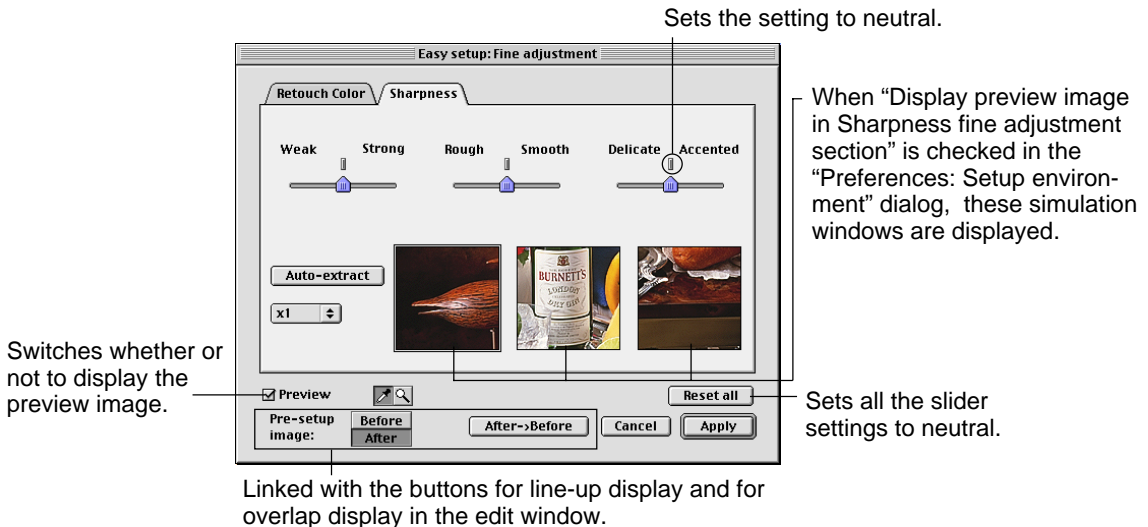


### 3.4 Adjusting sharpness

You can adjust the sharpness in the “Easy Setup: Fine Adjustment” dialog box. Sharpness refers to the effect that increases image intensity by increasing the contrast level of adjacent pixels.

#### Setup dialog box for the “Fine adjust sharpness”

Click the “Sharpness” tab in the “Easy setup: Fine adjustment” dialog, and the sharpness fine adjustment section will be displayed.



#### Note

These simulation windows do not appear if you connect the scanner in a client/server environment. These simulation windows will appear when a file is opened, however they will disappear if you crop or rotate the image or change the display size.

Sharpness can be adjusted using the following sliders: “Weak <-> Strong”, “Rough <-> Smooth “ and “Delicate <-> Accented”.


After sharpness correction, the simulation window displays the simulation images, which sample the upper left corner, center, and lower right corner of the image. The display sizes of these simulation images and/or the regions displayed can also be changed.

**To change the display size:**

Choose the desired size from X1, X2 or X4. The image display size in the simulation window will be changed to the selected size.

**To change the display region:**

Clicking the “Auto Extract” button extracts the most contrasty area (which has the greatest effect on sharpness), an intermediate area, and the least contrasty area, and displays them in order from the left.

You can also display any area you wish in the image. Selecting the color picker tool and placing the cursor in the Image window holding the control key changes the cursor shape to . If you now move the cursor to a position you want to display and click on it, the selected area will appear in the simulation window.

**Sharpness adjustment commands**

Sharpness can be adjusted with the three parameters: Strength (weak/strong), Graininess (rough/smooth), and Mask size (delicate/accented).

When the sharpness setup area appears, the standard (intermediate) values for each parameter are displayed.

**To adjust the strength:**

Move the “Weak <-> Strong” slider in either direction to set the strength of sharpness. There are 10 steps in either direction from the standard (center) point.

**To adjust the graininess:**

Applying sharpness may roughen the image. The higher the contrast level, the more the graininess will be generated. If the strength of sharpness is substantially increased, even the least contrasty areas may become rough.

Moving the “Rough <-> Smooth” slider to the right (Smooth) helps keep the image smooth (by not applying sharpness to the less-contrasty areas). However, the more this slider is moved to the right (Smooth), the more sharpness will be weakened.

**To adjust the mask size:**

Moving the “Delicate <-> Accented” slider to the right (Accented) enlarges the mask size, while moving it to the left (Delicate) reduces the mask size. When the mask size is enlarged, the contrast is emphasized along outlines over a wider area. Conversely, making the mask size

smaller narrows the area in which sharpness is applied to outlines.

When a large mask size is set for a low resolution image, wide edges or borders appear along the image's outlines. Even if you weaken the strength of sharpness, it will still look as if strong sharpness has been applied.

If a small mask size is set for a high resolution image, sharpness has hardly effect on the image even when you strengthen the sharpness. Set a mask size that is appropriate to each image's resolution or magnification.

### 3.5 Enlarging/reducing, scrolling and color picking



Magnifying glass tool

Color picker tool

#### Enlarging and reducing

You can use this tool in the same manner as for the Magnifying glass tool in the tool palette.

Please refer to “Processing images with tools” of “1.4 Setup essentials” in Chapter 3.

#### Scrolling

If the Magnifying glass tool is used while you are holding down the command key, the cursor will change to a hand shape. Dragging an image with this cursor allows you to scroll the image.

#### Color picking

You can use this tool in the same manner as for the Color picker tool in the tool palette.

Please refer to “Processing images with tools” of “1.4 Setup essentials” in Chapter 3.

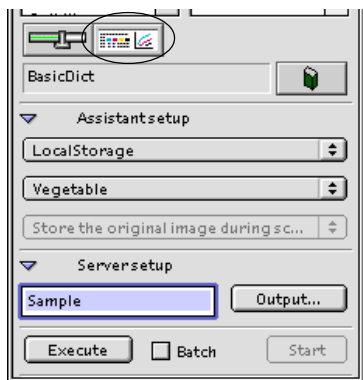


## 4. Manual Fine Adjustment

You can use Easy Setup simply by selecting keywords for the image's mode, type and finish.

However, depending upon the type of setup, subtler adjustments may be necessary. Manual fine adjustment allows you to perform more precise image settings and individually determine the commands to be used and the values for each parameter.

Clicking the button shown left on the Setup palette or choosing "Manual Setup :Fine adjustment" from the "Image" menu opens the "Manual fine adjustment" dialog. Perform the settings described below, and click the "OK" button after they are completed.



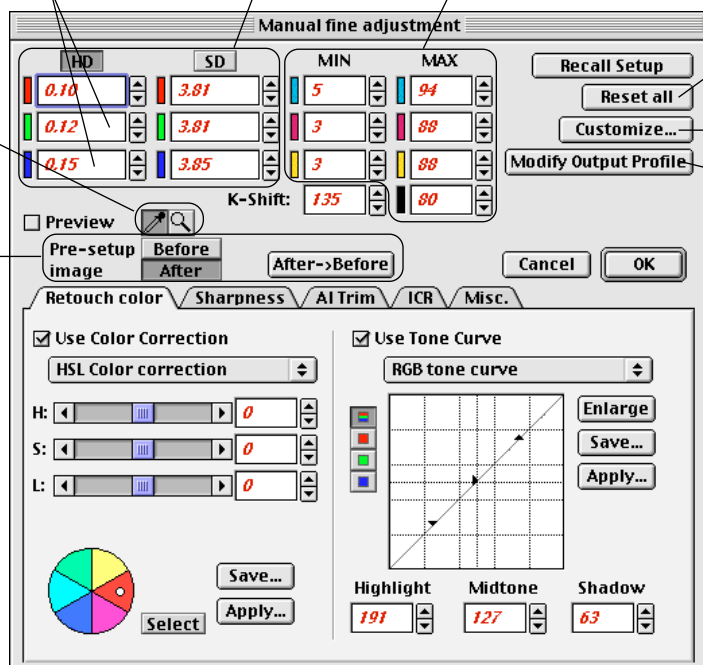
These values are red if they are automatically detected by the Easy setup function (initial values), but change to black if modified.

Sets the highlight/shadow points

Sets the maximum/minimum dot percentages

Enlarges/reduces, scrolls or samples an image.

Linked with the buttons for line-up display and for overlap display in the edit window.



Returns all the settings to their default values.

Opens the "Custom keyword editing" dialog. (Refer to "1.1 Keyword customization" in Chapter 4.)

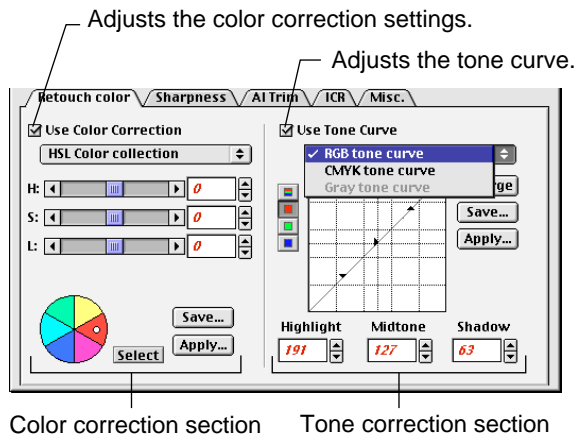
Overwrites a saved output profile. (Refer to "1.2 Profile customization" in Chapter 4.)



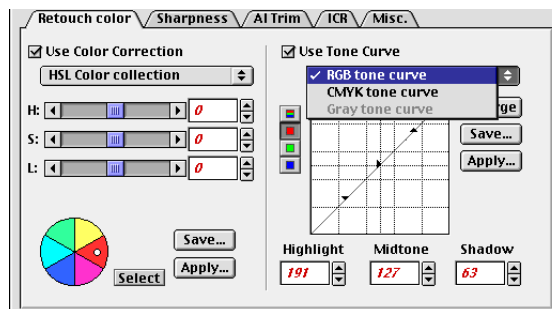
#### 4.1 Color correction and tone curve (Retouch color, Misc. )

The color correction dialog box allows you to select a color from the image, change it to another color, or adjust its saturation. The “Retouch color” tab is used for changing the contrast or brightness of particular images. For RGB or CMYK images, you can also change the hue by adjusting the tone curve for each color channel.

When an RGB input image is set to CMYK as the output mode, tone curve and color correction is possible in both the RGB and CMYK modes.



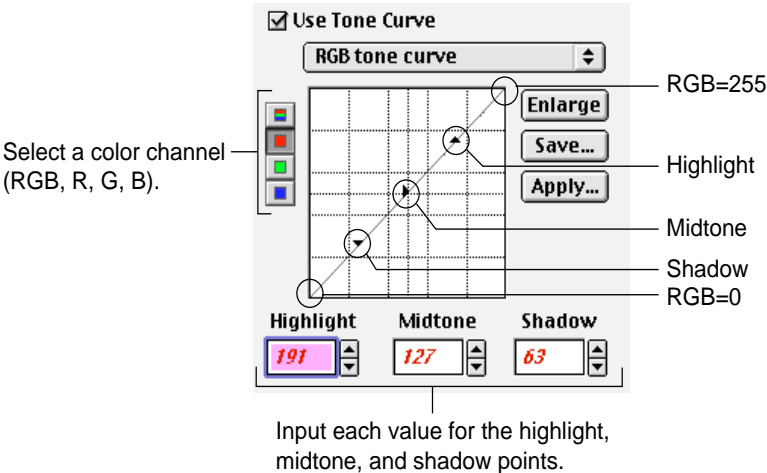
When an RGB input image is set to Grayscale as the output mode, tone curve and color correction is possible in both the RGB and Grayscale modes.



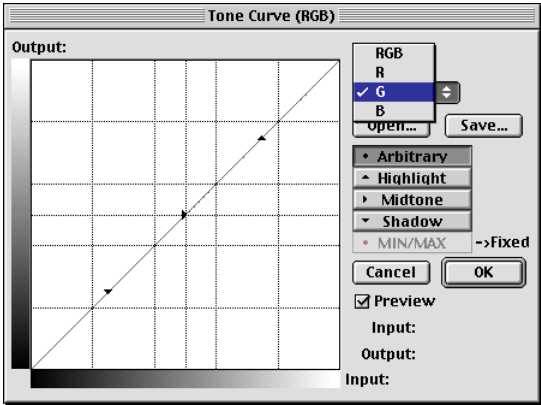
When the input image is in the CMYK or Grayscale mode, tone curve is only possible in their native modes.

Tone curve

The following tone curve is displayed in the tone correction section.  
The X axis represents the input level and the Y axis represents the output level after the tone level is corrected. The displayed curve illustrates the relationship between the input and output values.



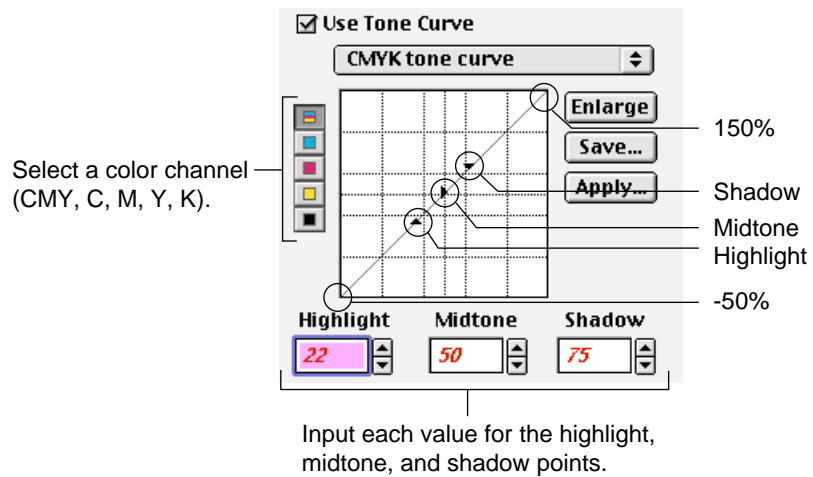
Enlarge



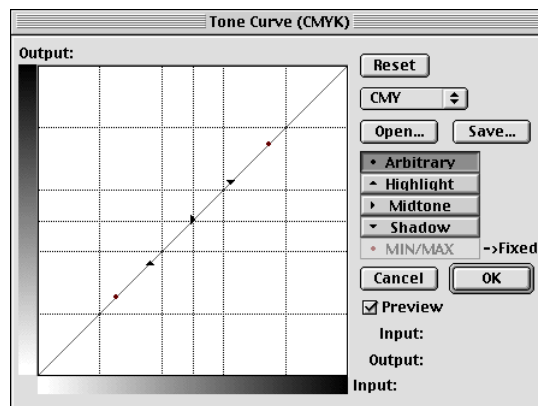
In the RGB mode, the leftmost end of the tone curve shows the shadow area (tone level 0 = black) and the rightmost end shows the highlight area (tone level 255 = white). The graph is divided into 50 tone units.  
You can select the RGB combined channel or one of the R, G, or B channels. The RGB channel corrects the tone of each channel the same

amount, and the R, G and B channels correct only the tone of selected channel. When the tone curve is again corrected in an individual channel after it has been corrected in the RGB channel, the two tone curves are combined.

In the CMYK mode, the tone curve can be corrected in the -50 to 150% dot. The graph is divided into increments of a 40% dot percentage. You can select the C, M, Y, K or CMY channel.



↓ Enlarge



**To correct the tone level:**

- 1) Choose the channel (or all channels) you want to adjust from the channel menu.
- 2) Set a value in the “Highlight”, “Midtone”, and “Shadow” fields.
- 3) If you want to modify the tone curve using the mouse, click the “Enlarge” button.

Arbitrary	Modifies any points you wish.
Highlight	Modifies only highlight values (indicated by the “▲” mark).
Midtone	Modifies only midtone values (indicated by the “►” mark).
Shadow	Modifies only shadow values (indicated by the “▼” mark).

Place the cursor at any point along the curve, or over a “▲”, “►”, or “▼” mark, and click.

The graph curves so that the line will pass through the selected point. The dot on the line will remain at the position you clicked. Even when you add a new dot, the previous dot will remain visible. If you want to move a dot you have already set, place the cursor on the dot and drag it in the desired direction. (You can remove the selected dot entirely by dragging the cursor outside the graph.)

Note

After saving the set tone curve with the “Save” button in the “Tone Curve” dialog box, you can apply the values of the set tone curve to other originals with the “Apply” button in the “Tone Curve” dialog box.

**Correcting colors**

When the output mode is set to RGB or CMYK, you can correct the colors in their native mode.

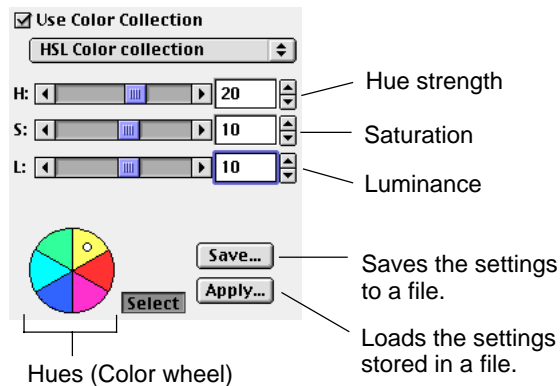
**Changing in the RGB mode**

You can adjust the hue strength, saturation and luminance for a selected image hue (cyan, magenta, yellow, red, green or blue) or adjust the saturation of the entire image. There are two ways to correct the saturation of an image: either by moving the slider to change the

saturation level for the entire image (including both highly and less saturated areas), or by correcting saturation with reference to the purity of the gray axis.

### To correct the selected hue parameters

You can individually correct the hue strength (H), saturation (S) and luminance (L) of 6 different hues (Color wheel: magenta, red, yellow, green, cyan and blue).



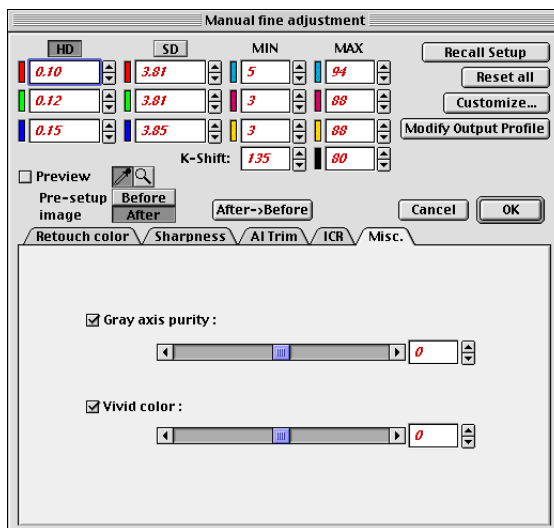
If you set the parameters as above, the yellow hue in the image will be corrected accordingly.

The hue color wheel is arranged in the following order: magenta, red, yellow, green, cyan and blue. Therefore, if the yellow hue is set as above and a positive value is entered in the hue strength field, the hue changes to greenish (moves in the green direction). Entering a negative (-) value in the hue strength field moves the yellow hue in the red direction. In addition, entering a positive value (+) in the saturation field intensifies the corresponding hue color, and entering a positive value (+) in the luminance field makes the corresponding hue color brighter.

**Note** After the “Select” button is activated, clicking an arbitrary point in the edit window with the color picker tool while holding down the command key will automatically record the hue information at that point.

### To correct saturation:

In the “Misc.” tab section, an image’s saturation can be adjusted using the saturation slider. Moving the slider to the right increases the value in the box (max. 100) and raises the saturation of the entire image. Moving it to the left changes the setting to a negative value (min. -100) and reduces the saturation of the entire image.



### To adjust saturation with the gray axis purity command:

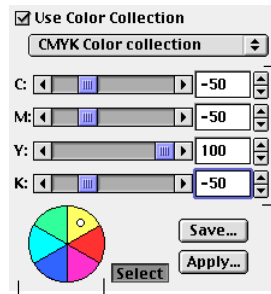
In the “Misc.” tab section, you can input values in the “Gray axis purity” field to correct saturation in the gray area. This command lets you adjust the correction area and level ranging from low (-100) to high (100) saturation levels. The default value is 0.

Inputting a positive number lowers the saturation level. The higher the value, the wider the correction area and the larger the correction volume. The smaller the value, the narrower the correction area and the smaller the correction volume.

Using the saturation slider will allow you to adjust the entire image, ranging from highly saturated areas to less saturated areas, to the same saturation level. The gray axis purity command is used to adjust only the gray areas. A positive value compensates for changes induced by the slider so that the end result will be little or no color change in the gray areas. If you enter a positive number in the field next to the saturation slider, you can increase the saturation of the entire image.

## Change in the CMYK mode

You can change the tone by adjusting the density for each separation (C, M, Y and K).

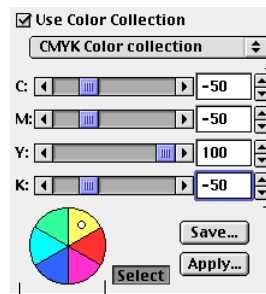


Corrects the density of each separation (-100 to 100).

Hue (Color wheel)

### To correct the tone by the hue:

Adjust the densities of C, M, Y and K separations individually (cyan, magenta, and yellow - and the first triad's complementary colors - red, green, blue).



Color Separations

Hue (Color wheel)

For example, the above settings show that the dot density for the yellow hue is low in the C, M and K separations, and is high in the Y separation (nearly the pure color).

#### Note

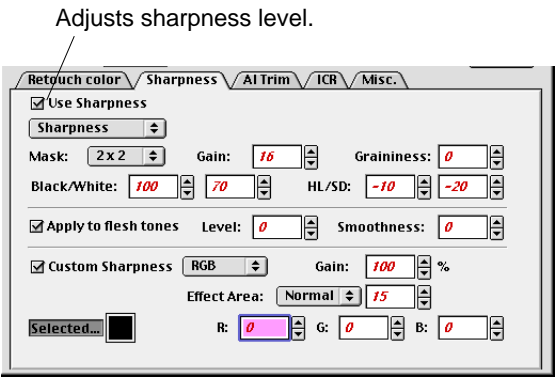
After the "Select" button is activated, clicking an arbitrary point in the edit window with the color picker tool while holding down the command key will automatically record the hue information at that point.

4.2 Sharpness settings (Sharpness)

The sharpen and unsharpen commands are respectively used to bring out detail in blurred images and soften the finish of an image.

To adjust sharpness or unsharpness levels, click the “Sharpness” tab.

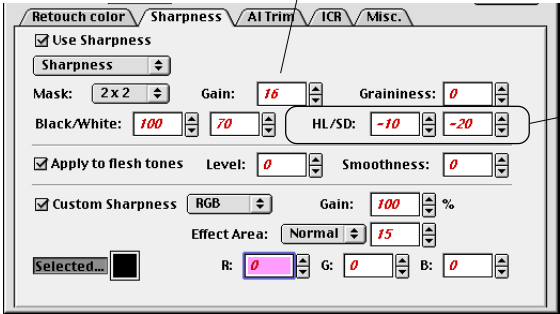
“Sharpness” enhances image sharpness, making contrasty areas appear even more contrasty.



“Unsharpness” softens the borders between obviously different color areas by narrowing the tonal gap between the pixels at the color boundaries.

Setting gain and highlight/shadow

Set the strength of sharpness to be applied to the entire image, ranging from 0 to 100.



Set the strength of sharpness to be applied to the highlight and shadow areas relative to the gain value: from -100 to 100%.

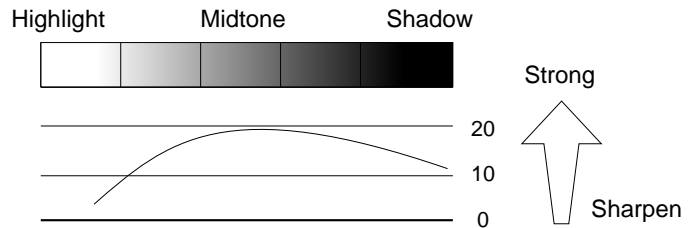


Gain refers to the overall sharpness strength. For the highlight and shadow settings, set the percentages at the highlight and shadow points to the gain value (for the entire image).

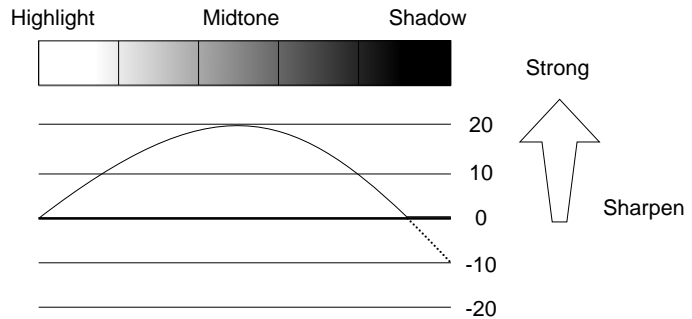
If the same strength sharpness that is applied to the midtone is also applied to shadow or highlight areas, the dot density may appear entirely solid or dots may disappear, either of which will degrade the image smoothness. To prevent this problem, the strength of sharpness applied to highlight and shadow areas should be less than that applied to midtones.

The highlight and shadow percentages can be set from -100 to 100%.

In this curve where the gain is set to 20, the highlight to 40% and the shadow to 60%, the sharpness for the midtone is 20, for the highlight, 8 and for the shadow, 12.



In this curve the gain is set to 20, the highlight to 0% and the shadow to -50%. The sharpness strength in the shadow area is supposed to curve in the minus direction (broken lines), but all minus values actually become 0 (no sharpness is applied).



Setting mask size

Mask:	<input checked="" type="checkbox"/> 2 x 2
	3 x 3
Black/W	4 x 4
	5 x 5
<input type="checkbox"/> Apply	6 x 6
	7 x 7
<input type="checkbox"/> Custo	8 x 8
	9 x 9
	10 x 10
	11 x 11

The sharpness function detects contrasty areas in the image, and darkens dark (blackish) pixels and conversely lightens lighter (whitish) pixels to further emphasize the contrast.

The size of the border mask designates the number of pixels affected by sharpness functions outside an image outline. When the mask size is set to a large value, a wide area around an outline becomes sharp; and when it is set to a low value, only the outline itself will be sharp.

If a large mask size is set for a low resolution image, thick edges will appear along the image outlines, and the sharpness level will also look strong even though its strength is set to weak.

On the other hand, if you set a small mask size for a high resolution image, the sharpness function will not be effective even if a strong level is set. Set the appropriate mask size according to the image’s resolution or magnification.

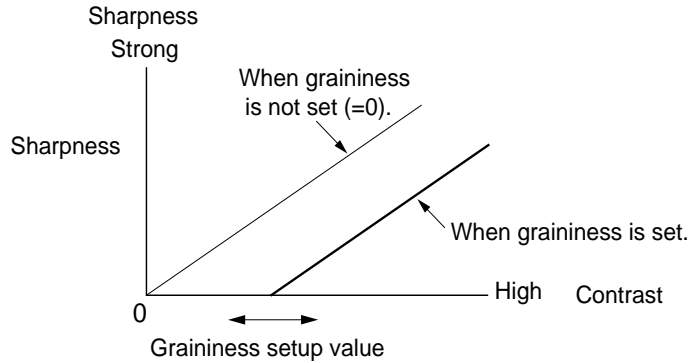
Setting graininess

Graininess:	<input type="text" value="0"/>	▲▼
	<input type="text" value="-10"/>	▲▼
	<input type="text" value="-20"/>	▲▼

The higher the graininess value, the less rough the image, but high values will also correspondingly reduce the general effect of the sharpness function. (Range: 0 to 10)

When you set a high gain value, outlines will be emphasized even in less contrasty areas, and graininess will consequently appear on the image. Set a high graininess value when you do not wish to apply the sharpness function to low contrast areas.

When the gain value is fixed, the relation between an image’s contrast and sharpness levels is shown below. Setting a high graininess value widens the area where sharpness is not performed. Setting it to low widens the area where sharpness will be performed.



### Setting outlines

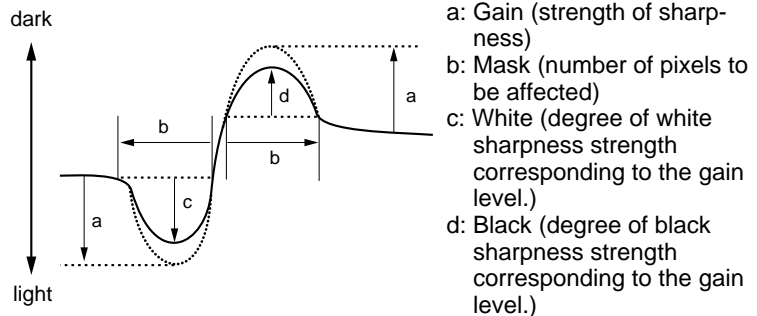
Performing sharpness emphasizes image outlines, i.e., black and white borders appear in contrasty areas. Sometimes, however, depending on the image, it is better that either white or black borders do not appear. You can therefore now adjust the contrast settings for black and white borders individually to prevent either or both from appearing.



If you increase either of these values, the edge of the increased color will become narrower.

The lower the value (%) in the “Black” field, the more unlikely it is a black border will appear. In the same manner, the lower the value in the “White” field, the more unlikely it is any white borders will appear. Although the white value is usually set lower than the black, in cases such as human facial outlines, no black borders should appear. In this case, the white value should be higher than the black.

The following graph illustrates the relationship between the gain level in the sharpness function, the black/white setup value (%) and the mask size.



Applying sharpness to flesh colors

When the entire image is sharpened, human flesh may appear rough with black pimples. To reduce such an effect, the sharpening can be softened using the following function.

- 1) Check the “Apply to flesh tones” check box.
- 2) Set the “Level” and “Smoothness” fields.

Level	Reduce the sharpness strength for flesh colors. (Compared with the “Custom Sharpness” function described below, this function’s processing speed is fast.)
Smoothness	Moderate the tone curve for the fresh colors to soften the finish of human skin areas.

Sharpen/Unsharpen selected colors

The “Custom Sharpness” command specifies certain colors in the image that sharpness should be applied to and adjusts the strength of the sharpness for these tone areas.

To use the “Custom Sharpness” function:

Check the “Custom Sharpness” option in the “Sharpness” dialog box.

Select the color space.

Select the effective tone area to be sharpened based on the specified color.

☒ Apply to flesh tones

Level: 0

Smoothness: 0

☒ Custom Sharpness

Gain: 100 %

Effect Area: Normal 15

Selected...

R: 0 G: 0 B: 0

Set the sharpness strength to be applied to the selected color: from 0 to 200%.

- 1) Select the color specification method (RGB or HSL color space) from the color model menu.
- 2) Click the “Selected ...” button. Placing the cursor inside the image changes the shape of the cursor to the color picker. Place the cursor on the color you want to select in the image and click on it with holding down the command key.  
The selected color is displayed in the “Selected color” box.  
The values for the selected color are displayed in the boxes of the R,

- G and B (H, S and L). You can change the selected color by clicking the “▲” or “▼” button or directly inputting the values.
- 3) Select the effective color sharpening area from the “Effective area” menu.

There are five choices for effective area (from “Extra Wide” to “Extra Narrow”), and after one is selected its corresponding color space value is displayed on the right. This value represents a diameter in the  $L^*a^*b^*$  color space. Sharpness is performed on all tones covered in the space (sphere) defined by this diameter with the specified color at its center.

**Note**

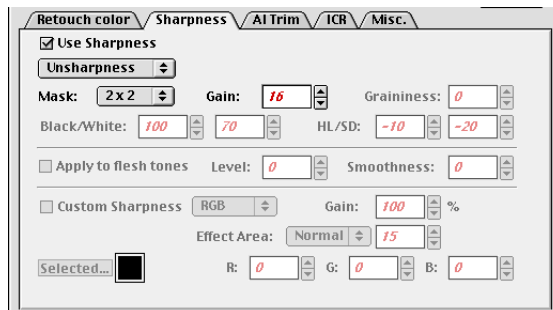
A setting of 100 represents the diameter of a space with the selected color at its center, which in turn defines the effective area of the sharpness function within the total  $L^*a^*b^*$  color space.

- 4) Set the gain level (%).

This value is a percentage of the overall gain level. Therefore, when the overall gain level has been set to 50 and you set 50 (%) for the selected color’s gain level, an absolute gain level of 25 will be applied to the selected color area.

## Adjusting the unsharpness

With the unsharpness adjustment commands, you can adjust the gain level and mask size.



### 4.3 AI Setup (AI Trim)

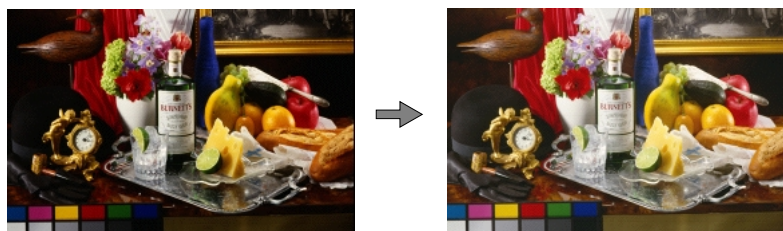
AI Setup refers to features for analyzing the density distribution of the entire image and setting satisfactory highlight and shadow points. It also analyzes common color components in the highlight and shadow areas and adjusts the color balance of the entire image by decreasing these components.

#### Description of AI Setup

##### Auto setting the highlight and shadow points

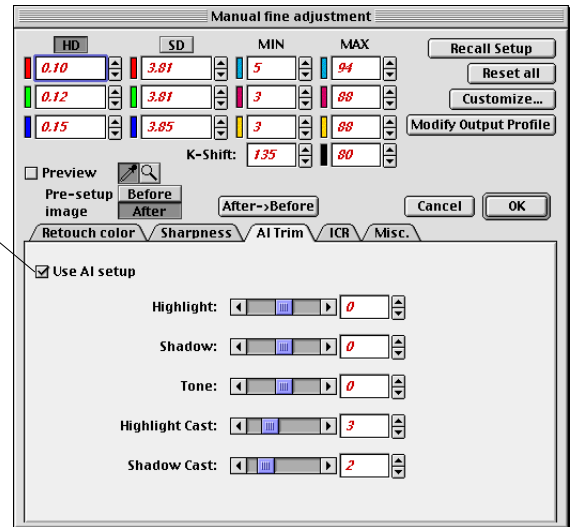
Depending on the input original, the shadow area may become too dark and consequently obscure the boundaries in the background, or dots may disappear in highlight areas and diminish the solidity of the image. AI Setup automatically sets appropriate highlight and shadow points on such originals and corrects the tone distribution across the whole image.

AI Setup designates appropriate highlight and shadow points after analyzing the entire image's density distribution, even on originals which



contain very small or widely dispersed highlight and shadow areas. Clicking the “AI Trim” tab displays the fine adjustment section for AI Setup.

Adjusts AI Setup.



## Setting the area for AI analysis



AI tool

With the AI setup, the area selected with the AI tool on the tool palette is analyzed. The AI analysis area will be displayed in the red frame. If you don't select an area, the area for AI analysis is automatically chosen as follows: the width and height of the chosen area is 70% of the image's width and height, calculated from the center of the image. If the edge of the mask sheet is scanned into the image, select only the area of the original.

### To change the tone level of a highlight, shadow or midtone:

Moving the highlight slider to the right lowers its tone level and the highlight area becomes brighter. Moving it to the left raises the tone level and the highlight area becomes darker.

Moving the shadow slider to the right lowers its tone level and the shadow area becomes brighter. Moving it to the left raises the tone level and the shadow area becomes darker.

Moving the midtone slider to the right lowers the midtone curve and the midtone becomes darker. Moving it to the left, raises the tone curve and the midtone becomes brighter.

### To change the strength of Highlight Cast/Shadow Cast

Highlight Cast/Shadow Cast detects common color components in highlight and shadow area, and attempts to adjust the color balance by removing such components.

#### **4.4 Settings for mode conversion (HD, SD, MAX, MIN, ICR, Mixing ratio)**

You can set the density of highlight points (minimum density) and shadow points (maximum density) when converting RGB images to CMYK images. When the mode is converted to CMYK, a K separation will be created. It is also possible to set the start point (tonal value) for the K separation.

When setting up an RGB image in RGB mode, the tonal values for each color's shadow and highlight points can be changed. When converting to Grayscale, you can also set the lightness percentages for R, G and B.

#### **Converting to CMYK**

The RGB to CMYK conversion separates the image into C, M, Y and K separations via a selected mode conversion calibration profile.

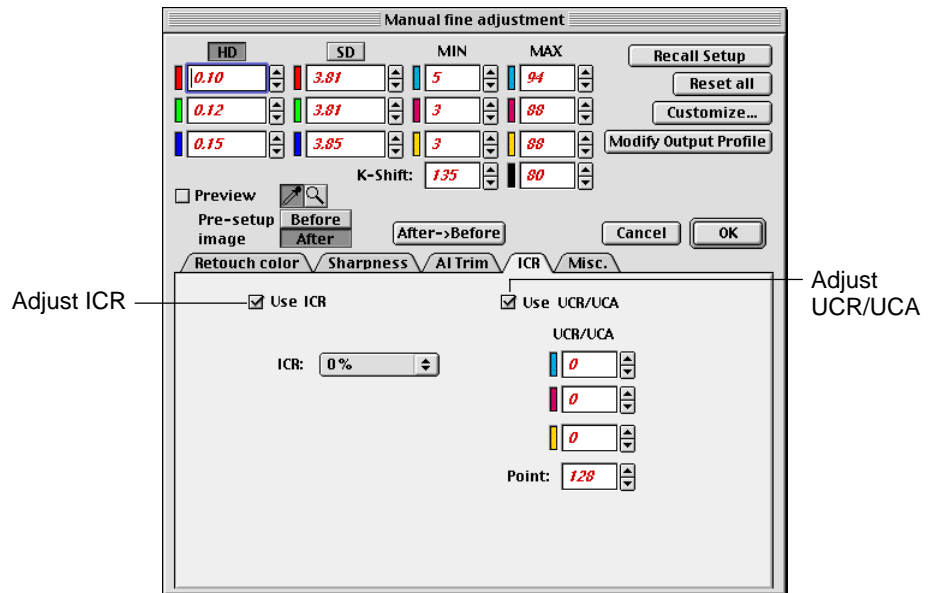
Although gray (black) areas are supposed to be created with the C, M and Y separations, it is difficult to create pure grays with the same density as the other separations for actual printing, so a K separation is also created.

#### **Setting the dot percentage of highlight/shadow points**

When creating C, M, Y and K separations from a CMYK image and printing them, it may be advisable to change the dot percentages of the highlight/shadow points depending on the type of ink or paper. The K separation's entry point (along the image's highlight to shadow axis) will significantly affect the quality of the final result.

In the "Max/Min..." area, you can set the dot percentages for highlight and shadow and the start point of the K separation (K-shift) for each CMYK separation. You can also access and operate the ICR function and the UCR/UCA function in the "ICR" tab section.





### Setting highlight/shadow points

In ColorGenius, the highlight and shadow points are automatically determined with the AI Setup function. However, if you want to set them manually, follow the procedures below.

#### Note

- The highlight and shadow points can not be set when the original type is negative film.
  - Changing the “HD” or “SD” value will remove the check mark from the “Use AI setup” checkbox in the “AI Trim” tab.
- 1) Select the “HD” button in the “Manual fine adjustment” dialog. Then, while pressing down the command key, click a point you wish to set as the highlight point in the edit window, or enter a value for that point in the dialog.
  - 2) Select the “SD” button in the “Manual fine adjustment” dialog. Then, while pressing down the command key, click a point you wish to set as the shadow point in the edit window, or enter a value for that point in the dialog.

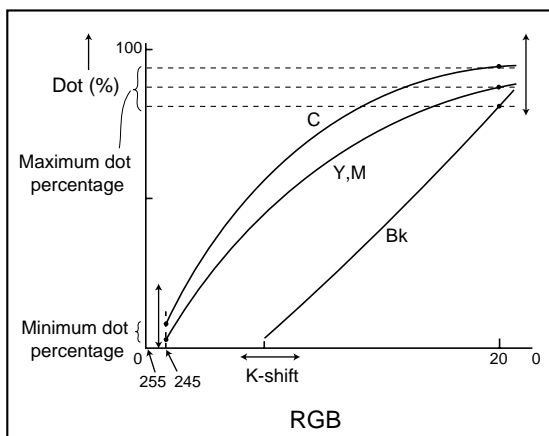
### Maximum/Minimum dot percentage setting

This setting designates the dot percentage of the highlight and shadow points of the image. In the ColorGenius, the highlight and shadow point setup is performed at the RGB level with the AI Setup function, highlight and shadow point setup is performed in the RGB mode with the AI Setup function or by manually changing their densities. The Max/Min setting sets the dot percentage of the highlight and shadow points on the setup RGB image.

The ColorGenius internally has a standard value for the highlight and shadow points at the RGB level. The AI Setup sets the tone level of the highlight points as 245 and that of the shadow points as 20 according to the standard value. So, the Max/Min setting sets the dot percentage for the 245 RGB tone level and that for the 20 RGB tone level.

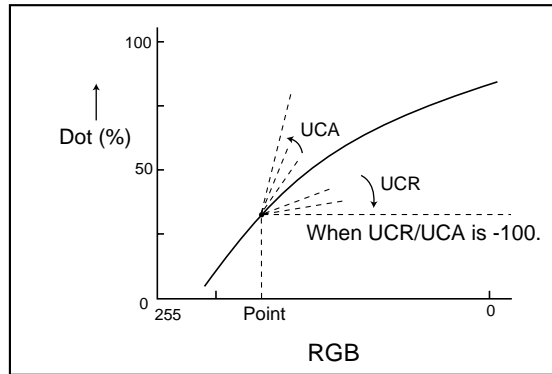
### K-Shift setting

Input a RGB value in the "K-Shift" field from 0 to 255 to set the starting point of the K separation. When the value is increased, dots begin appearing in the K separation from the light area. When the value is decreased, dots start appearing in the K separation from the dark area. The following graph illustrates the relationship between the minimum dot percentage, the maximum dot percentage and the K-Shift setting.



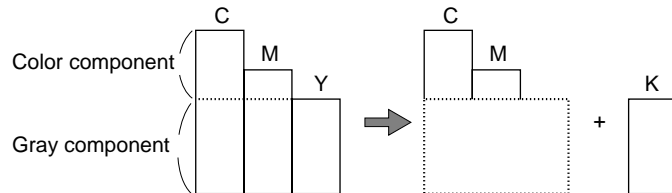
### UCR/UCA setting

This setting adjusts the tone curve of the gray component of the image. You can designate a starting point of the UCR/UCA effect with an RGB level from 0 to 255 and an UCR/UCA value for each C, M and Y separation with a value from -100 to 100. Minus value settings reduce the gray component in each separation and a -100 setting makes the tone curve of the gray component flat.



### ICR setting

Mixing equal amounts of cyan, magenta and yellow ink theoretically creates gray. For example, when the CMY ratio is as shown in the following figure, the gray component corresponds to Y (the smallest color component) and equal amounts of the other two colors. In other words, if the same amounts of color are removed from pixels which include C, M and Y components, and this tertiary color is then replaced with gray (K separation), the overall tonal value will not change.



The ICR function replaces dark tertiary colors (consisting of C, M and Y mixtures whose individual dot percentages are all greater than 0%) with

the K separation and automatically performs color correction so that the resulting color approximates the replaced color. The ICR setting ranges is from 0 to 100.

When ICR is set to 100, the tertiary color is always replaced with K and the remaining fractions of the other two colors. If ICR is set to 0, this replacement is not performed.

The ICR setting allows you to reduce the total amount of ink used, and shortens the ink drying time. Also, when the density differs between the three ink colors, it reduces hue inconsistencies and improves the appearance of the gray tones. Note, however, moire is likely to occur during printing if the K separation is included to create a color which can actually be reproduced with only the C, M and Y colors (i.e., a fourth separation increases the chance of moire interference).

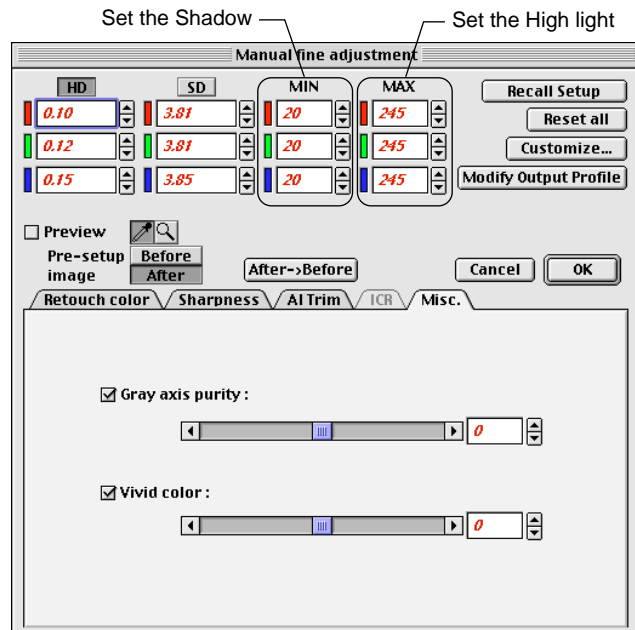
## Converting to RGB

You can change the individual R, G and B highlight and shadow values for RGB conversion.

To set highlight/shadow points

Set highlight/shadow points using the same procedure noted in “Converting to CMYK”.

### To change the max/min tonal value:

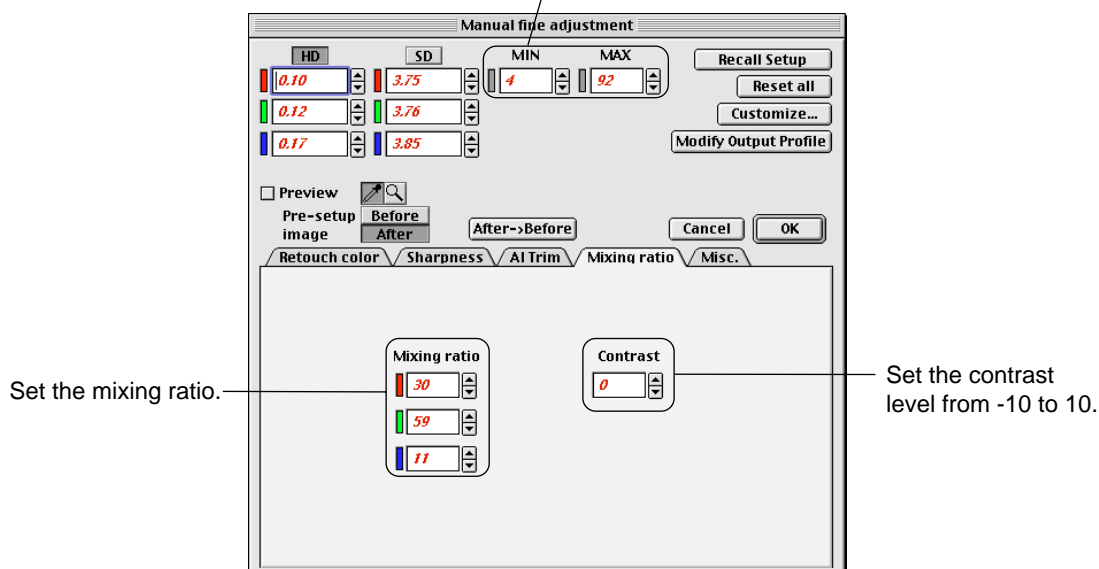


Input values in the fields. Checking the “Preview” option previews the image with the currently set conversion values.

## Converting to Grayscale

When the color mode is converted from RGB to Grayscale, the grayscale tonal value is calculated from the R, G and B tonal values for each pixel and the mixing ratio currently set in the “Mixing ratio” tab section. In this section, you can change the mixing ratio and contrast level, and set the dot density values for highlight and shadow points.

Set the dot percentages for highlight and shadow points.



### To set highlight/shadow points

Set highlight/shadow points using the same procedure noted in “Converting to CMYK”.

### To set the maximum and minimum grayscale values:

Set the dot percentages for the highlight and shadow points on the K separation. Enter the values in the “Min” and “Max” fields.

### To change the mixing ratio:

Enter the values of the new mixing ratio in each of the R, G and B fields from the range of 0 to 100.

### To adjust the contrast:

You can adjust an image’s contrast level by changing the value in the “Contrast” field (in the range from -10 to 10). The higher the value, the higher the contrast.

## 4.5 Enlarging/reducing, scrolling and color picking



### Enlarging and reducing

You can use this tool in the same manner as for the Magnifying glass tool in the tool palette.

Please refer to “Processing images with tools” of “1.4 Setup essentials” in Chapter 3.

### Scrolling

If the Magnifying glass tool is used while you are holding down the command key, the cursor will change to a hand shape. Dragging an image with this cursor allows you to scroll the image.

### Color picking

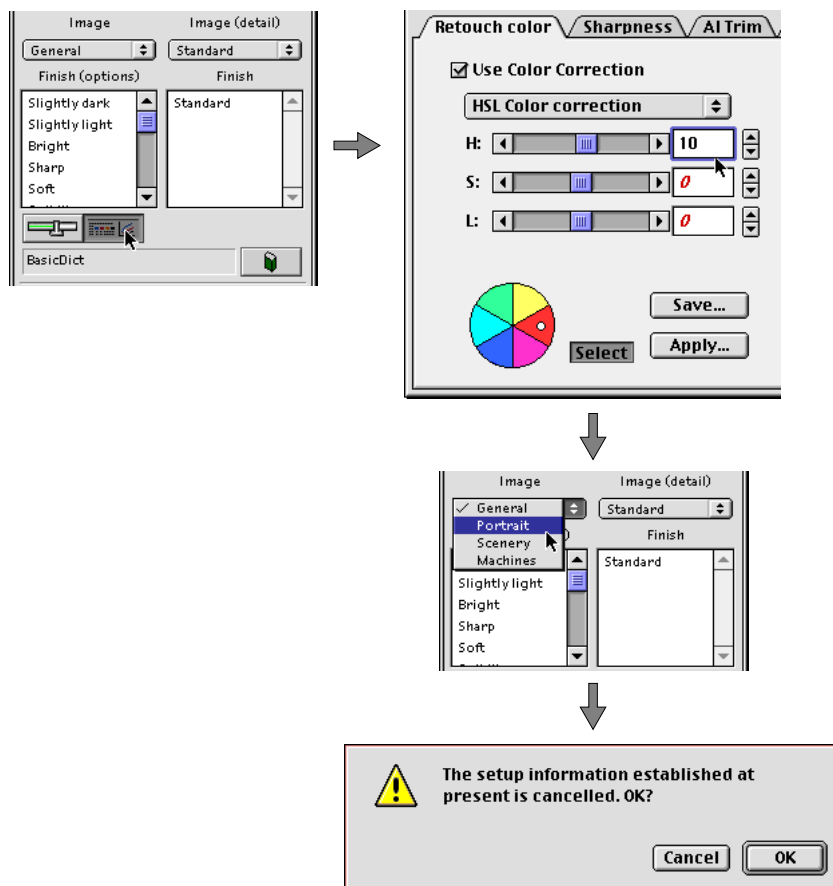
You can use this tool in the same manner as for the Color picker tool in the tool palette.

Please refer to “Processing images with tools” of “1.4 Setup essentials” in Chapter 3.

## 5. Precautions when changing the setup parameters

If you modify the parameters detected by Easy setup (Intelligent setup) via the “Manual fine adjustment” function and implement the operations described below, a warning will appear.

- When changing the image keywords.
- When changing the original type.
- When fine adjusting using the “Easy setup: Fine adjustment” function.

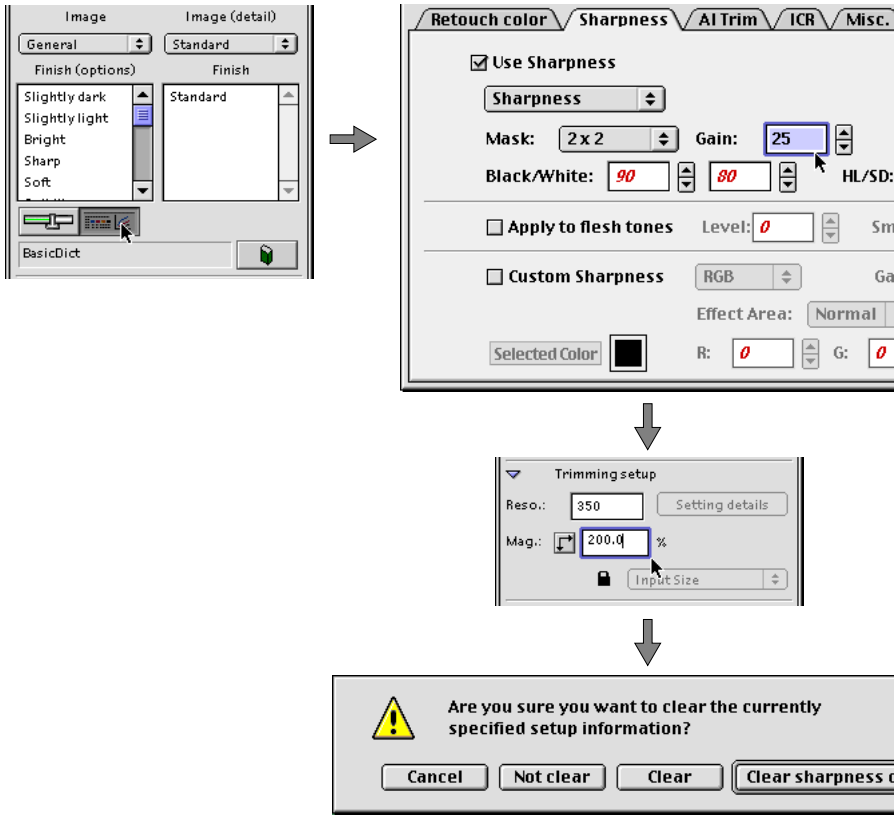


Clicking the “OK” button clears the parameters that were modified via the “Manual fine adjustment” function and sets the redetected parameters.



If you modify the parameters detected by Easy setup (Intelligent setup) via the “Manual fine adjustment” function and implement the operations described below, a warning will appear.

- When changing the resolution.
- When changing the magnification.



Button	Function
Cancel	Cancels the operation.
Not clear	Uses the parameters that were modified via the “Manual fine adjustment” function as they are.
Clear	Clears the parameters that were modified via the “Manual fine adjustment” function, and sets the redetected parameters.
Clear sharpness only	Only clears the parameters for sharpness that were modified via the “Manual fine adjustment” function, and sets the redetected parameters for sharpness.

# Chapter 4 Utilizing convenient functions

This chapter explains the useful functions which enhance the efficiency of the setup process.

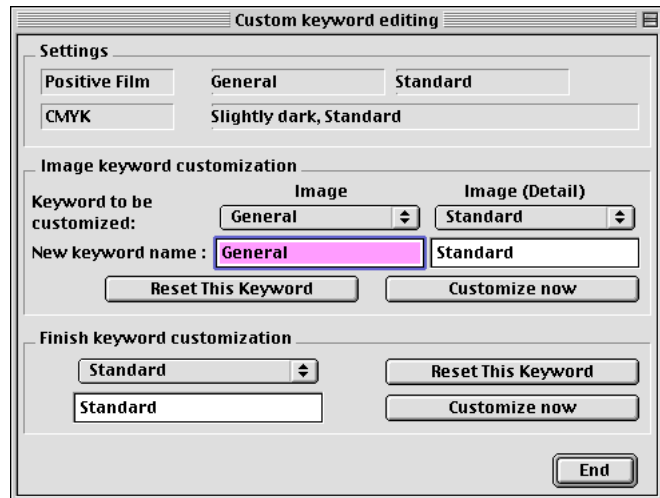
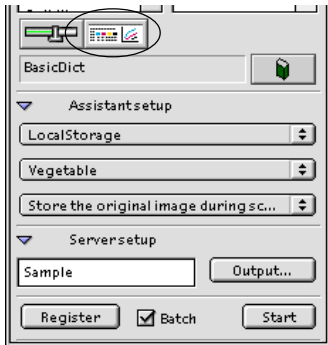
## 1. Customizing

The various customizing functions are described below.

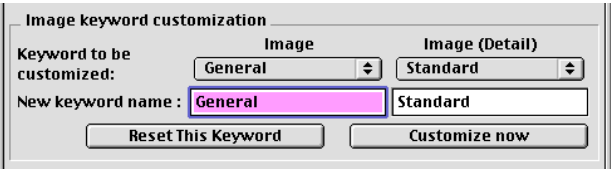
### 1.1 Keyword customization

The settings in the “Manual setup” dialog can be registered as a keyword for Easy Setup. You can select the registered keyword in the “Image”, “Image (detail)”, and “Finish (options)” fields in the Setup palette window. To register manual fine adjustment settings, follow the procedure below.

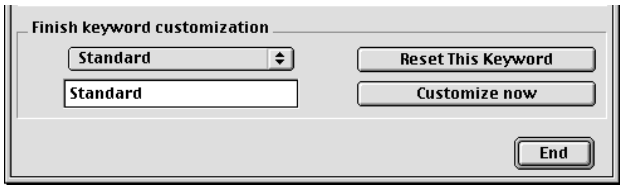
- 1) Click the button shown in the Setup palette figure below, or choose “Manual Setup : Fine Adjustment” from the “Image” menu.
- 2) After all of the settings are completed in the “Manual fine adjustment” dialog, click the “Customize” button.



- 3) Select your intended item in the “Keyword to be customized” pop-up menu, and enter a keyword name in the “New keyword name” box. Then click the “Customize now” button.



- 4) Perform finish keyword customization as for step 3).

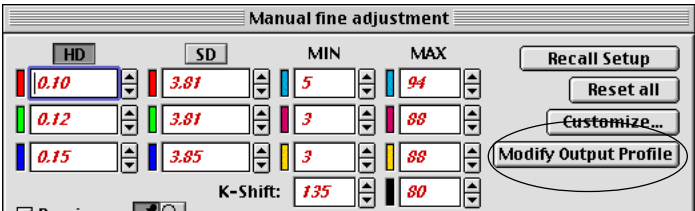


- 5) Click the “End” button.

**Note** Click the “Reset This Keyword” button to return all the parameters for the selected keyword to their default values.

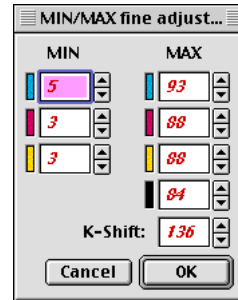
## 1.2 Profile customization

You can load the stored output profile in the dialog and modify the contents.

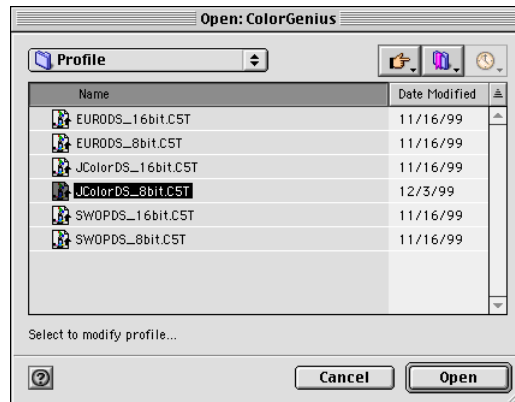


### Modifying the contents of an output profile

- 1) When you click the “Modify Output Profile” button in the Manual fine adjustment dialog box, the “MIN/MAX fine adjust...” dialog box will appear, as shown below.

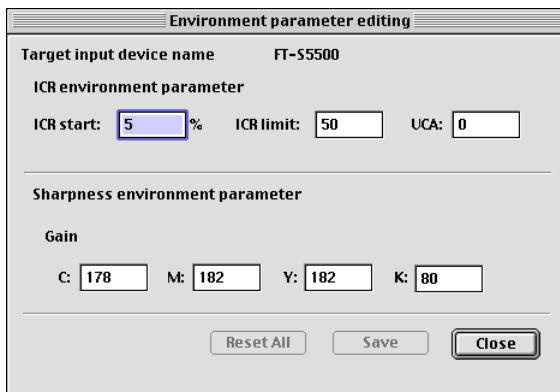


- 2) Set the MIN and MAX values and click “OK”.
- 3) Select the file to be modified and click “Open”.



### 1.3 Editing image handling parameter preferences

With this setup parameter editing tool, the degree of applied sharpness is adjusted individually for each CMYK separation, and the ICR settings are changed.

The image shows a dialog box titled "Environment parameter editing". It contains two main sections. The first section, "ICR environment parameter", has three input fields: "ICR start:" with a value of 5, "ICR limit:" with a value of 50, and "UCA:" with a value of 0. The second section, "Sharpness environment parameter", has a "Gain" label and four input fields for CMYK: "C:" with 178, "M:" with 182, "Y:" with 182, and "K:" with 80. At the bottom are three buttons: "Reset All", "Save", and "Close".

Environment parameter editing			
Target input device name		FT-S5500	
ICR environment parameter			
ICR start:	5 %	ICR limit:	50
		UCA:	0
Sharpness environment parameter			
Gain			
C:	178	M:	182
Y:	182	K:	80
Reset All		Save	Close

- 1) From the “File” menu, choose the “Setup environment” sub-menu under “Preferences”.
- 2) Click the “Image handling preference” button. The “Environment parameter editing” dialog will appear.

#### ICR settings

##### ICR start (Default: 5, 0 to 100)

This sets how far from the Cyan separation’s minimum halftone dot value, as set in the CMYK Max/Min settings, ICR processing starts. If you set the ICR to 100%, which is where the K separation begins, the C, M, and Y separations will be left as is. If the C separation’s minimum halftone dot is 4%, and the ICR lower threshold is 5%, then ICR starts at 4+5=9%.

##### ICR limit (Default: 50, 0 to 100)

This sets the value at which the C, M and Y separations are used for ICR. The higher the threshold, the further the C, M,. and Y separations ICR threshold will be towards the shadow values.

**UCA (Default: 0, -100 to 100)**

This sets the increase of the C, M, and Y separations from the upper ICR threshold. When this is set to 0 and the ICR is 100%, the C, M, and Y separation values are not increased, and remain as is. When this is set to 100 and ICR is at 0% (ICR off), the values increase to match the C, M, and Y separation curves.

**Sharpness settings****Sharpness gain settings for each separation (CMYK) (0 to 255)**

This sets the level of sharpness for the C, M, Y, and K separations. When this is set to 0, there will be no sharpness applied to that separation. When this is set to 255, the sharpness function will be applied to its fullest extent.

**1.4 Negative AI film parameter edit**

ColorGenius includes a function that allows it to change images scanned in from negative films to their equivalent positive images. The characteristics of negative film vary by the maker and film type, and therefore different conversion parameter values must be used for each . ColorGenius already includes parameter settings for 7 commonly available types of negative film, as well as a more generic set of parameters. You can change the existing parameter value sets or create new ones as necessary.

**Grayscale image input****Registering variations for a film type**

First of all, photograph a paper gray scale using the film you wish to register. Scan the resulting image and make the necessary settings. When photographing the image, try to reproduce the conditions used in taking actual images you will later need to scan; if images are taken outdoors, photograph the gray scale outdoors in the same kind of weather, or reproduce the studio lighting used indoors.

**Scanner input**

Next, scan the film with the image of the paper gray scale. Make sure that the film includes an orange mask (area with no image).

**Input conditions:**

Scan the image under the following conditions

Input mode:	8-bit RGB
Optical resolution:	200 dpi
Magnification:	100%
Input original type:	Transparency
Finish:	Not used

The optical resolution indicated above is sufficient. If the resolution is too high, variations caused by small differences in the film granules may appear, making it difficult to get correct values. Also be sure to open up the manual setup command palette and make sure that all the setup commands are off.

**Measuring the RGB values for the paper gray scale**

Once scanning is complete, the input image's image window (negative image) is displayed. Measure the paper gray scales white, black, and mid-tone gray patch RGB values.



Since the image is a negative, white and black are reversed. The patch that looks black is actually white and the patch that looks white is actually black. Determine the RGB values for these two patches, as well as the mid-tone gray patch 6 away from the white patch, using the information palette. Note the values for future reference.

In order to compensate for any moire generated when the image was taken, or for variations in the film granules, check as many points as possible and use the average value for each group of points.

### Measure the RGB value for the orange mask area

Next, measure the RGB values for an unexposed area (orange mask). You can use a section of the film which was not exposed, or the area around the perforation as the orange mask.

### Setting characteristic data

Now we will register the RGB values you acquired in the last few steps using the “Negative AI films parameter edit” function.

- 1) From the “File” menu, choose the “Setup environment” sub-menu under “Preferences”.
- 2) Click the “Negative film AI parameter” button, and the “Negative AI film parameter editing” dialog will appear.

Negative file registration	
Target input device name	FT-S5500
Manufacturer:	Agfa
Film:	XRGI100
Agfa:XRGI100	
Fuji:REALA100	
Kodak:EKTAR100	
Agfa:XRGI400	
Fuji:SuperGAce400	
Kodak:Gold400	
Konica:LV400	
Fuji:NS160	
Standard:Standard	
USER1:USER1	
USER1:USER2	
Highlight	R: 90 G: 66 B: 40
Midtone	R: 128 G: 97 B: 66
Shadow	R: 180 G: 140 B: 108
Orange Mask	R: 202 G: 156 B: 124
Saturation:	90
Overexp. adjust:	15
Tones:	R: -7 G: -7 B: -7
<input type="button" value="Reset all"/> <input type="button" value="Save"/> <input type="button" value="Close"/>	

### Register the characteristic data

Characteristic data for each film is registered in the NegaAIPParameter File. The contents of this file are loaded when the Negative AI film parameter is launched, and the dialog box containing a list of registered file names appears. You can change the data registered, or register new sets of data for film that is not included as one of the defaults.

- 1) To change film data that is already registered, select your intended film and modify whatever parameters are necessary.
- 2) Input the white, mid-tone gray, and black patch RGB values in the HL, mid-tone, and SD areas.
- 3) Input the RGB values for the orange mask.



**Note**

For a single film, the paper gray scale's white, mid-tone gray, and black RGB values, along with the orange mask RGB values, should have the following relationship:

White values < Mid-tone gray values < Black values < Orange mask values

If the values do not relate in this way, an error will occur when you click on Save.

- 4) Input the saturation value (Default: 100, 0 to 100)

There is normally no need to set this value. When negative/positive conversion is done, the image tone may be too high in some cases after conversion. If this occurs, set the saturation value to below 100.

- 5) Input the Tone RGB value (Default: 0, -10 to 10)

There is normally no need to set this value. Use it if you want to brighten the mid-tones when converting from negative to positive images. The higher the value, the brighter the mid-tones after conversion.

- 6) Input the overexp. adjustment value (Default: 15, 0 to 20)

When strobe lighting has been used to photograph an object and the image is overexposed, the resulting positive film's highlight may have a yellow cast. To reduce this cast, set this parameter. The default is 15. To increase the effect, set the value above 15; to reduce the effect, set it below 15.

- 7) Click on "Save". This returns you to the registration of negative film dialog box. To add other film types or edit more of the existing types, repeat the same procedures.

- 8) When all the settings have been made, click on "Close". The following dialog box appears.

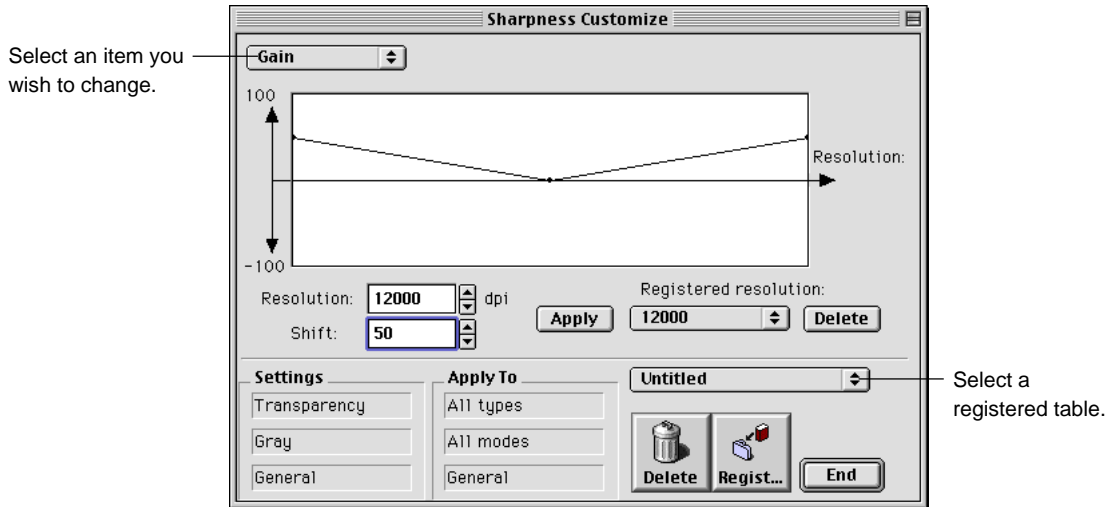
**Note**

When converting negative images to positive images, ColorGenius uses a parameter file called "NegaAlParameterFile". If you wish to make changes but also want to keep the old file data, change the old data file's name and use the name "NegaAlParameterFile" for the new file.

## 1.5 Sharpness customization

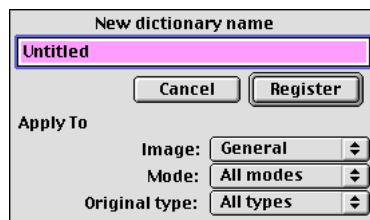
This function adjusts sharpness effects (gain, graininess, mask size, White/black) depending on the magnification and resolution settings.

From the “File” menu, choose the “Setup customize” sub-menu under “Preferences”.



### Registering a new table:

- 1) Click the “Register” button.



- 2) Select image, mode and original type, enter a table name, then click the “Register” button.
- 3) Select an item you wish to change, such as “Gain”, “Graininess”, “Mask size”, “White/black”.
- 4) Set a value for “Resolution” and “Shift”, and click the “Apply” button. The shift value will be displayed in the graph and the resolution value in the “Registered resolution” field.

- 5) If you want to delete the resolution registered in the “Registered resolution” field, select the resolution you wish to delete and click the “Delete” button.
- 6) Click the “End” button.

**Note** If “0” is set in the “Shift” field, the sharpness effect for the selected resolution will not be modified.  
The resolution value in this dialog is equal to “magnification” multiplied by “resolution”.

### Modifying a registered table

- 1) Select a registered table you wish to modify.
- 2) Modify the settings using the same procedure noted in steps 3) to 5) for new table registration. After setting modifications are all completed, click the “End” button.

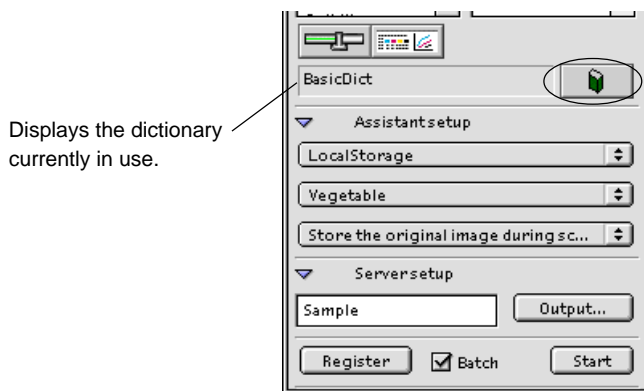
### Deleting a registered table

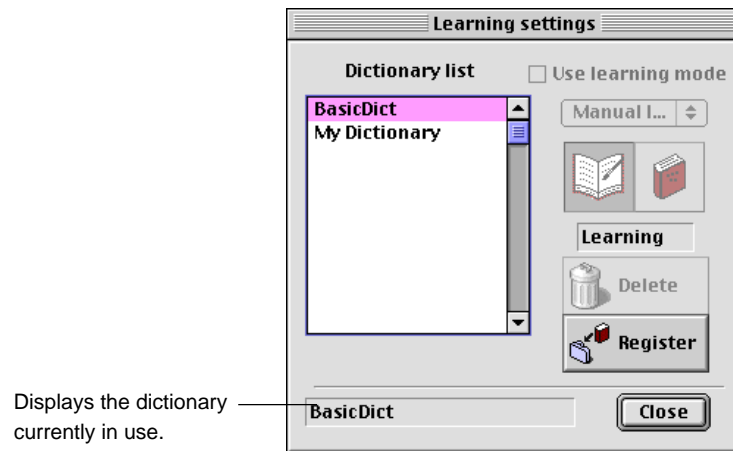
Select a registered dictionary you wish to delete, and click the “Delete” button.

## 1.6 Learning function

When the learning function is activated, the settings in the “Easy setup: Fine adjustment” dialog are recorded in a dictionary file, to learn frequently used settings and affect the setup.

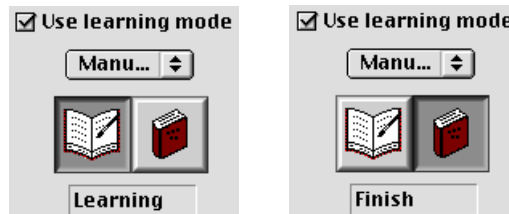
Click the button shown in the figure below, and the “Learning settings” dialog will appear.





### Activating the learning function:

Checking the “Use learning mode” check box activates the learning function.



### Selecting a learning mode:

There are two learning modes, as shown in the following list.

Manual learning ..... When the mode selection area in the “Learning settings” dialog is as shown in the upper left figure, when the “Apply” button is clicked in the “Easy setup: Fine adjust” dialog box, setup contents are accumulated (learned). When it is as shown in the lower left figure, learning is completed and the recorded data affects the setup value.

Automatic learning ..... The setup contents are recorded when the “Apply” button is clicked in the “Easy setup: Fine adjust” dialog box, and the data affects the setup value.

**Creating and deleting the dictionary:**

Only the “BasicDict” is included as the dictionary setting for software from the factory. To create a new dictionary, click the “Register” button. To delete a registered dictionary, select the dictionary you want to delete in the “Dictionary list” and click the “Delete” button.

**Selecting the dictionary:**

To select a dictionary, double-click a dictionary name in the “Dictionary list”.

## 2. Recall setup and apply recipe

With the use of the “recall setup” command, you can read previously used setup parameters.

After completing the setup and reopening the file, you found that the current image doesn’t have the desired sharpness, but you want to reproduce the previous setup commands excluding sharpness. In such a case, with the “recall setup” command, you can read and apply the previous setup parameters to the image, and then modify only the sharpness as you desire.

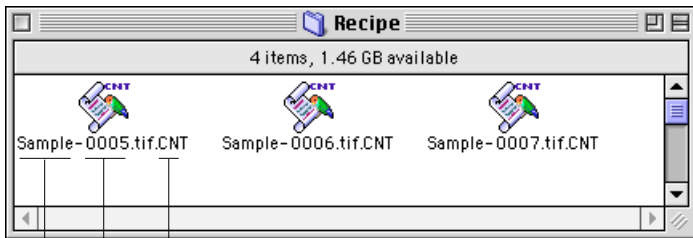
Also, with the use of “Apply recipe” command, you can read and use the previous setup parameters, resolution, and output profile settings.

**Note**

If you execute the “Apply Recipe” command for images opened from files, only the setup parameters will be applied.

### 2.1 About the recipe file

After registering the image file to the server, a recipe file in which the setup parameters, resolution, magnification and output profile are contained is created. The recipe file is created in the “Recipe” folder in the “ColorGenius” folder of the client computer with its name as follows.



— The extension for recipe files

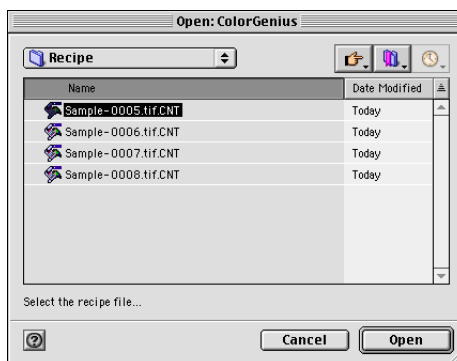
— “Counter number” designated in the “Output settings” dialog.

— “Base file name” designated in the “Output settings” dialog.

## 2.2 Recalling the previous setup with recipe file

To recall and apply the previous setup parameters, implement the following procedures.

- 1) Set the original, which you want to set up again, in the FT-S5500, and then implement the prescanning.
- 2) Click on “Confirm” after specifying the trimming area, and display the Edit window.
- 3) Select the “Recall setup” in the “Manual fine adjustment”.



- 4) Details of the recipe folder appear. Select the recipe file created when set up the previous image.
- 5) Click on “Open”  
Parameters indicated in the setup palette change to those in the previous setup.
- 6) Modify the settings of the parameters as you desire, and then register such parameters to the server following the usual setup procedures.

### Note

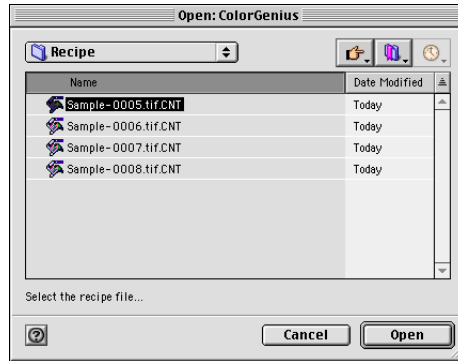
If you modify the color mode of the image to be output, be sure that the data of the “Max/Min” set in the previous setup parameters are cleared.

## 2.3 Applying the previous recipe

To recall and apply the previous setup parameters, resolution, magnification, and output profile, implement the following procedures.

- 1) Set the original, which you want to set up again, in the FT-S5500, and then implement prescanning.

- 2) Click on “Confirm” after specifying the trimming area, and display the Edit window.
- 3) Select “Apply Recipe” from the Image menu.



- 4) Details of the recipe folder appear. Select the recipe file created when the previous image was setup.
- 5) Click on “Open”.  
Parameters indicated in the setup palette change to those of the previous setup.
- 6) Modify the parameter settings as you desire, and then register them to the server following the usual setup procedures.

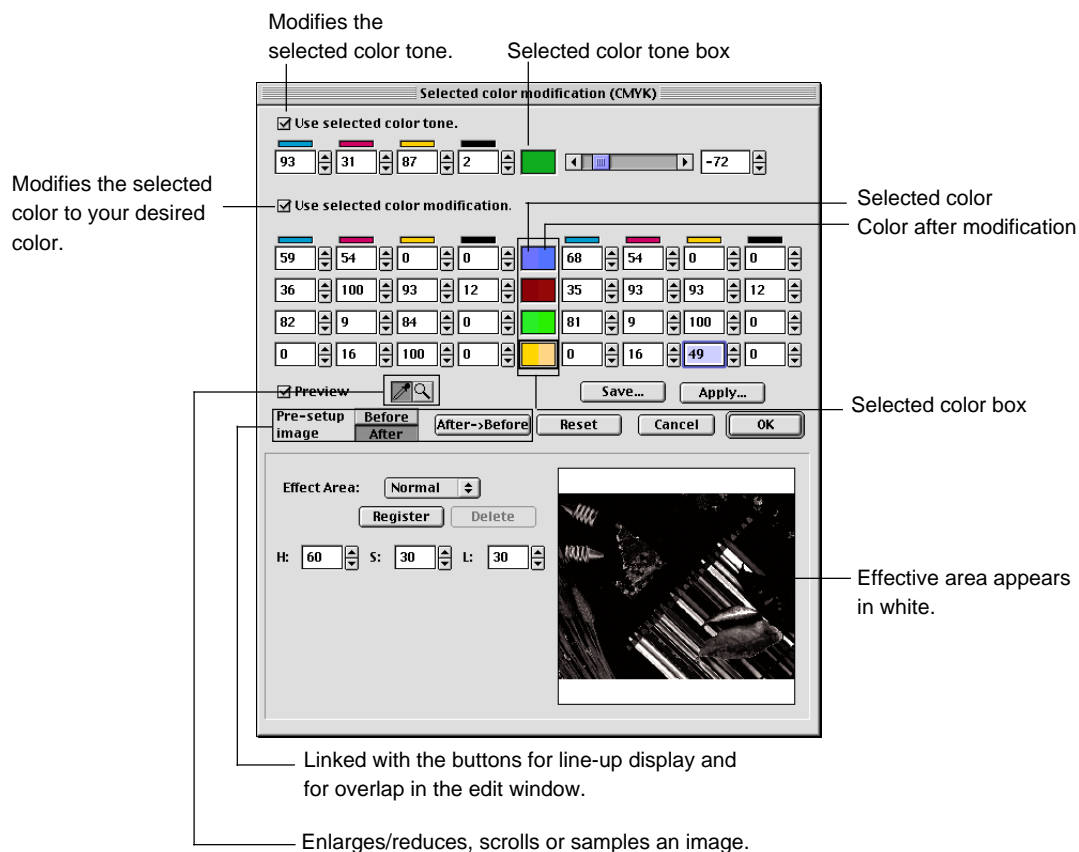
**Note**

If you modify the color mode of the image to be output, be sure that the “Max/Min” data set in the previous setup’s parameters are cleared.



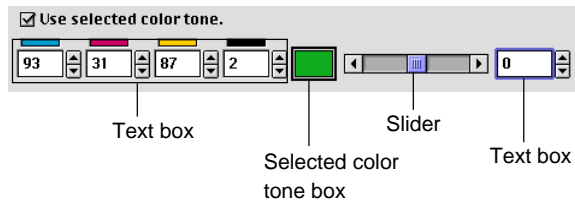
### 3. Modifying a selected color

You can change a color that you select into another color. In addition, you can brighten or darken the finish of a selected color by making its tone curve steep or gentle.



### 3.1 Tone change

- 1) Choose “Selected color modification” from under the “Image” menu.
- 2) Checkmark the “Use selected colors tone” box.
- 3) Click the selected colors tone box.



- 4) Select the color you want by clicking it in the Edit window while holding down the command key. The selected color is then displayed in the selected color tone box. You can also enter values in the text boxes on the left.
- 5) To modify the color tone in the selected color tone box, use the slider or enter a value in the text box on the right.
- 6) Press the Apply button to display the modified color tone in the Edit window.

To store the settings in the file, press the Save button. If you press the Load button, the selected color modification window will read the saved setting.

### 3.2 Color change

- 1) Choose “Selected color modification” from under the “Image” menu.
- 2) Checkmark the “Use selected color modification” box.
- 3) Click a selected color box.



- 4) Select the color you want by clicking it in the Edit window while holding down the command key. The selected color is then displayed in the selected color box. You can also enter values in the text boxes on the left.
- 5) To set the color in a selected color box, enter the changed values in the text boxes on the right.
- 6) You can set a maximum of four selected colors. Conduct the steps from 2) to 4) above for each.

Figure 1 shows a 4x12 grid world environment. The grid contains numbers 0, 10, and 66. Colored bars (blue, pink, yellow, black) are above the top row. Arrows indicate movement directions. The start state is at (1,1) with value 0, and the goal state is at (1,9) with value 66.

- 7) Press the Apply button to display the modified color in the Edit window.

To store the settings in the file, press the Save button. If you press the Load button, the selected color modification window will read the saved setting.

### 3.3 Setting the effective area

- 1) Select the areas from the “Effective area” menu. You can also enter values in the text boxes.

Click the “Save” button so that the settings for the effective area will be saved into the “Effective area” menu.


Click the “Delete” button so that the settings for the effective area will be deleted from the “Effective area” menu.

#### Note

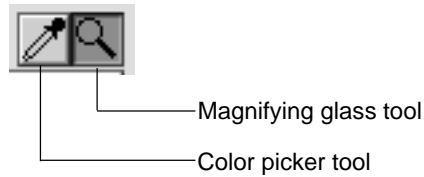
Note that items registered at the factory before shipment cannot be removed from the “Effective area” menu.

Effect Area:

H:  S:  L:



### 3.4 Enlarging/reducing, scrolling and color picking



#### **Enlarging and reducing**

You can use this tool in the same manner as for the Magnifying glass tool in the tool palette.

Please refer to “Processing images with tools” of “1.4 Setup essentials” in Chapter 3.

#### **Scrolling**

If the Magnifying glass tool is used while you are holding down the command key, the cursor will change to a hand shape. Dragging an image with this cursor allows you to scroll the image.

#### **Color picking**

You can use this tool in the same manner as for the Color picker tool in the tool palette.

Please refer to “Processing images with tools” of “1.4 Setup essentials” in Chapter 3.

## 4.Reuse of the RGB images

You can store the scanned RGB images that have not been processed (before setup) and the recipe files in the local storages (simple database), and reuse the stored RGB images.

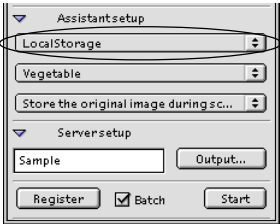
Note

Set up the server assistant environment before implementing the above operation by referring to “Server assistant environment” in Chapter 2 “Operation environmental settings”.

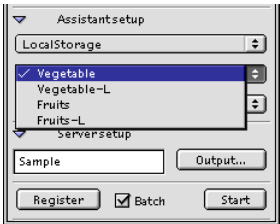
### 4.1 Saving in the local storage

The following explains the procedure to store the scanned RGB images that have not been processed (before setup) in the local storages.

- 1) Referring to Chapter 3 “Understanding basic setup procedures”, set the setup parameters.
- 2) Before scanning, select in the setup palette window a method for storing the RGB images in the local storage. Select the local storage.



- 3) Select the search keyword.

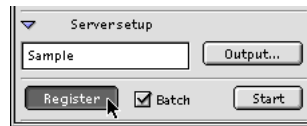


- 4) Select the method to store RGB images.

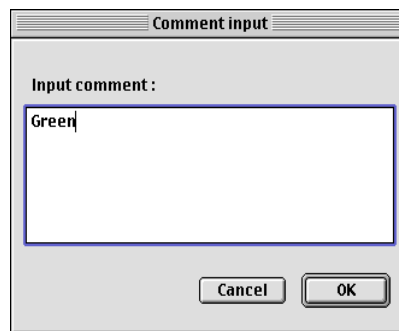


Button	Function
Store the original image during scanning	Stores the RGB images that have not been processed (before setup) in the local storages while processing the images during scanning.
Store the RGB images only	Stores only the RGB images that have not been processed (before setup) in the local storages. The processed images are not stored.
Store no image	Stores no RGB images that have not been processed (before setup) in the local storage.

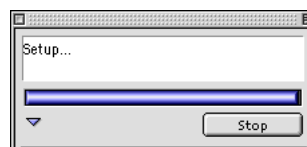
- 5) Click the “Scan” button or the “Register” button in the setup palette window.



- 6) Enter a comment and click the “OK” button.  
If you do not need any comments, just click the “OK” button.



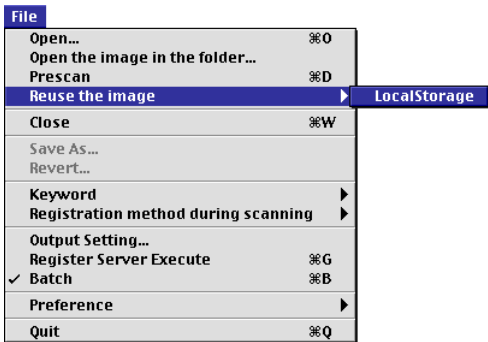
- 7) If you clicked the “Register” button in step 5), click the “Start” button. The calculation starts in the server.



4.2 Search

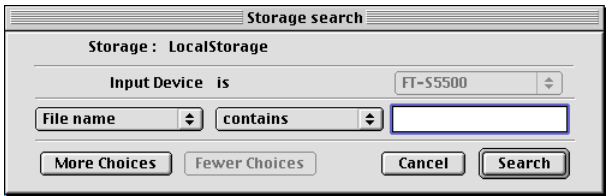
The following explains the procedure to search for the RGB images to be reused.

- 1) From the “File” menu, select the “Reuse the image” sub-menu under “LocalStorage”.

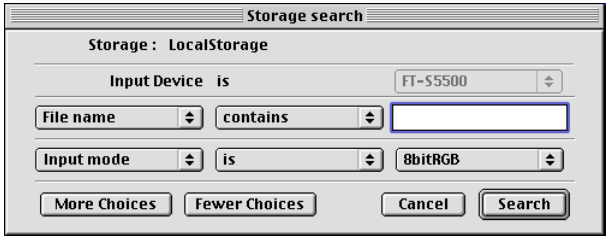


- 2) Enter the search condition and click the “Search” button.

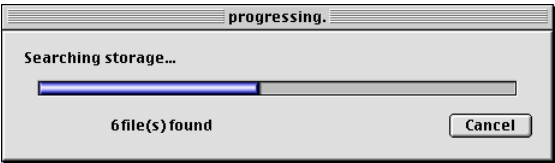
- Note
- When you wish to narrow a search (AND-search), click the “More choices” button. After entering the advanced search conditions, click the “Search” button.
  - AND-search can be used. OR-search cannot be used.



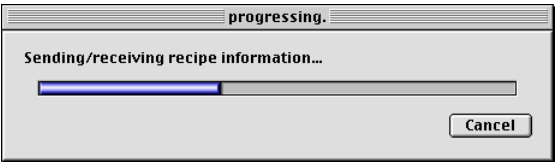
More choices ↓      ↑ Fewer choices



During a search, a progress bar will appear.

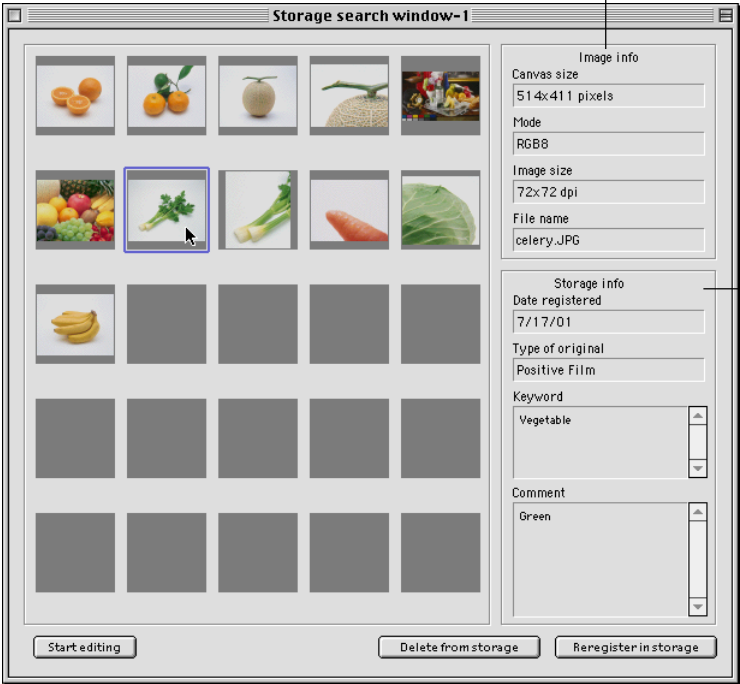


At the same time, the recipe (previously used setup parameters) is sent to the client.



“Storage search” window will appear.

Displays the information about the selected image.

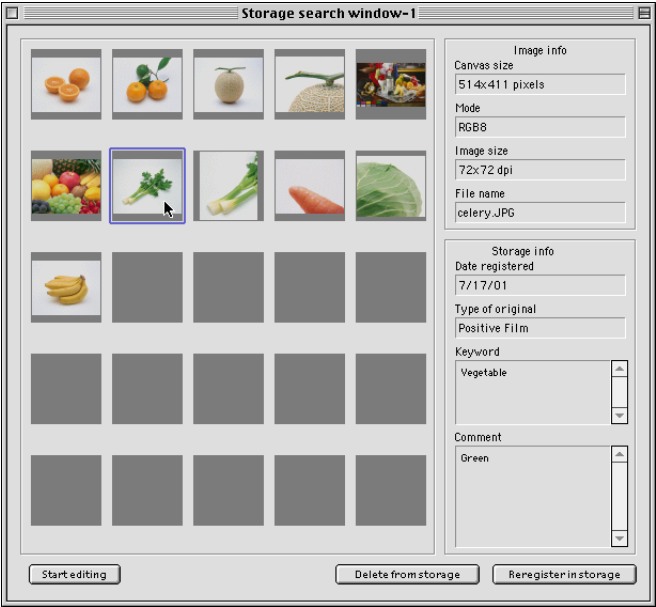


Displays the category information about the selected image for the local storage.



4.3 Edit and calculation

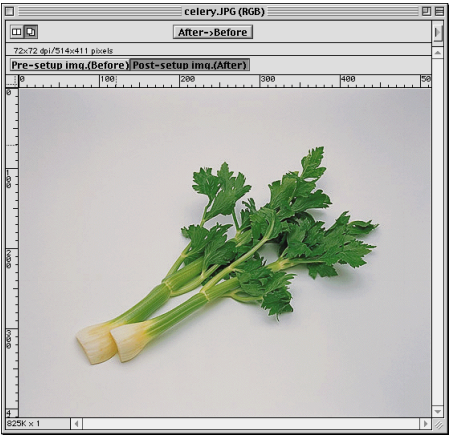
- 1) Select the image to be edited and calculated in “Storage search” window.



- 2) Double-click the thumbnail image, or select the thumbnail image and click the “Start editing” button.

The image is displayed in the window for editing.

Based on the recipe information, the previously used setup parameters are automatically displayed on the setup palette window.



- 3) Referring to Chapter 3 “Understanding basic setup procedures”, modify the setup parameters.
- 4) Click the “Scan” button or the “Register” button in the setup palette window.
- 5) If you clicked the “Register” button in step 4), click the “Start” button. The calculation starts in the server.

**Note**

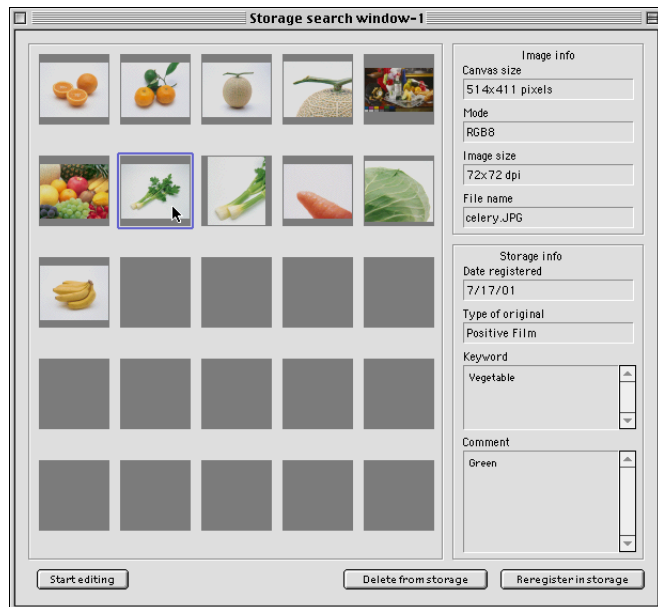
Because of the additional operations (sending the recipe file and transferring the image file to the shared folder with the server), the calculation will take more time than usual.

#### 4.4 Deletion and re-registration

The following explains the procedure to delete the image files from the local storages, and to modify the comments and reregister the image files in the local storages.

##### To delete the image file from the local storage:

- 1) Referring to “5.2 Search”, search for the image file.  
The “Storage search” window will appear.

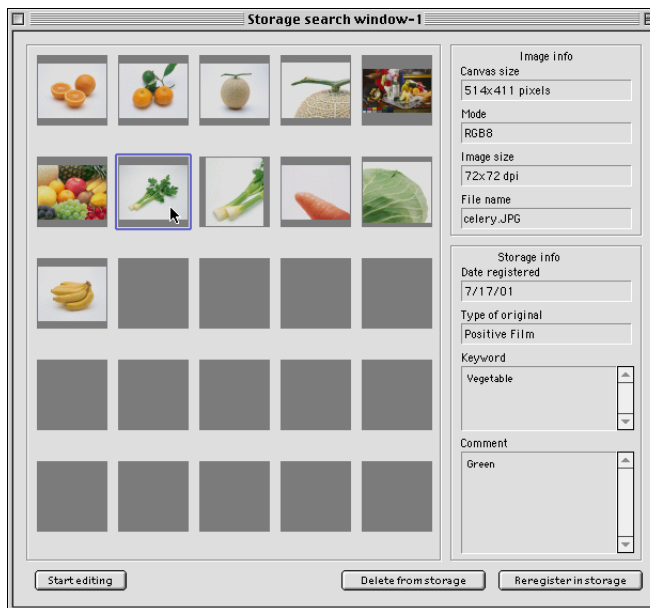


- 2) Select the thumbnail image.
- 3) Click the “Delete from storage” button.

**To modify the comment and reregister the image file in the local storage:**

- 1) Referring to “5.2 Search”, search for the image file.

The “Storage search” window will appear.



- 2) Select the thumbnail image.
- 3) Click the “Reregister in storage” button.

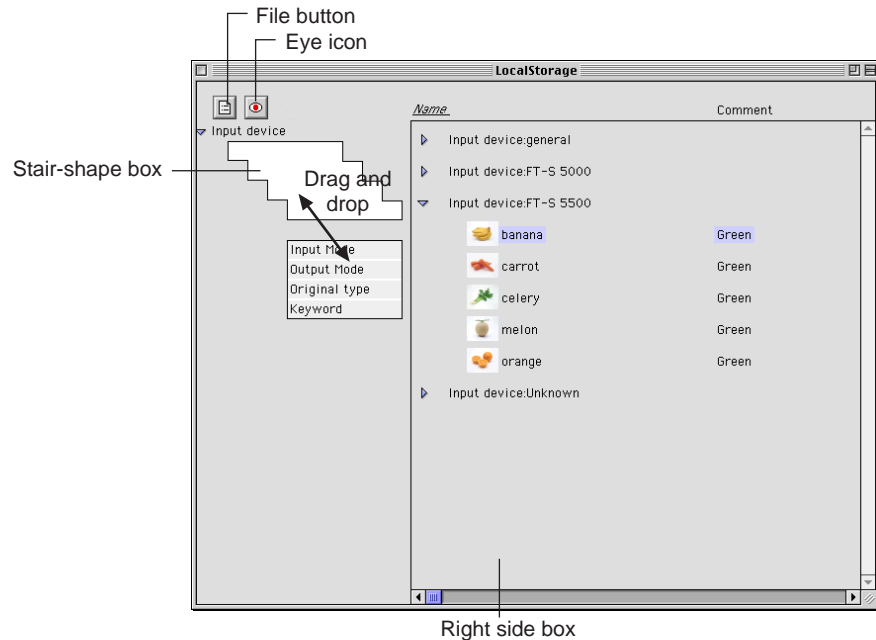
#### 4. 5 Local storage maintenance

When a list of images previously registered in the local storage is displayed on screen, the following operations are possible, as is the addition or modification of the keywords already registered in the storage.

- Confirmation of the registered information
- Deletion of unnecessary images
- Modification of comments

- 1) Startup the Assistant application.
- 2) Open the environment settings from the file menu.
- 3) Select a local storage you wish to modify from the “Local storage setup” list, and click “Modify”.

- 4) The maintenance window, which contains the following items, is open.



### Description of window

“File button” ..... Opens a dialog for the addition or modification of a keyword.

“Eye icon” ..... Displays detailed information when clicking a selected image.

It is also possible to edit comments.

“Stair-shape box” ..... Designates the order of data expansion for browsing images.

The conditions of data expansion can be dragged from the box located and dropped in the stair-shape box. According to the order of conditions specified (from the top), the classified images are displayed.

“Right side box” ..... Displays a list of images.

When you click ► for the corresponding data name, the image will be expanded according to the conditions specified. The thumbnail image and its file name of the selected item are displayed.

- 5) Input the expansion conditions in the stair-shape box, and click ► for the data name in the box to the right to display the corresponding image. (If no condition is specified in the stair-shape box, all the images organized by its input device will be displayed).
  - a) To delete image ..... Select from the list an image you wish to delete and press the DEL key.
  - b) To rewrite comment ..... Select an image you wish to rewrite and click the “eye” icon. When the detailed information of the selected image is displayed on screen, rewrite the comments.
- 6) When all the steps described above have been completed, click the close box to close the maintenance window.

**Note**

Once this operation is performed, the operation of the assistant application is stopped, and the connection between the server and client applications is disconnected.

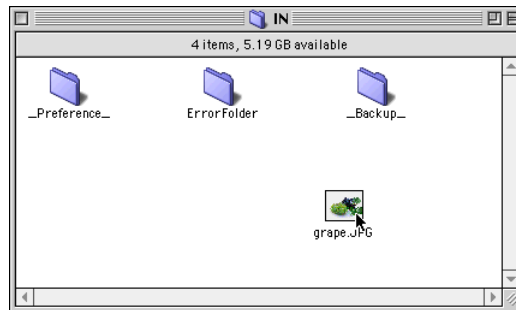
**Restart procedure**

- 1) Terminate the assistant application and restart.
- 2) Disconnect the server connection in the client application and then reconnect it.

## 5. Hot folder

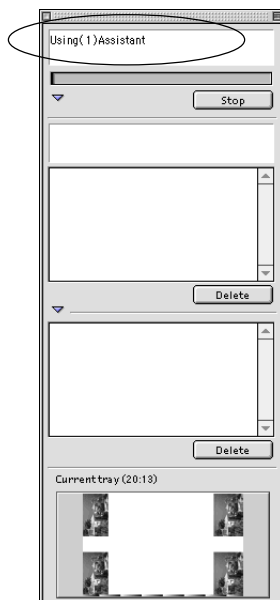
You can perform image processing automatically (automatic batch process) by just dragging and dropping an image file onto the folder designated as a hot folder. The following explains the procedure.

- Note**
- Set up the server assistant environment before implementing the above operation by referring to “Server assistant environment” in Chapter 2 “Operation environmental settings”.
  - In the Mac OS X environment, after opening the privilege window, select “Read & Write” for files and folders in the pop up menu for users who are logged into the Macintosh.
- 1) Start up the server assistant, server application and client application (following the order as described here).
  - 2) Drag and drop the image onto the hot folder following any procedure described below in the Finder.
    - Drag and drop the image file only.
    - Drag and drop the folder that contains the “image file” and the “recipe file”.
    - Drag and drop the folder that contains the “image file that is embedded in the ICC profile” and the “destination file”.

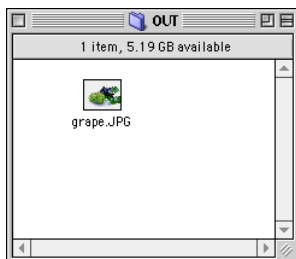


If an error occurs and the process fails, the files are moved to “ErrorFolder”.

During the calculation, the Server Management palette is as shown below.



When the calculation is completed normally, the image file is output to the output destination folder.



## 6. Opening all image files in a folder at once

The following explains the procedure to open all image files in a folder at once (folder open function) and process the image files.

**Note**

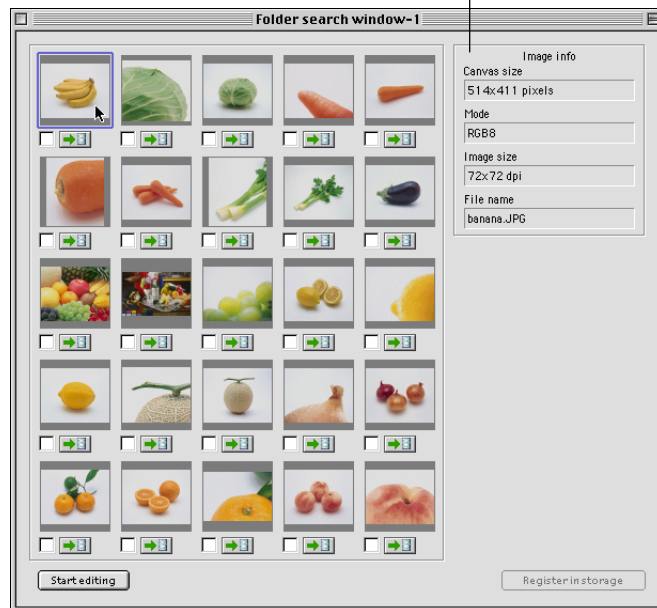
Set up the server assistant environment before implementing the above operation by referring to “Server assistant environment” in Chapter 2 “Operation environmental settings”.

### To open all image files at once:

The following explains the procedure to open all image files in a folder at once and display them in “Folder search” window.

- 1) Start up the server assistant, server application and client application (following the order as described here).
- 2) Select “Open the images in the folder...” from the “File” menu.
- 3) Select the folder and click the “Select” button.
- 4) “Folder search” window will appear.

Displays the information about the selected image.

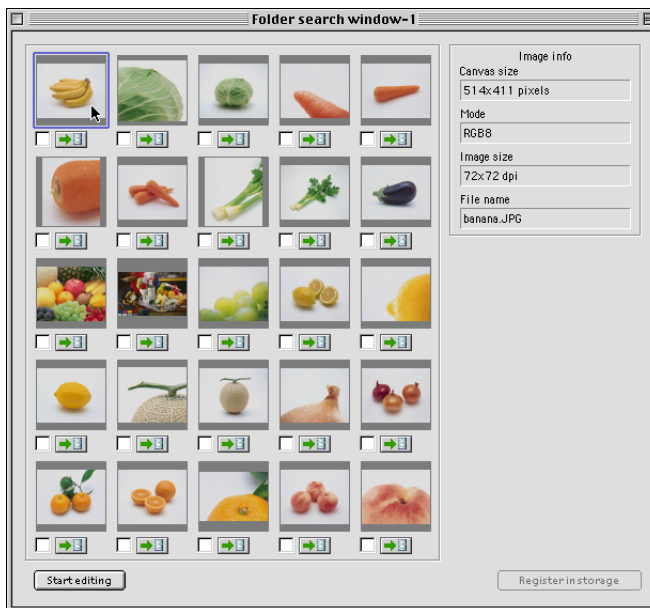




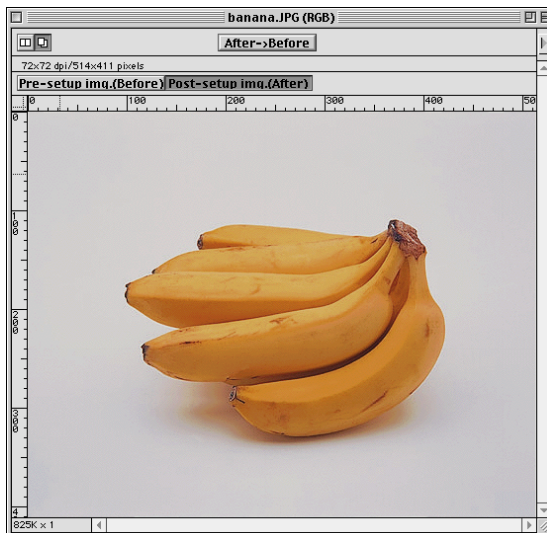
**To edit and calculate the image file:**

The following explains the procedure to edit and calculate the image files.

- 1) Double-click the thumbnail image in “Folder search” window, or select the thumbnail image and click the “Start editing” button.



The image is displayed in the window for editing.



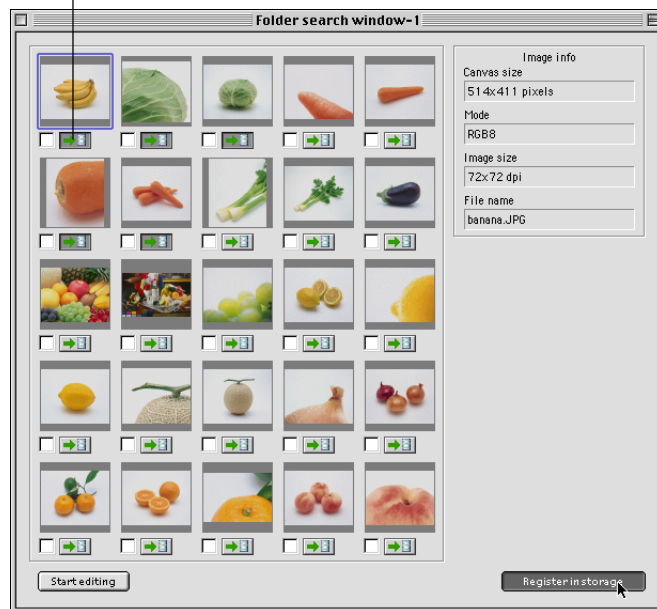
- 2) Referring to Chapter 3 “Understanding basic setup procedures”, modify the setup parameters.
- 3) Click the “Scan” button or the “Register” button in the setup palette window.
- 4) If you clicked the “Register” button in step 3), click the “Start” button. The calculation starts in the server.

### To register the image file in the local storage:

The following explains the procedure to register the image files in the local storage. Registering the image files in the local storage enables you to reuse the image files. (Refer to “4. Reuse of the RGB images”.)

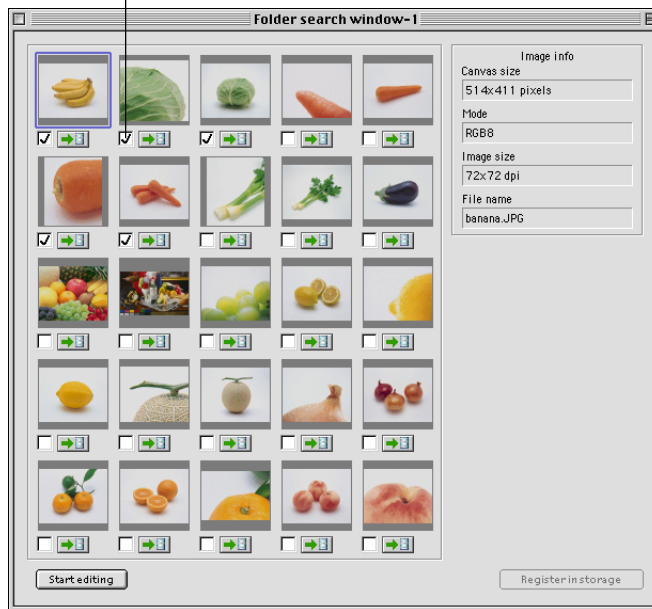
- 1) In “Folder search” window, after activating the “Select” button under the image you wish to register in the local storage, click the “Register in storage” button.

Select button



Displays a checkmark under the thumbnail image after completing registration.

Check mark



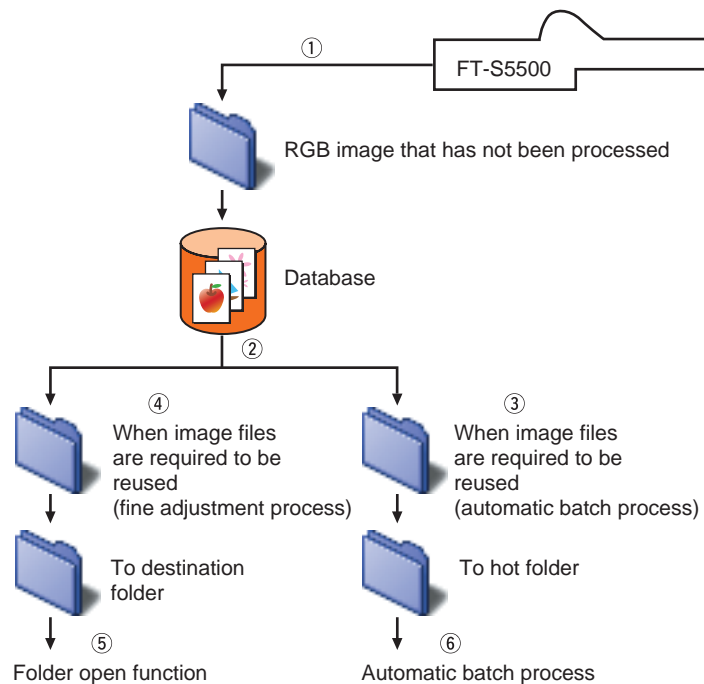
## 7. Example usage of hot folder and folder open function

If you use a hot folder and the folder open function simultaneously, you can implement the “automatic batch process + fine adjustment process” flow.

This flow is useful in the cases described below.

### To use with a general-purpose database:

The following is an example of when it is used with a general-purpose database. Refer to the figure shown below.



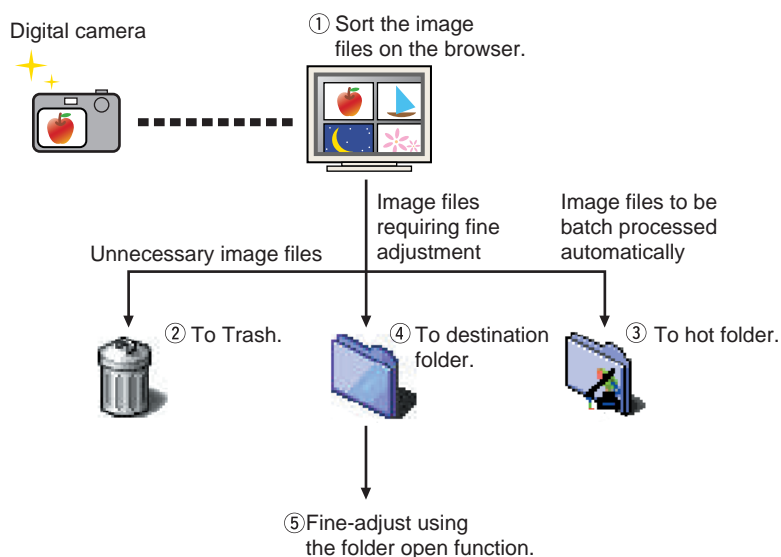
- 1) Transfer the RGB image files (before setup) to the database from the FT-S5500.
- 2) Sort the image files into two groups: one group for fine adjustment and one group to be batch processed automatically.
- 3) Move the files to be batch processed automatically to the hot folder.
- 4) Move the files requiring fine adjustment to the destination folder.
- 5) Fine-adjust the files after using the folder open function.  
Refer to “6. Opening all image files in a folder at once”.

- 6) The files are batch processed automatically.  
Refer to “5. Hot folder”.

### To use with digital camera:

The following illustrates image processing in ColorGenius whereby images are imported from a digital camera.

**Note** An ICC profile for digital camera is required for the above.



- 1) Sort the image files into unnecessary image files, image files requiring fine adjustment and image files to be batch processed automatically.
- 2) Drag the unnecessary image files to the Trash.
- 3) Move the files to be batch processed automatically to the hot folder.
- 4) Move the files requiring fine adjustment to the destination folder.
- 5) Fine-adjust the files using the folder open function.  
Refer to “6. Opening all image files in a folder at once”.
- 6) The files are batch processed automatically.  
Refer to “5. Hot folder”.

## 8. Scanning using the optional compound tray

By using the optional compound tray set, you can implement the scanning of multiple originals (regular form) effectively.

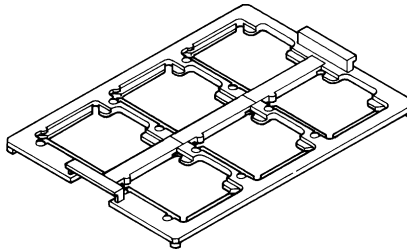
**Note**

As for the procedures for setting the original in the holder and setting the holder in the compound tray, refer to the manual supplied with the optional compound tray for details.

### 8.1 About the compound tray set

The following trays and holders are included in the optional compound tray set.

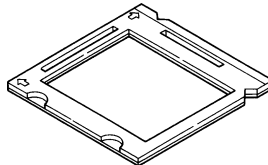
#### Compound tray



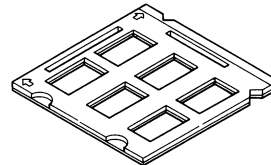
The compound tray is a tray which is used with the glassless holder or the plastic holder. The compound tray is used by taking off the standard glass tray from the FT-S5500.

#### Glassless holder

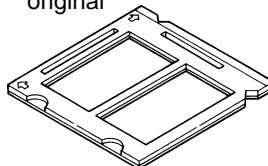
The glassless holder is a holder used when scanning the original in medium or low resolutions. There are 4 original size options for the holders.



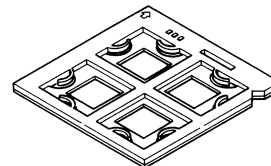
For the 4 X 5 inch  
original



35 mm



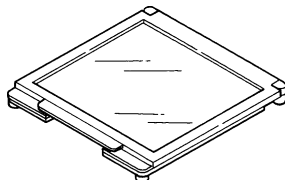
6 X 6 cm (6 X 7 cm)



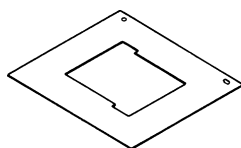
35 mm - slides

**Plastic holder**

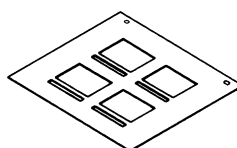
The plastic holder is a holder which allows you to put the original between transparent plastic covers. By using the exclusive mask sheets (for the plastic holder), you can set the original in 4 X 5 inch, 6 X 7 cm or 35 mm sizes. The plastic holder is used for scanning in full resolution.

**Mask sheets for plastic holder**

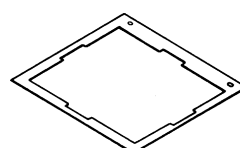
Exclusive mask sheets are used for setting the original in the plastic holder. Holes on the mask sheet allow you to align the original simply by placing the holes on the pins on the plastic holder.



6 X 7 cminch original



35 mm

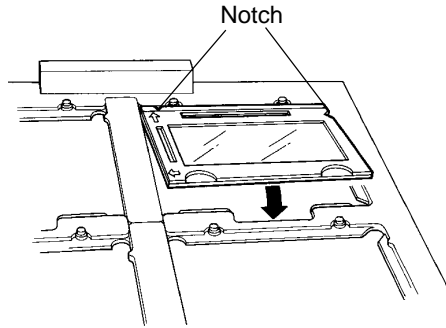


For the 4 X 5

**8.2 Scanning using the compound tray**

- 1) Set the original in either the plastic holder or the glassless holder.
- 2) Remove the standard tray from the FT-S5500, and then mount the optional compound tray. The compound tray has its own mounting directions, right and left. The side on which a notch is made, should be placed on the right. Be sure not to mount the tray in the reverse.

- 3) Set the holder, in which the original has been set in 1. above on the compound tray. The holder shall be set matching the triangle notches with the corresponding triangle protrusions on the tray.



- 4) Close the top cover, and then start prescanning.  
The Prescan window appears after completing the prescanning.  
The FT-S5500 has the ability to recognize the position of the input originals automatically and reproduce them in the display in the same position. Dotted lines indicating the trimming area appear around the input images (except when "Auto Trimming enable" is not checked on the "General" tab in the "FT-S5500 Option" window).
- Note
- There are windows on the top and left sides of the glassless holder. These windows are used to detect the orientation of the holder and the size/position/direction of the original accurately.
- 5) Hereafter, implement the setup operations following the usual setup procedures.



# Chapter 5 Using the Make Profile Tool

**Note** The Make Profile Tool on the Mac OS X can be operated within the classic environment.

## Output profile making tool

When outputting an image from ColorGenius, it is also necessary to convert the image into data that matches the individual printer and printing conditions. The output profile making tool will create the mode conversion profile using the ICC profile supplied with the scanner. You can also create a output profile by modifying the conversion data with which the image has already been converted.

### 1. The Output profile making tool

Double-click the “Make Profile” icon, located in the folder where ColorGenius was installed. This tool creates ColorGenius conversion profiles (Output profiles), which are used to convert image data that was set up in ColorGenius from CMYK to RGB and so on. ColorGenius profiles are in file format. Therefore, the user can generate and save several different profiles. Profiles are available for use once they are placed in the ColorGenius Profile folder. Furthermore, a single file can contain more than one profile.\* Each contains an RGB/RGB conversion table, an RGB/CMYK conversion table, and an RGB/Grayscale conversion table. This tool allows you to make each of those types of profiles.

**Note** A single file can contain 5 profiles (for transparent originals, reflective originals, negative color originals, printed materials, water color and a default for other originals). The profile for default is applied to the original if there is no specific profile for it.

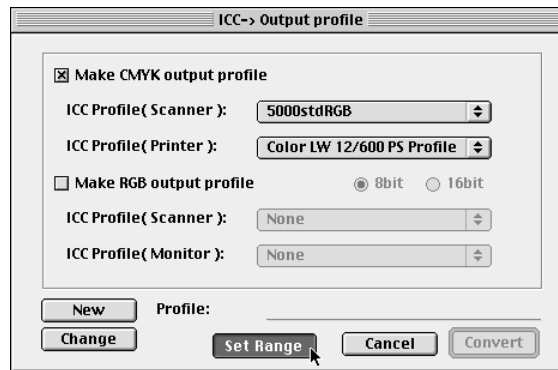
You can create profiles two different ways, as indicated below.

- Use a ColorSync profile  
This allows you to create RGB/RGB and RGB/CMYK conversion tables.
- Edit an existing profile  
This allows you to create RGB/RGB, RGB/CMYK, and RGB/Grayscale conversion tables.

## Creating a profile using a ColorSync profile

If you already have a ColorSync version 2 profile for the printer you will use for output, you can alter that profile to create a ColorGenius conversion profile. ICC profiles include two profiles, which link the RGB and CMYK levels generated by scanners and printers with measured colors. To create a ColorGenius RGB/RGB conversion profile, simply combine the scanner and monitor profiles. For an RGB/CMYK conversion profile, a scanner profile and a printer profile are required. With this application, you can generate a ColorGenius input profile using an existing ColorSync profile. You can not create a ColorSync profile. If you want to generate ColorGenius profiles using ColorSync profiles, ColorSync V2 must be installed in your system.

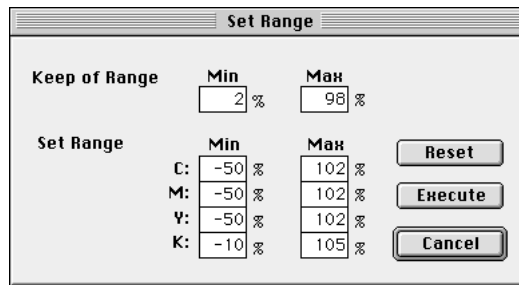
- 1) Select “Convert from ICC profile” in the Make menu.
- 2) A dialog box is displayed. Check the RGB output table of the CMYK output table as necessary for the table you will create.



- 3) When you click the ICC profile (scanner) menu, you can select a profile to use. Select “StdRGB (Scanner)”. To create an RGB output profile, select a monitor profile as well. To create a CMYK output profile, select the printer or printing press profile required.
- 4) After indicating the tables to be generated, make the other profile generation settings. If you are generating a new profile, select “New”. To change an existing profile, select “Change”. A dialog box is displayed. If you are generating a new profile, input the name and folder for the file. If you are editing a profile, select the profile you wish to alter.

If you are editing an existing profile, only the tables whose check boxes are checked will be changed. Tables whose check boxes are not checked will not be changed. If you are generating a new profile but have only selected one table, a default will be generated for the other automatically.

When creating a CMYK profile, the range of 0 to 100% dot is automatically increased. Click the "Set Range" button when you wish to designate the increased range. The "Set Range" dialog appears in which you can designate the range.

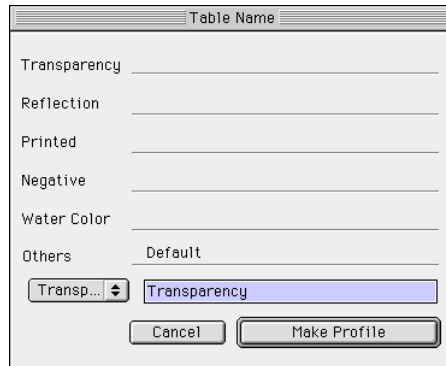


The "Set Range" dialog box is used to set the minimum and maximum values for the color channels. It contains two sections: "Keep of Range" and "Set Range".

	Min	Max
Keep of Range	2 %	98 %
Set Range		
C:	-50 %	102 %
M:	-50 %	102 %
Y:	-50 %	102 %
K:	-10 %	105 %

Buttons: Reset, Execute, Cancel

- 5) If you click on "Convert", the dialog box for the profiles contained in the file to be converted appears.



The "Table Name" dialog box is used to select a profile from a list. It contains a list of profiles and a "Make Profile" button.

Table Name
Transparency
Reflection
Printed
Negative
Water Color
Others
Default

Buttons: Transp..., Cancel, Make Profile

If you want to change the profile, select the profile from the menu, and enter a new profile name. Clicking on "Make Profile" will enable you to change the parameters of the profile.

## To edit an existing profile

You can generate a conversion table that includes changes to the tone curve or a color correction applied after the data is converted to CMYK by ColorGenius.

The output profile making tool can change an existing profile or make a new profile.

**Note**

A single profile contains various conversion tables for transparent originals, reflective originals, negative color originals or printed materials.

Therefore, although you can make a thoroughly new conversion profile, we recommend that you change only the required tables in a copy of an attached profile.

The procedure for editing an existing profile is as follows.

- Scan an RGB image from the FT-S5500 after applying AI Setup and Sharpness.
- Add a patch to the scanned RGB TIFF image.
- Convert the RGB image to an CMYK image with the ColorGenius for the finished image that you desire.
- Create an RGB/CMYK output profile using a ColorGenius tool which reads the dot percentage in the patch areas of both the RGB image and the CMYK image.

- 1) Scan an RGB image from the FT-S5500 after applying AI Setup and Sharpness.

Make an 8 bit RGB image after applying the AI and Sharpness processes with the Manual setup of the ColorGenius.

The Sharpness function is considered to have no relationship with the color adjustment, however, since it may cause a dullness of color, it should be applied in this step.

**Note**

The Easy setup (Intelligent setup) is not suitable for CMYK conversion in the subsequent process because it sets the most appropriate setting for RGB output.

Store the RGB image processed by the ColorGenius in the TIFF format.

- 2) Add a patch to the scanned RGB TIFF image.

Start the Make Profile Tool and select "PROFILE", an output profile making tool.

Select "Add patch to TIFF Image" from the "Make" menu and select the scanned RGB TIFF image.

**Note**

This process adds the information for creating a profile to the RGB image. Note that it causes an unidentifiable image to appear on the top side of the image and this is not caused by an error.

- 3) Convert the RGB image to an CMYK image by the ColorGenius for the finished image you desire.

In the manual fine adjust of the ColorGenius, adjust the color functions such as Max/Min setting, Color correction, or Tone correction, so that the image to be converted to an CMYK image results in an appropriate printing with suitable color reproduction. Then convert the RGB image to an CMYK image and store it.

**Note**

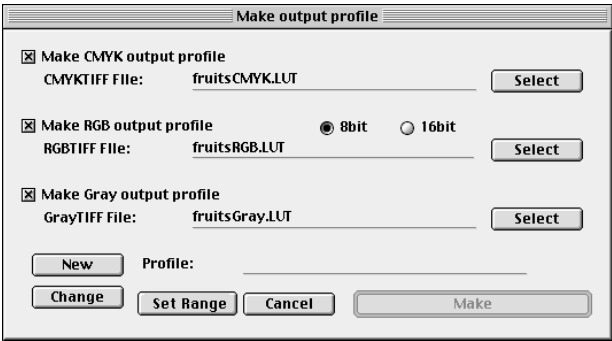
Although you can perform the above adjustment in another application, the standard dot percentage for the highlight or shadow points may differ from that of the FT-S5500. For example, a setting to avoid a change of the dot percentage for the highlight and shadow points is required.

Do not apply the AI and Sharpness functions here because they have already been applied to the image.

Store the CMYK image in the TIFF format.

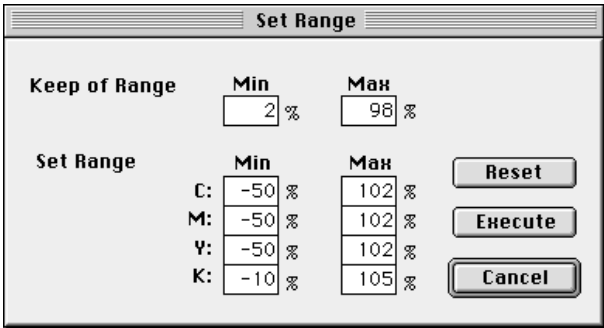
When creating an RGB/Gray scale conversion profile, set so that the converted image becomes a gray scale image. When creating an RGB/RGB conversion profile, set so that the RGB output image results in the most appropriate printing.

- 4) Select “Convert from patched TIFF” from the “Make” menu. The “Make output profile” dialog appears.



- 5) Check the “Make CMYK output profile” check box on the top side of the dialog, and select an CMYK TIFF image file to be read. The characteristics of the RGB/CMYK conversion are read.
- 6) Click the “Change” button and select an existing profile you wish to edit.

Clicking the “New” button makes a new profile.



**Note**

If you want to set the value for the dot range increase, click the “Set Range” button and designate the value you wish. Even if the value is not set here, the dot range increase is automatically done with the current set value or default value (if the value has not been changed yet).

- 7) Click the “Make” button and select the kind of original to which the conversion characteristics can be applied.

**Note**

A single profile contains various conversion tables for transparent originals, reflective originals, negative color originals or printed materials. One original type to which the conversion characteristics can be applied must be selected before they are written in the profile.

- 8) Input a profile name and store it.  
The profile name is displayed in the right bottom side of the Calibration palette. Click the “Make” button to write the conversion characteristics in the profile.  
This completes the procedure for writing characteristics concerning the tone or color correction in a conversion profile. These characteristics can then be used by selecting the output profile in the Setup palette window or “Merge Profile” from the “Environment” menu.

## Chapter 6 Line Art

ColorGenius allows you to input line art originals from the FT-S5500. The originals can be transparent media (films, etc.) or reflective media (mechanicals, etc.).

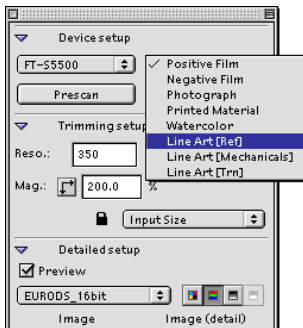
If you select “Line art” from the “Original” menu, you must start by setting up ColorGenius with the “FT-S5500 Options” dialog box. This is different from the procedure for other originals.

### 1. Prescanning

- 1) Set the original to the scanner.
- 2) Select “Line art [Ref]” or “Line art [Trn]” from the “Original” menu.

**Note**

It is recommended that you select “Line Art [Mechanicals]” if you use mechanicals as an original.

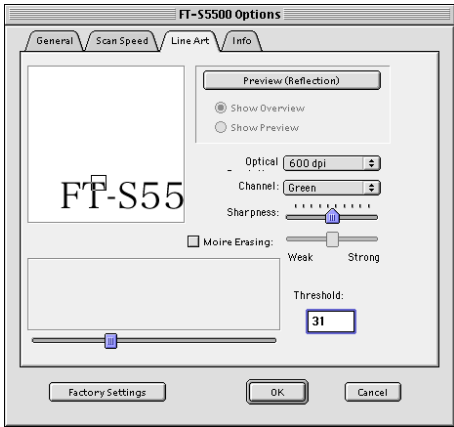


- 3) Click the “Prescan” button.  
The prescanning starts. The display of the prescanned image indicates the completion of the pre-scanning operation.
- 4) Set the trimming area in the Prescan Window.  
The procedures for trimming and designating the prescanning area are the same as for other types of originals.
- 5) Click on the “Reso.” box in the setup palette, and then input the desired resolution setting using numerical keys.
- 6) Click on the “Mag.” box in the setup palette, and then input the desired magnification setting using numerical keys.



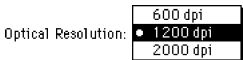
## 2. Line art controls

- 1) Click the “Setting expand” button in the setup palette window.
- 2) Click the “Line art” tab.



### Preview in full resolution

The prescanned image is displayed in the upper left corner of the window. A partial area of the prescanned image can be previewed in the actually entered resolution (i.e. the “Reso” resolution setting multiplied by the magnification factor entered in the setup palette). The line art controls to be used for scanning can be set while using this previewed image.



#### To set the optical resolution:

Select the optical resolution to be applied for the scanning, from the “Optical Resolution” pull-down menu.

#### Note

The set optical resolution will be used during the FT-S5500’s full-resolution scan of an original. You can select a desired optical resolution from among the 2000 dpi, 1200 dpi and 600 dpi settings. The following tables shows the prominent characteristics of each optical resolution.

Optical resolution	Scanning time	Fine detail reproduction quality	Number of scan passes for full tray table
600 dpi	Rapid	Low	Once
1200 dpi	Moderate	Moderate	Twice
2000 dpi	Slow	High	Four times

**To set the partial preview area:**

The small box appearing at the center of the prescanned image is the area that can be previewed in full resolution. Placing the cursor inside the image changes the shape of the cursor (hand shape) to enable the hand tool. You can scroll up/down the prescanned image by dragging this hand tool. By placing the cursor on the small box and dragging it, you can move the partial preview area.

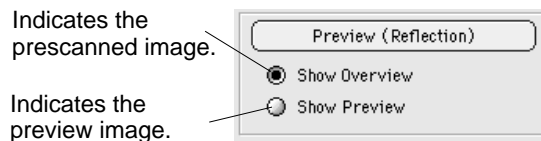
**Starting the preview:**

Click the “Preview” button after setting the resolution and partial preview area. The prescanning starts with the set resolution.

**To undo the preview:**

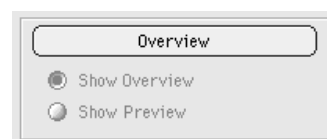
You can undo the preview settings if you feel the selected preview area or the selected resolution is not appropriate.

By clicking the “Show Overview” radio button under the “Preview” button, the prescanned image reappears in place of the preview image on the monitor. During this display, you can set the preview area again, and then click the “Preview” button.

**Note**

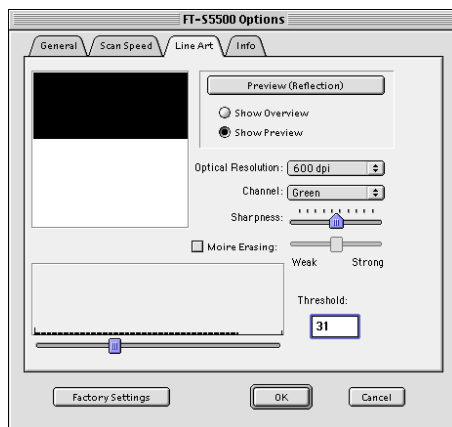
If you are operating ColorGenius in a multi-client/server environment, while an image is being scanned upon another client's request, the overview image may not be displayed on your screen.

Even if the above occurs, you still can set the line art controls. If you wish to preview the image in full resolution, be sure to display the overview image on your window by clicking the “Overview” button before previewing.



## Setting the input controls

When the prescreening is completed, the preview image is displayed in place of the prescreened image. The input controls can be set while monitoring the preview image.



- 1) Select the filter to be used for scanning, from the “Channel” pull-down menu.

If any corrections have been made with a red pen on the original in black, and if the “Red” filter is selected from the menu, ColorGenius will allow the image to be input, while sorting out the portions in red, during the scanning.

- 2) Set the appropriate sharpness level in the image by moving the sharpness slider. Moving the slider to the left/right gives a simulation of the image.
- 3) When you scan the halftone tint, there will be a moire. Checking the “Moire Erasing” box will allow you to eliminate the moire on the image. By moving the moire removal slider, you can adjust the degree of moire erasing.

### Note

Increasing the degree of moire erasing too much will result in a deterioration of the character clarity in the image.

- 4) While monitoring the preview image, set the threshold level, which discriminates between white and black sections of line art, to an appropriate value by moving the threshold slider.
- 5) Click the “OK” button, and then close the “FT-S5500 Options” dialog box.

**Note**

- If a start&stop occurs during scanning with the FT-S5500, click the “Scan speed” tab, and then activate “Adjust automatically the scan speed at line art/DotFinder.”
- Automatic control of the scanning speed is not possible with the “Scan speed” tab in the FT-S5000.

### 3. Server registration

After the input controls have been set, register the controls in the server in the same way as in the normal setup registration procedure.

- 1) Designate the scanning area with the Trimming tool.
- 2) Perform the output setting procedure.
- 3) Perform the registration operations in the server.

When the batch process is deactivated (off), the scanning starts.

When the batch process is activated (on), click the “Start” button to start the scanning.

After completion of the scanning, the image is registered to its output destination with its designated file name.

<b>Note</b>
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If any additional operation is implemented on the host computer while inputting an image via the FT-S5500, it will lower the transmission speed of the image data to the host computer and temporarily halt the scanning by the FT-S5500 while it waits for the host computer to complete reading the image data (start & stop function). If this “start & stop function” occurs while inputting line art from the FT-S5500, this can result in unevenness in some portion of the image. To avoid this, please do not implement any additional operation on the host computer while inputting line art.

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**Color Image Processing Software**

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**ColorGenius EX**  
for Macintosh

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**USERS MANUAL**

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