

JETimage

Wide Format Copying in Color and B/W

User's Guide

Windows 98, NT & 2000

Table of Contents

1. Making Copies	1-1
1.1 Copy Steps – Overview	1-1
1.2 Copy Steps – Description	1-2
1.2.1 Insert your Document	1-2
1.2.2 Select Color or Black and White Copying	1-2
1.2.3 Select the Type of Original	1-2
1.2.4 Select the Copy Sizes	1-4
1.2.5 Start Copying	1-5
1.3 Additional Options and Tools	1-6
1.3.1 Optional Previewing	1-6
1.3.2 Set the Number of Copies	1-6
1.3.3 Stop Button	1-6
1.3.4 The Reset Button	1-6
1.3.5 Collate Copy – Copy Sets	1-7
2. JETimage Copy System	2-1
2.1 About the System	2-1
2.2 Installing JETimage	2-5
2.3 Setting Up the System for the First Time	2-7
2.3.1 Setting Up Your Printer	2-7
2.3.2 Setting Up Your Scanner	2-9
2.3.3 Copy System Verification	2-11
2.3.4 Copy System Defaults	2-12
2.4 The JETimage User Interface	2-13
2.4.1 The Viewing Section	2-13
2.4.2 The Copy Option Section	2-14
2.4.3 The Copy Toolbar	2-14
2.4.4 Entering Numbers and Names	2-15
3. Reference Guide	3-1
3.1 Type of Original Templates	3-1
3.1.1 About Type of Original Templates	3-1
3.1.2 Type of Original Selection	3-2
3.1.3 Setting the Copy <i>Method</i>	3-3
3.1.4 Lightness	3-4
3.1.5 Saturation	3-4
3.1.6 Red, Green & Blue	3-5
3.1.7 Black & White Level	3-5
3.1.8 Sharpen/Blur	3-6
3.1.9 Accept/Save/Delete Template Settings	3-7
3.1.10 Creating Type of Original Templates	3-8
3.2 Size Settings	3-10
3.2.1 Size Option Relationships	3-10

3.2.2	Setting Input Size/Output Size	3-10
3.2.3	Using Size Presets	3-12
3.2.4	Controlling the Size Preset List – Paper Series	3-15
3.2.5	Setting a Scale factor	3-15
3.2.6	Using Scale Factor Presets	3-17
3.3	Output Settings	3-19
3.3.1	Setting the Output Margins	3-19
3.3.2	“Account for unprintable area” Option	3-21
3.3.3	Printer Selection and Setup	3-23
3.3.4	Copy Quality	3-26
3.3.5	Paper Roll	3-27
3.4	Media Profiles	3-28
3.4.1	Setting the Media Profile	3-28
3.4.2	Creating New Media Profiles	3-29
3.5	Previewing	3-34
3.5.1	The Paper Frame	3-34
3.5.2	Zoom Tools	3-36
3.5.3	Move Tool	3-37
3.5.4	Position the Paper Frame	3-37
3.5.5	Align the Image	3-38
3.6	Setup Preferences	3-40
3.6.1	Units of Measurement	3-40
3.6.2	Loading Preferences	3-40
3.7	Scanner Settings	3-42
3.7.1	Selected Scanner	3-42
3.7.2	Paper Load	3-43
3.7.3	Media Offsets	3-43
3.7.4	Extended Thickness Settings	3-44
3.8	Verifying Your Copy - Testing	3-46
3.8.1	On Screen Verification	3-46
3.8.2	Make a Trial Copy	3-46
4.	Appendix A: Glossary	4-1
5.	Appendix B: Program License Agreement	5-1
6.	Appendix C: Index	6-1

Contex A/S reserves the right to modify the information given in this publication without prior notice. The License terms and conditions applicable for your purchase of this equipment or/and programs are given in the license agreement (see Appendix). Please consult them for details.

Contex document no.: JIM VER3.0 UG/001 (bld301-08022000)

© Copyright Contex A/S, February, 2000

Note: All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher.

Preface

JETimage is a complete copying software for Context wide format color and monochrome scanners. This guide explains how to use JETimage's features.

The JETimage application is installed in both touchscreen and conventional mouse versions. This User's Guide applies for both versions since they basically share a common and consistent graphical user interface although the touchscreen interface uses larger buttons and controls to make finger tip activation easier. Any important differences between the touchscreen and mouse versions will be pointed out in relevant sections.

System Requirements

- Supported computer and operating system, see the chapter on installation.
- Wide format color or monochrome scanner.
- Large format printer.

Related Publications

The documentation which came with your computer.

The "OPERATOR'S GUIDE" which came with your Wide Format Scanner.

Documentation regarding your supported large format printer.

See also the README.htm file on the JETimage distribution CD for latest information and news.

About This Guide

This guide is divided into 3 main sections.

Chapter 1 describes how to make a copy in a few simple steps.

Chapter 2 describes the system and how to set it up for the first time. Make, once and for all, the appropriate default settings for your scanner and printer so the system becomes as easy to use as a standard office copy machine.

Chapter 3 is your reference guide. Look here for details on each of JETimage's copy options and advanced features for high quality color and monochrome copying. Contains information about bypassing JETimage's standard settings for creating finely tuned copy parameters to match your own needs and most demanding copy assignments.

Conventions

The following typographical conventions are used throughout this User's Guide:

- Dialog, button, selection and option labels are capitalized as they appear in the application and written in *Italics* for enhancement.
Examples: Select the *Type of original* button.
- Names of JETimage tools and other application components appear in italics, conventional book title capitalization format (proceeding caps in each word).
Examples : The *Zoom Button* is found in the *Image Toolbar*.
- Terms that are not tools or control labels but internal definitions related to JETimage's features will appear without italics but in conventional book title capitalization format.
Examples: Scale Preset
- Instructions on choosing an option will use the general term "press". The term "press" will apply for both pressing your finger on a touchscreen and clicking your mouse button in connection with a conventional mouse configuration.


1. Making Copies

With your system up and ready, wide format copying is easy and most copy tasks will require only a few settings.

1.1 Copy Steps – Overview



Copying is controlled through the *Copy Tab* and involves the following steps:

1. Insert the original into the scanner.
2. Select *Color* or *B&W* (black and white) copying.
3. Select your *Type of original* template.
4. Set the *Input size*. Usually this will be equal to the size of your original.
5. Set the intended *Output size* of your copy. For making one-to-one copies, this will be the size of your original. You can also use *Scale* to determine the copy's size.
6. Press the copy button. 

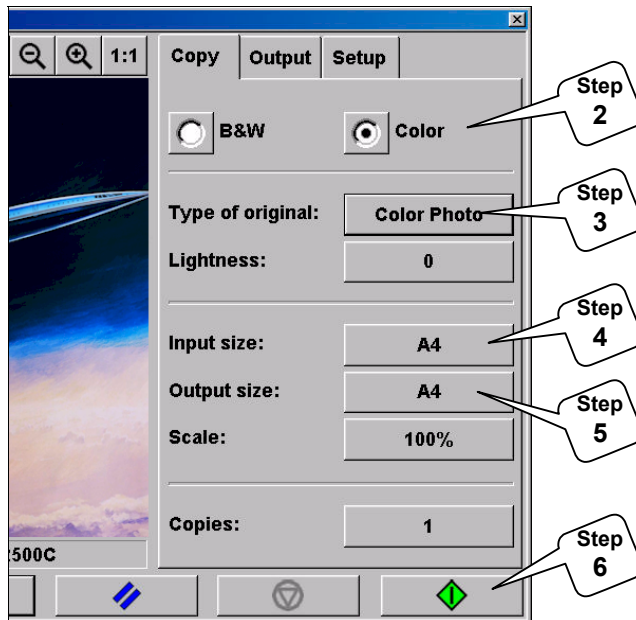


Fig. 1-1: Copy Options

You can get an optional preview before printing. The preview will give you a “What You See Is What You Get” (WYSIWYG) picture of your copy. Press the *Preview* button to make a preview of your copy.



1.2 Copy Steps – Description

This section, describes in greater detail, the central copy steps listed on the previous page.

1.2.1 Insert your Document

- You can load your original into the scanner from the scanner’s center or side. See the current loading method in the *Setup Tab -> Load*.
- Place the document with the intended top edge forward in the scanner insertion slot.
- Slide the document gently into the insertion slot until you feel it pulled into the start position.

1.2.2 Select Color or Black and White Copying

For monochrome scanners, this is not an option. For color scanners with monochrome capabilities, your selection determines which *Type of original* templates will be available in the following step.

1.2.3 Select the Type of Original

A *Type of original* template describes your input.

To select the Type of Original template:

- Press the *Type of original* button in the *Copy Tab* dialog.
- In the resulting *Type of Original* (template) *Setup* dialog, press the *Type of original* button to see the list of templates available.
- Select from the list a *Type of Original* template that best describes your current input.

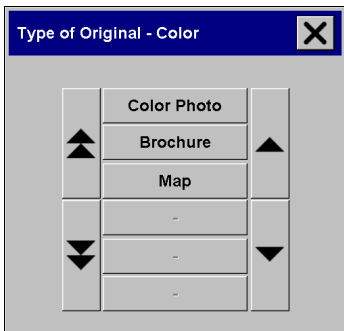


Fig. 1-2: Type of original Template List - Color Copying

The two tables below show the standard *Type or Original* templates delivered with JETimage. Use the descriptions to select the best template for your original and copy assignment.

Press **OK** to apply your choice.

Type of original templates for Color copying:	
Color Photo	For reproducing photographs and posters.
Brochure	For documents containing both photos and text.
Map	Suitable for maps and graphics with a high level of detail.

Type of original templates for Black and White copying:	
Normal	<i>Normal</i> is suitable for drawings, text, and documents that contain black and white together with graytones.
Low Contrast	Suitable for Sepia, Blueprint, and other originals with heavily distorted foregrounds and backgrounds where the shades that create image noise are close to the shades that represent the image's data and the two are hard to differentiate.
B&W Photo	<i>B&W Photo</i> is suitable for photographic images that contain many shades of gray.

1.2.4 Select the Copy Sizes

The *Input size*, *Output size*, and *Scale* settings work together to determine the image capture area and the size of the resulting copy. The three are connected and changing one will automatically adjust the others following a defined order described in the reference guide section. You can select your size values from a list containing standard and custom predefined sizes.

Selecting the *Input size*:

- Press the *Input size* button.
- The next dialog is the *Input Size Setup* dialog. Press here the *Input size* button to display the list of sizes predefined in your system.

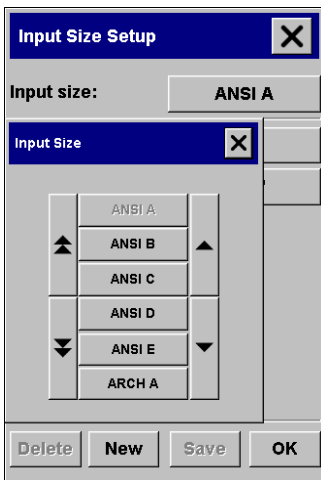


Fig. 1-3: Select Copy Size Values

- Select the size from the list that fits your original.
- Press *OK* to return to the *Copy Tab*.

Selecting the *Output size*

This follows the same pattern and offers the same size choices.

- Press the *Output size* button in the *Copy Tab* and again in the *Output size Setup* dialog.
- Select the size you want for your output copy.
- Press *OK* to return to the *Copy Tab*.

Use a Scale factor to determine the copy's output size:

- This is an alternative way to determine the size of your copy.
- After making your input setting, press the *Scale* button.
- The next dialog is the *Scale Size Setup* dialog. Press here the *Scale* button to display the list of standard or customized scaling factors predefined in your system.

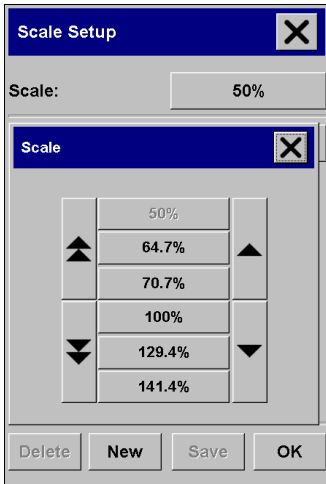


Fig. 1-4: Select Scale Values

- Select the *Scale* value that fits your copy intentions. A *Scale* factor of 100% makes a 1:1 duplicate. Below 100% reduces the image in the copy and above 100% blows it up.
- Press *OK* to return to the *Copy Tab*.

1.2.5 Start Copying

The *Copy* button starts the copy process with the settings you made.



1.3 Additional Options and Tools

The steps described up to this point are all you need to make quality copies. But the program includes additional features you might find useful.

1.3.1 Optional Previewing

Creating a preview is not absolutely necessary. If you know your settings work well with the current original, then you can skip previewing. The Preview button can be pressed at any time, and always creates a fresh preview of the whole image while using the currently active settings. This means that you can visually control new settings online before pressing the copy button and sending output to the printer.



1.3.2 Set the Number of Copies

Press the *Copies* button if you want to make more than one copy of the loaded original. Enter the number of copies in the edit field. Wide format copy jobs can be time consuming. This option allows you to leave the system working overnight or frees you to take care of other tasks.

1.3.3 Stop Button



Use this button to abort the current copy process.

1.3.4 The Reset Button




Press the *Reset* button to clear your own settings and reset the application to all of JETimage's default values.

1.3.5 Collate Copy – Copy Sets


The *Collate Copy* function works like on standard office copy machines. The function allows you to group your copies into sets, and then output a selected number of these sets on your printer. By activating the *Collate Copy* tool, you tell JETimage to store the copies internally before sending them out to the printer. All the previewing and enhancement options available for single document copying are also available when using *Collate Copy*.

To make collated copies – copy sets:

- Insert the first document of your set into the scanner.
- Make your copy settings in the *Copy Tab* dialog.
- If you wish, you can press the *Preview* button and make on screen adjustments and tests.

- Press the *Collate Copy* button. 
- The original will then be input (captured) as with single sheet copying, but it will be put **on standby** inside your system instead of going to the printer.
- Continue inserting originals that belong to the set and press the *Collate Copy* button for each one until all the originals that are part of the set have been scanned.
- You can adjust each copy in the set just like you can with single document copying.
- Set the number of sets by pressing the button labeled *Copies* in the *Copy Tab*. The number of copies indicates how many sets, each containing all the input originals, will be output on your printer.



- Press the *Collate Print* button to activate the whole copy job.
- 
- You can abort the *Collate session* at any time by pressing the *Reset Button*.



2. JETimage Copy System

2.1 About the System

An easy to use copy machine

Once the JETimage system is set up and configured to your office's needs and standards, it becomes as simple to use as a conventional office copy machine. User's will only need to follow the straightforward steps described in the first chapter. This chapter contains guidelines for setting up your system so that users won't have to worry about more than those few simple settings.

Advanced options for demanding copy assignments

The application is also designed for very demanding copy assignments, and the interface offers easy access to special features and options for advanced users. The application's advanced features are based on the documented needs of copy professionals worldwide.

Image capture fitted to the original

Different types of originals will need different settings during image capture. JETimage come with standard templates that cover most original types, but you can also customize your own templates, save and recall them later when copying similar originals.

You can perform high quality monochrome copying through selectable gray adaptive and graytone methods. The advanced adaptive method analyzes the drawing while scanning, and varies the level to compensate for changes in background, faded areas and stains. This means that you can make copies that are clearer and sharper than their originals.

Dual 2D-Adaptive Enhancement

B/W copying uses Dual 2D-Adaptive enhancement processing in which processing is performed simultaneously on different aspects of the original. Enhancement includes ADL+ error diffusion halftoning, 2D-Adaptive foreground thresholding, 2D-Adaptive background suppression, and 2D-Auto edge enhancement. JETimage emulates the image processing features in the software for those scanner models without embedded hardware processing.

Previewing results

The JETimage interface includes a preview window that provides not only visual control of your settings, but also useful on-screen viewing tools. You get a WYSIWYG picture of the copy including your selected margins. When you make enhancement adjustments such as

lightness, sharpness, etc, an updated preview will display the effects of your adjustments on your screen before you commit the copy to the printer.

Color matching

High quality color results can only be obtained if the capture device (scanner) and output device (printer) “see” colors in the same way on a given media. Closed Loop Calibration ensures optimal color consistency between the scanned original and the printed copy. The process involves analyzing the correspondence between printed and scanned values on a set of reference color patches printed on the actual output media.

The results are stored in units called “*Media Profiles*” and each refers to a type of output media that you use.

A number of standard color *Media Profiles*, fit to popular printers and printing media are predefined, tested and installed with the JETimage application.

If necessary, you can create your own *Media Profiles* and thus add required media types to the list. Guided by the application, you print the color patches on your printer and then scan the printed output, automatically generating a *Media Profile* that will be applied during copying. You can store your different *Media Profiles*, each reflecting a specific combination of printing media and printer. The color consistency parameters are automatically activated when you select your printing media with the your current printer.

Touchscreen or Mouse Interface Versions

JETimage is installed in both touchscreen and conventional mouse controlled interface versions. The descriptions in this manual apply to both. The JETimage interface has the look and feel of a typical copy machine control panel with familiar icons and controls.

There are some setup parameters, such as the printer’s, that require a mouse in both versions. However, once these settings are defined, you will seldom need to access them again unless you attach a new printer to the system.

Copy System Configuration

Configure the system, presets and default settings to your office's standards and needs so that anybody can make high quality copies without fussing over options for already established settings. The system can stand ready at all times so anybody can walk up and immediately make a copy.

List of Main features:

- Copy settings are stored in useful templates and presets.
- Standardized and tested templates for different types of originals are already created and available with the application. These standard templates cover most copy needs.
- Output color quality controlled through binding the color characteristics of your scanner, printer and the type of output media you are using. These factors are stored in your system as *Media Profiles*.
- Standardized and tested *Media Profiles* fitted to the most popular wide format printers and media are included in the application. Just select your printer and media and the underlying *Media Profile* parameters will be activated behind the scenes.
- You can also create your own *Media Profiles* for special printers or printing media.
- Copying color originals with advanced tonal adjustment such as white/black levels, color balance, sharpening, blurring, saturation and lightness.
- Advanced Dual 2D-Adaptive enhancement control with B/W copying. Supplies the advanced enhancement features through emulation in the software for scanner models without the hardware embedded processing.
- With on-screen previewing you can control the quality of the image with your settings before copying.

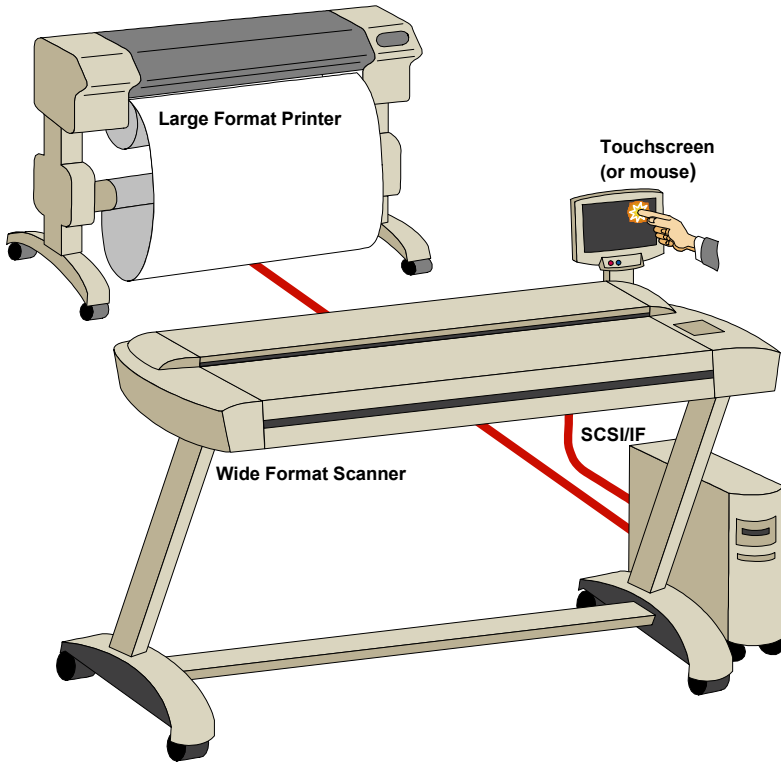


Fig. 2-1: Wide Format Copy System

2.2 Installing JETimage

The JETimage program requires a compatible wide format scanner correctly installed and powered on in order to function. Installation of both the JETimage mouse and touchscreen versions will require a mouse or other pointing device.

JETimage can be installed on the following systems:

- Windows 98
- Windows NT
- Windows 2000

Always check the README.htm file on the distribution CD for updates describing supported platforms and installation procedures.

Scanner and Printer Installation

Your scanner and printer must be connected and their relevant drivers installed before installing the JETimage software.

- Follow the scanner installation instructions in the Operator's Guide that came with your scanner (remember to install the Adaptec ASPI drivers for the SCSI I/F).
- Install your large format printer following the manufacturer's installation instructions.

Windows 98, NT, 2000 Installation

System Requirements:

- Touchscreen for touchscreen version.
- 24-bit color display for traditional PC version.
- Mouse and keyboard (both versions).
- PC - 64 Mb RAM (128 Mb recommended).
- Minimum 800 x 600 display.

Use the Setup program (SETUP.EXE) on the distribution CD, to set up JETImage on your computer:

1. Insert the JETImage distribution CD in the CD-ROM drive.
2. Normally, setup program will start automatically. If it does not, perform the following steps to activate it.
3. Click the Start button on the Taskbar, choose Run from
4. the menu.
5. Type D:\setup in the Command Line Box (where D: represents the name of your CD-ROM drive).
6. Choose the OK button.
7. Follow the setup instructions on the screen.

After installing all the files, "Setup" creates a JETImage program folder with a JETImage icon for easy access to JETImage.

To start JETImage:

1. Click "Programs" in the "Start" menu.
2. Click the "JETImage" program folder.
3. Click the either the "JETImage for Touchscreen" or "JETImage for Workstation" icon to start the program.

2.3 Setting Up the System for the First Time

This section tells you how to setup and test your system. Setting up the system involves also setting the parameters to accommodate your office per default, so that after the setup, users can make copies with a minimum of adjustments.

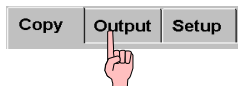
Setting up your system involves:

- Setup your printer - make and verify your initial printer settings.
- Setup your scanner - make and verify your initial scanner settings.
- Verify the copy process.
- Set your system defaults.

2.3.1 Setting Up Your Printer

Your printer must be set up correctly before you can start copying. Make sure your printer is installed according to the printer manufacturer's instructions. Then perform the following steps:

- Press the Output Tab.



- Press the button labeled *Printer* to reach the dialog shown below.

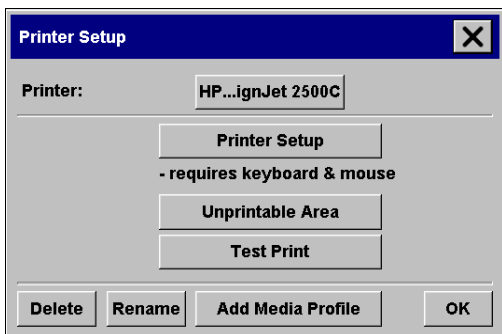


Fig. 2-2: Printer Selection and Setup Entry

- Press the *Printer Setup* button to reach the driver options:



- Setting up your printer for JETimage touchscreen applications requires a mouse and keyboard attached to the system.

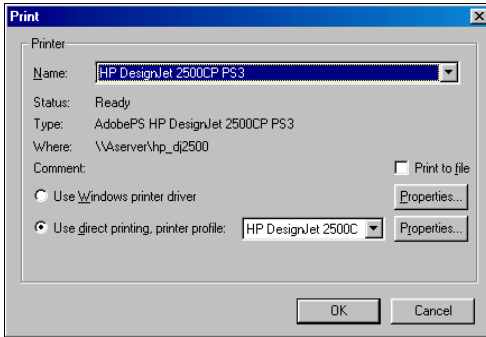


Fig. 2-3: Print (Driver Setup Dialog)

- You can use a *Windows* printer driver or select *Direct Printing*. Windows driver options are not controlled by JETimage.
- With direct printing, you can use standard Printer Profiles created for popular printers or, you can create your own Printer Profiles. Direct printing is faster than Windows printing and enables usage of the standard Media Profiles supplied with the application. Click and scroll the list of predefined printer profiles and check if your specific printer is among them.
- If your printer was not among those predefined in JETimage, you can customize your own printer profile. See “Printer Setup” in the Reference Guide sections for details on creating printer profiles.
- When you leave the dialog, the printer name will be displayed on the button labeled *Printer*.
- Press the *Unprintable Area* button to enter the values defining the printer’s unprintable area (margins). Look in your printer’s documentation for the correct values. The values can be used for calculating your output margins and saving paper. More on this in the Reference Guide sections describing the *Output Tab – Margins*.

After defining your printer, verify your printer settings by making a test print directly from JETimage:

- Still in the *Printer Setup Dialog*, Press the *Test Print* button.

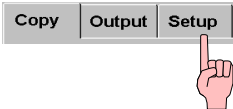


- A test image should be output on your printer. If not, go back to the *Printer Setup* button options and check your driver settings.
- The current printer’s name will be displayed under the Preview Window.

2.3.2 Setting Up Your Scanner

Verify that your scanner is connected, turned on and functioning correctly as described in the “OPERATOR’S GUIDE” that came with your scanner. JETimage will automatically find scanner’s on your system. You can verify the scanner model through the *Setup Tab*.

- Press the *Setup* tab.



- Press the button labeled *Scanner*.

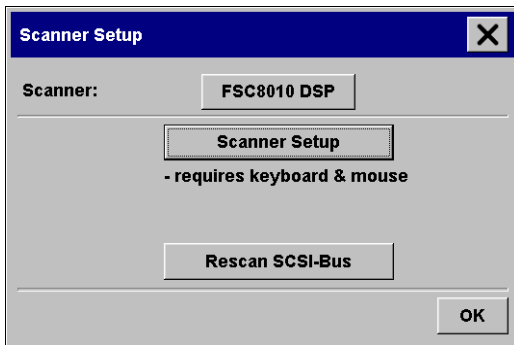
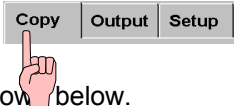


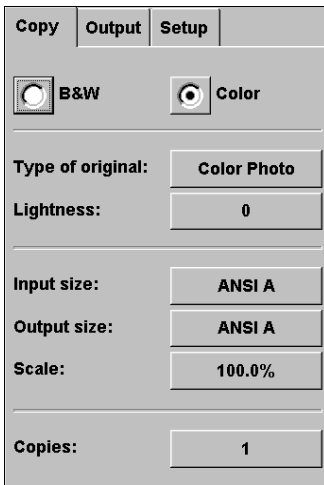
Fig. 2-4: *Scanner Setup Dialog*

- **Select the scanner** - the *Scanner* button displays a list of recognized scanners when more than one scanner is connected. With a single scanner system, just verify that the named scanner fits the description of your model.
- **Demo scanner** - When you start JETimage, the application will tell you if it could not find an attached scanner and you will be given the option to run JETimage with a *Demo* scanner. The *Demo* scanner is a fictive device that enables you to run the interface for demonstrations or tutoring. To make copies, JETimage must recognize a real scanner.
If *Demo* appears as the current scanner when you have one attached, then push the *Rescan SCSI bus* button in the *Scanner Setup* dialog. This will initiate a new search. If JETimage still doesn't recognize your scanner, try rebooting your PC with the scanner ON and warmed up.

Test your Scanner

- Try to scan any Letter-size, A4 or small sized document with text or a picture. Insert the document into the scanner (center loading is the default setting). Push the paper gently into the insertion slot until it is detected and pulled inside.
- Select the *Copy* Tab. 


The *Copy* options are shown below.



Copy	Output	Setup
<input checked="" type="radio"/> B&W	<input type="radio"/> Color	
Type of original:	Color Photo	
Lightness:	0	
Input size:	ANSI A	
Output size:	ANSI A	
Scale:	100.0%	
Copies:	1	

Fig. 2-5: Copy Options

Enter settings into the Copy options as described below:

- Select *Color* or *B/W* copying. Use color if you are using a color scanner with a color original.
- Set the *Input* and *Output* size to ANSI A or A4. To change the *Input* and *Output* size, press on each of the buttons and select the size definition from the list.
- Set *Copies* to 1.
- Press the Copy Preview button . The image of your original should appear in the Preview Window as it is scanned.

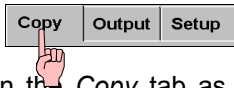
2.3.3 Copy System Verification

After verifying the printer and the scanner separately, you can complete system verification by making a copy. Use either the sheet still in the scanner or else load something new, and then follow these steps:

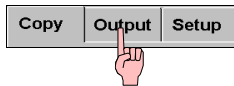
- Press the Reset button to clear any alterations done in previous steps.




- Press the *Copy* tab.
- Make the settings in the *Copy* tab as in the previous section on “Setting Up Your Scanner”.



- Press the *Output* tab.
- For color copying, select a media from the list of *Media Profiles* available with your printer. Find the *Media Profile* that matches the media currently loaded in your printer.
- If there are no *Media Profiles* available with your printer then see the reference sections on creating *Media Profiles* so you can set one up for the system.



- Press the *Copy* button  in the screen toolbar. This activates both the scanner and printer. The scanner starts capturing the original and the copy is gradually output on your printer.

2.3.4 Copy System Defaults

Once you have confirmed your system's functionality, move through the options in the *Output* and *Setup* tabs and make the settings that will apply as default settings for your system and all its users. These should include margins, quality, your load preferences and your units of measure preferences. You should also add any necessary customized *Type of original* templates, sizes and scale factors.

For example, your *Media Profile* should be set to match the paper in your printer and your margins should be set to your office's standards. The settings that apply when you install JETimage are tuned to the most common copy purposes and can at any time be reinstalled by pressing the *Reset* button.

Setting up your system defaults will make copying a simple process and many users will not need to get acquainted with the more advanced features in JETimage. Once the system defaults are in place, copying will follow the simple steps described in this guide's first chapter. Use the reference guide if you need to look for details on the settings.

2.4 The JETimage User Interface

The JETimage user interface can be divided into two main sections:

1. The *Viewing Section* on the left.
2. The *Option Section* on the right.

2.4.1 The Viewing Section

The viewing section consists of:

- The *Image Toolbar* at the top with tools for moving the image, moving the Paper Frame, alignment and zooming tools.



- The *Preview Window* for on-screen previewing and adjusting of expected results.

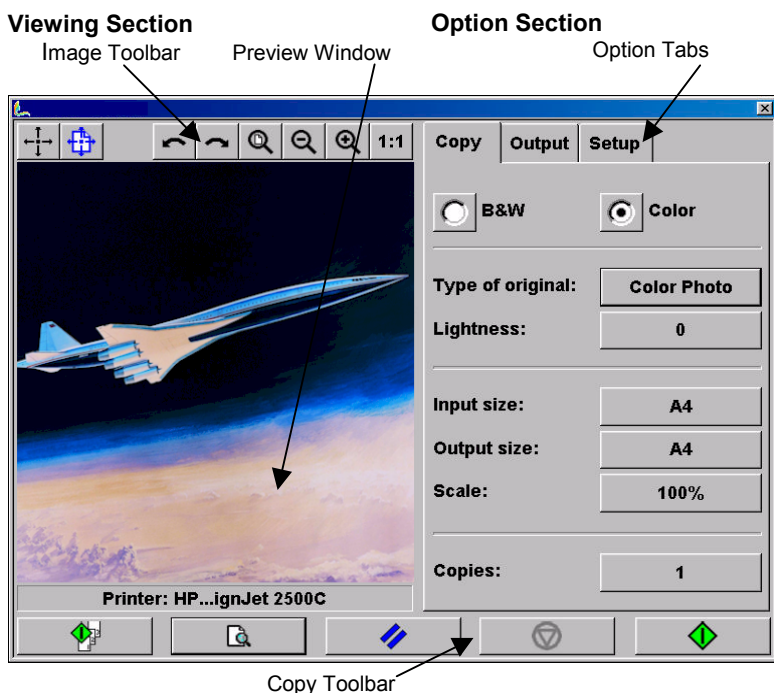


Fig. 2-6: JETimage User Interface Overview

2.4.2 The Copy Option Section

The Copy Option section consists of 3 option tabs:

1. **Copy** – Primary copy settings. The options available in the Copy Tab will be sufficient for most users and common copy tasks.
2. **Output** – Secondary copy settings that mainly have to do with the printer, the printing media, and layout.
3. **Setup** – Settings that have to do with system preferences such as preferred units of measurement (mm, inches), center or side loading, etc.

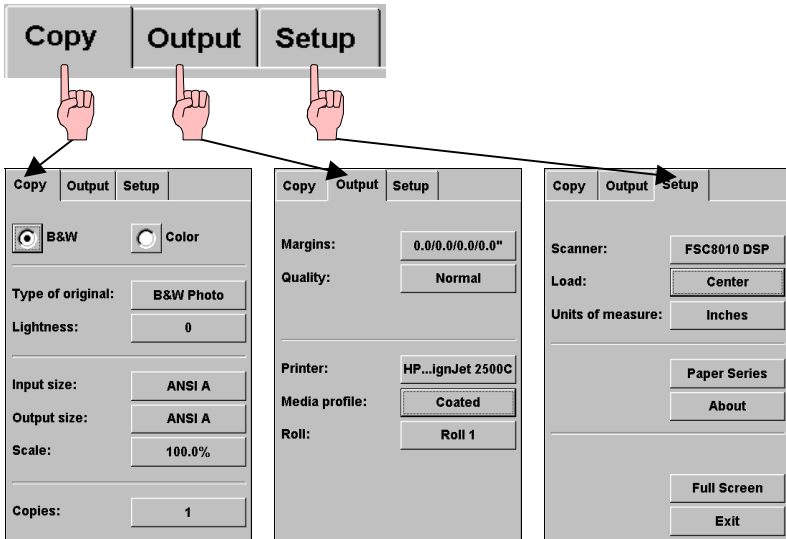


Fig. 2-7: Copy Options – Copy, Output, Setup

2.4.3 The Copy Toolbar

At the bottom you'll find the *Copy Toolbar* with the main buttons – *Collate Copy, Preview, Reset, Stop* and *Copy*.



2.4.4 Entering Numbers and Names

There are some dialogs and option fields in JETimage that will require written values or texts. These are especially common in connection with customizing and creating new presets. To support touchscreen users, JETimage incorporates two types of on-screen keyboards – a text keyboard and a value keyboard. The two types are shown below. They appear in the touchscreen interface whenever written information is required to set the option.

The return key accepts your setting and returns to the previous dialog.

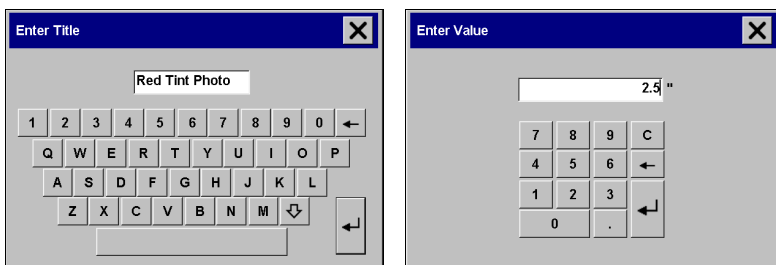


Fig. 2-8 : Text and Value On-Screen Keyboards

In the JETimage mouse version these keyboards are replaced by simple edit fields wherein users can enter their values and texts directly.

3. Reference Guide

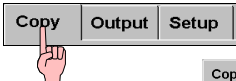

3.1 Type of Original Templates

3.1.1 About Type of Original Templates

The *Type of original* template is your central input parameter and relates to controlling image capture. The capture or scanning *Method* with relevant image enhancement settings are grouped together in a *Type of original* template that is constructed to give prime results with the kind of input document it refers to. Your selection of *Color* or *B&W* copying determines which *Methods* and enhancement adjustments are relevant to the template.

For most copy assignments, you only need to select a *Type of original* template that fits your input and not worry about the settings grouped underneath. JETimage contains standard *Type of original* templates with optimal default settings. For example, a brochure is typically a mix of photos and text while maps are line orientated. These characteristics are accounted for in the *Brochure* and *Map Type of original* template's settings and enforced during image capture. However, sometimes you will want to make small adjustments to a standard *Type of original* template or you will want to construct one of your own and save it for repeated use. JETimage gives you that much flexibility.

To access the *Type of original* template settings:

- Press the Copy Tab. 
- Set the copy mode to *Color* or *B&W*. 
- Press the *Type of original* button. The *Type of original* (template) *Setup* dialog appears.
- The setup dialogs related to *Color* and *B&W* copying are shown in fig 3-1.

TIP: While adjusting *Type of Original* template settings, you can use the *Preview* button to get on-line screen views of your setting's effects on the copy.



3.1.2 Type of Original Selection

With the button labeled *Type of original* you can adapt to the current input type by selecting a template from a list. The text describing the currently active *Type of original* template is always displayed on the selection button. Standard *Type of Original* templates are supplied with JETimage and they will fulfill most of your copy needs. When you create a new *Type of Original* template, it will be added to the list of available options.

Fig. 3-1: Type of Original Template Setup -Color Copying and B&W Copying

Type of original templates for Color copying:	
Color Photo	For reproducing photographs and posters.
Brochure	For documents containing both photos and text.
Map	Suitable for maps and graphics with a high level of detail.

Type of original templates for Black and White copying:	
Normal	<i>Normal</i> is suitable for drawings, text, and documents that contain black and white together with graytones.
Low Contrast	Suitable for Sepia, Blueprint, and other originals with heavily distorted foregrounds and backgrounds where the shades that create image noise are close to the shades that represent the image's data and the two are hard to differentiate.
B&W Photo	<i>B&W Photo</i> is suitable for photographic images that contain many shades of gray.

3.1.3 Setting the Copy Method

The *Method* applies to the way the scanner captures and digitizes the image. The default *Method* settings for the built-in *Type of original* templates are optimal in relation to the kind of original in question and you shouldn't have to change them. However, if you are creating a new *Type of original* template, then use the following guidelines.

- Press the button labeled *Method*.
- A list of available *Methods* appears.
- The *Methods* will be relevant to your choice of Color or B&W copying.

Available Methods for color copying:	
Continuous tone	Photographic color images. <ul style="list-style-type: none"> • <i>Sharpen</i> function is optimized for continuous tones and moiré removal. • <i>Black Level</i> has light impact on graytones.
Mixed	Both photographic and lineart/text elements. <ul style="list-style-type: none"> • <i>Sharpen</i> function is optimized for mixed elements. • <i>Black Level</i> has moderate impact on graytones.
Graphics	Maps or drawings. <ul style="list-style-type: none"> • <i>Sharpen</i> function optimized for thin lines • <i>Black Level</i> has heavy impact on graytones.

Available <i>Methods</i> for Black and White copying:	
Normal	For Line drawings and mixed graphics <ul style="list-style-type: none"> Removes background noise.
Adaptive	For low contrast and difficult drawings. <ul style="list-style-type: none"> Clears up and intensifies low contrast drawings where background noise and foreground data are hard to differentiate.
Photo	For Photographic images <ul style="list-style-type: none"> Maintains the original's full dynamic range.

3.1.4 Lightness

This same setting can also be accessed directly from the *Copy Tab* dialog. The default *Lightness* value is set to zero which works well with most documents. You can change this value to make the copy lighter or darker and compensate for dull or faded originals.

- Press the lightness button. A value selection panel appears:

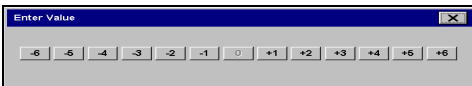


- Select a positive value from the list to make the copy lighter.
- Select a negative value from the list to make the copy darker.

3.1.5 Saturation

Saturation indicates the intensity of a hue or in other words, the strength of a color. A high saturation makes a color's hue more intense than the same color with a low saturation value. To adjust the saturation:

- Press the *Saturation* button.
- A value selection dialog appears.



- Zero is your "normal" saturation level.
- Select positive values to increase saturation.
- Select negative values to decrease saturation.

Note : Setting *Saturation* to other values than zero will affect color matching precision.

3.1.6 Red, Green & Blue

You can adjust your copy's color balance during image capture through separate controls for each of the three color channels Red, Green and Blue. Adding and subtracting an amount of a color affects the whole color balance. Often it's best to keep the three channels on the same levels. Experiment with the different effects through previewing.

- Press one of the three color balance buttons Red, Green or Blue.
- A value selection dialog appears.



- Select negative values to reduce the total content of the color and select positive values to increase the total content of the color.
- Adjust the other color channel controls in the same way.

Note : Changing the color balance values from zero will affect color matching precision.

3.1.7 Black & White Level

The **Black Level** is used to change dark graytone colors to true black. For example, if you are copying a brochure with a mixture of text and pictures, the text will often be digitized to a color that we may see as black but really is a dark graytone. When the printer digests this graytone data, it will print the original's text with a halftone pattern, meaning scattered dots instead of solid black.

By increasing the **Black Level** value, you can get the text to be copied in real black and it will therefore appear clearer.

Use the **Black Level** option with caution, because it can change other dark colors (not only grays) into black making small dark spots appear in the picture.

White Level is used if you have an original with a background that is not completely white. If you want your background to appear as pure white then you can set the White Level to a lower value. As with **Black Level**, **White Level** should be used with caution. Some of the other light colors can also be affected by changing the **White Level** value.

Both *Black* and *White Level* function as "cutoff" values in which pixels under or over a certain value are affected by the setting. You define cutting points on a scale of low to high **lightness** measured in values from 0 to 255. Black defaults at zero and white at 255.

Example:

You have copied an original and want to improve it by making the text blacker and the background whiter.

- Adjust the black level upwards from its default of zero (to let's say 25) and thus make pixels with low lightness values go to black.
- Adjust the white level downwards from the default of 255 (to say 230) and thus make the pixels at high lightness levels (from 230 and up to 255) go to white.

3.1.8 Sharpen/Blur

You can give your copy sharper lines with the *Sharpen* option. The *Sharpen* feature identifies edges in the image and intensifies them.

The *Blur* feature blends colors and thus removes unwanted "noise" during image capture. Many images are created with dithering which is used for representing different colors in the original and this dithering often creates unnecessary "noise" in the image. Blurring smoothes out unwanted transitions between colors. With *Black* and *White* copying the *Blur* feature smoothes out gray dither by removing unwanted sharp transitions between excessive shades of gray.

Don't think of blurring as the opposite of sharpening. Sharpening works on the image's edges only while blurring looks at whole color or graytone areas and smoothes them out.

Using *Sharpen* together with the *Blur* feature can often enhance image quality by first blurring away noise in the image and then sharpening the result.

To set Sharpen and Blur:

- Press the *Sharpen/Blur* button.
- The *Sharpen/Blur* dialog appears:

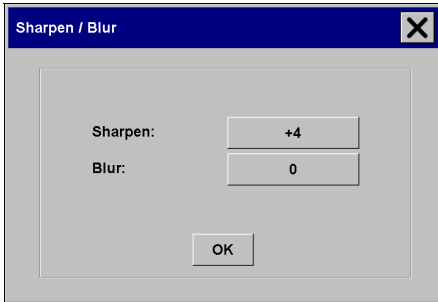



Fig. 3-2: Sharpen/Blur dialog

- Press the *Sharpen* button
- The ways you set the *Sharpen* effect depend on your scanner model and scanning *Method*. You will either set numbered values or else turn *Sharpen ON* or *OFF*.
- If your *Method* uses selectable values then a value list will appear and otherwise you'll get *ON/OFF* option buttons.
- Zero and *OFF* are the "normal" positions.
- Now Press the *Blur* button.
- A value selection dialog appears.
- The range of *Blur* values depends on your scanner and scanning *Method*. Zero is always the normal setting and the higher settings turn up the blurring effects.
- Click *OK* to accept both the *Blur* and the *Sharpen* settings. 

3.1.9 Accept/Save/Delete Template Settings

- If you have changed your settings for the current *Type of Original* template pressing the *OK* button will accept the values but they will only be used for the current copy job. The next time you call up the template, it will have regained its old settings.
- If you wish to save the settings under the same *Type of original* template name then press the *Save* button.



- Only user created *Type of Original* templates can be changed and saved. The built-in presets that came with the application are protected and can only be temporarily adjusted for a current copy job.
- A *Type of Original* template with a changed parameter will be marked with an asterisk ("*").

- To delete an existing *Type of Original* template, select it from the list and then press the *Delete* button.

Delete

Only user created *Type of Original* templates can be deleted from the list

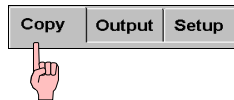
- Confirm the action by pressing *OK*.

OK

3.1.10 Creating Type of Original Templates

When you create a new *Type of original* template, it will be added to the list and stay there until you delete it.

- Press the *Copy Tab*.



- Set the copy mode to *Color or B/W*.
- Press the *Type of original* button to reach the *Type of Original* (template) *Setup* dialog. A custom *Type of Original* template called "Snow Photos" was created as displayed overleaf.
- Customizing JETimage with a new *Type of Original* template is controlled with the *New* and *Save* buttons on the bottom of the dialog.
- After having made your settings and ensuring that they work well with the current original, press the *New* button.

New

- Enter the name for your new template. Select a name that represents the type of copy job you are working with like "Pastel Posters".



Fig. 3-3: Type of original Template Setup - Color Mode

- Press the **Save** button to create the new *Type of Original* template.

Save

- Your new *Type of Original* template will be added to the list of those already available in JETimage.
- You can start with one of the predefined *Type of Original* presets that is closest to your original, save it under a new name and then change it to fit your specific needs. Use the preview to test your settings.
- Press the **Save** button when you are finished.

Save

- Confirm by pressing **OK**.

OK

3.2 Size Settings

The *Input size*, *Output size*, and *Scale* are found in the Copy Tab. They work together to determine the size of the image capture area, the size of the resulting copy, and the relationship between the two. Usually you would set the Input Size to that of the original, but you can also use small sizes to copy selected portions. With the *Output size* setting or *Scale*, you can blow up, shrink or make one-to-one copies of the original.

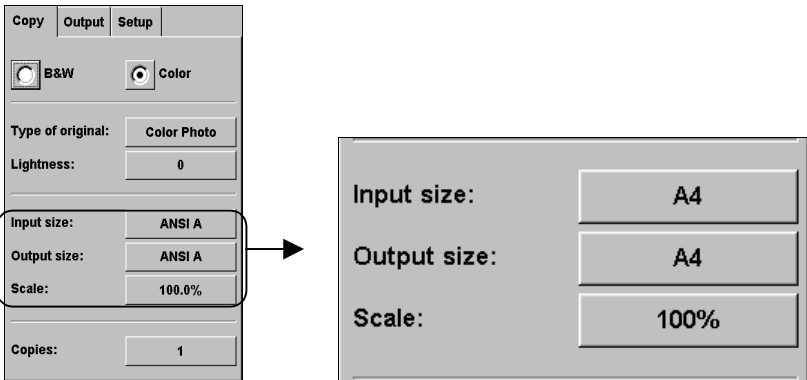


Fig. 3-4: *Input size, Output size, Scale Control Buttons*

3.2.1 Size Option Relationships

The *Input*, *Output* and *Scale* values are connected and changes to each automatically adjust the others in the following way:

The first time you set a size value, or just after you press reset:

Changing the *Input size* adjusts the *Output size*.

Changing the *Output size* adjusts the *Scale*

Changing the *Scale* adjusts the *Input size*.

3.2.2 Setting Input Size/Output Size

The *Input size* setting determines the scope of the scanner's image capture area.

You can use the variable *Input size* setting to capture selected portions of the original and thus make printed copies of specific image details. You also might want to print small strips of difficult areas for testing purposes before committing the whole copy to the printer.

The **Output size** setting refers to the printed result. For making a duplicate sized copy, you set both the *Output size* and the *Input size* to the size of the original, or set one of them to the size of the original and set scaling to 100%. For blowing up an original you set an output size that is larger than the input size, and the opposite for making a reduced copy. Blowing up and reduction can also be controlled through scaling.

To set the *Input size* or *Output size*:

- Press the *Copy Tab*
- Press the *Input size* or *Output size* button.
- You can use standard sizes or custom size presets. Press the dialog's *Input* or *Output size* button to display the list of available sizes.

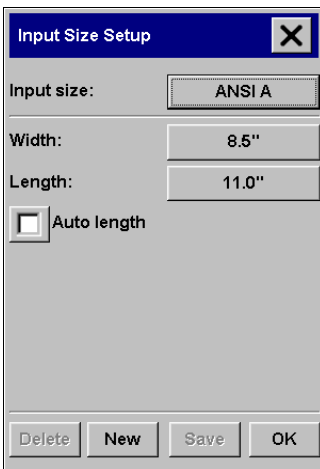
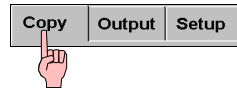


Fig. 3-5: Size Setup

- You can also specify the size by setting the *Width* and *Length*. The original's width can be read off the ruler at the scanner's insertion slot.
- Instead of a *Length* value, you can select *Auto Length* to get automatic length detection at the physical bottom end of the document.
- Press *OK* to return to the *Copy Tab*.

Tip: If you are copying an original that has an uncommon size, then use *Auto Length* to let the system detect the length for you.

Tip: Save paper, ink and time. If you are going to make a trial copy, then set the *Input size* to a small standard size that only covers an area you wish to test.



Tip: Make a fast miniature version of your big copy by setting the *Scale factor* to 25%.


3.2.3 Using Size Presets

JETimage covers most original and copy sizes with a wide range of predefined standard size options. But you may get an assignment in which a whole group of specially sized copies must be made, or you have a stable customer who's standard size of input material is not as "standard" as the rest of the world's. In such cases you could save precious time by retaining the special size definitions in size presets that can be recalled when needed.

When you create a size preset, it becomes available both in the list of *Input size* presets and in the list of *Output size* presets because the list of preset sizes is shared by both options. This of course means that a new size preset can be created through both the *Input Size* and *Output Size* dialogs with absolutely equal results - a new size definition on the application's shared list for predefined sizes.

In the following steps, we will create a new predefined size through the *Input Size* dialog bearing in mind that we can perform the same task through the *Output Size* dialog.

- Press the *Copy* Tab. 
- Press the button labeled *Input size*.
- In the *Input Size* dialog, press the *New* button. 
- Enter and accept a name for your size preset like "Bob's Photo Size".
- Press the *Width* button and set the width value you want in your preset. Set the *Length* value in the same manner.

- Your preset can also use the *Auto Length* option for automatic length detection.
- Press the Save button when you are finished. 
- Your new size will join the standard sizes and your other user-defined sizes in the list of available size presets as shown above.

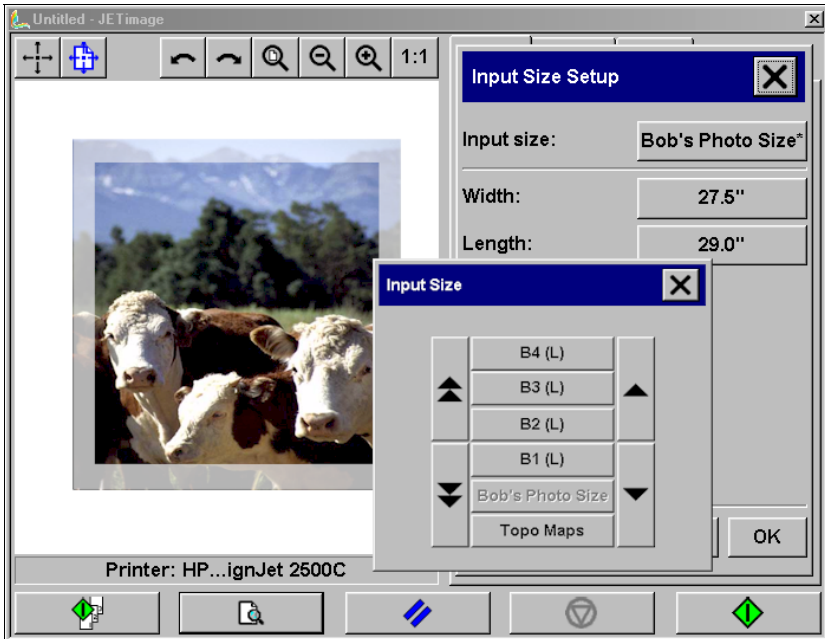





Fig. 3-6: Adding a new size to the Size Preset list

Changing Size Presets:

- Through the *Input* or *Output Size* dialogs, select the size preset you wish to change from the list of presets.
- Only user created sizes can be changed and saved. Standard size presets that came with JETimage are write protected. However, you can always save the values for a standard size under a new name and then change it.
- Make your changes to the size through the *Width* and *Length* buttons.
- Press the Save button when you are finished. 
- A Size preset with a changed parameter will be marked with an asterisk (“*”).

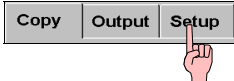
- If you Press *OK*,  the preset will only be changed for the duration of the current job.

To delete an existing Size Preset:

- Select the size preset you wish to delete from the list.
- Only sizes that are user created can be deleted. Size presets that are standard and delivered with JETimage are protected.
- Press the *Delete* button. 
- The size preset will be removed from the *Input Size* and *Output Size* list.

3.2.4 Controlling the Size Preset List – Paper Series

It would be cumbersome to have your list of available presets cluttered up with entries you seldom or never use. You can determine which types of size presets you want to appear in the size preset list through the *Setup Tab* dialog.

- Press the *Setup Tab*. 
- Press the *Paper Series* button to reach the dialog shown below.

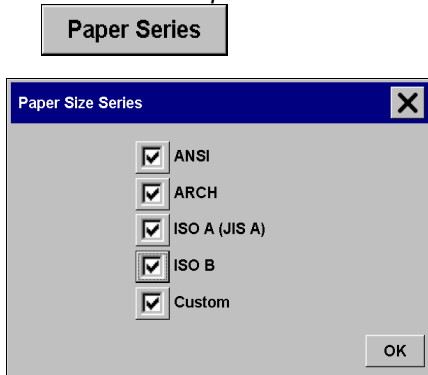



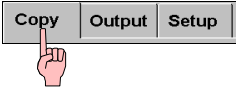
Fig. 3-7: *Paper Series Dialog - Controlling the Size Presets List*

- A check-marked *Paper Size Series* means it is available in the list of size presets. You can enable or disable a series at any time.
- For example, unmarking *Custom* will make your user defined size presets disappear from the size list. The presets are still in the system and check-marking *Custom* again will bring them back.
- Click the OK button to enforce your changes. 

3.2.5 Setting a Scale factor

The scaling value is defined as a percent (factor) of the original. A scaling factor of 100% means that the original retains its size. The scaling factor can be selected from a list of predefined factors, or it can be set manually. New Scaling factors can be created and added to the list of available scaling factors.

To set the scaling factor :

- Press the *Copy Tab*. 
- Press the *Scale* button.
- Press the next *Scale* button in the *Scale Setup* dialog to view predefined scaling factors.

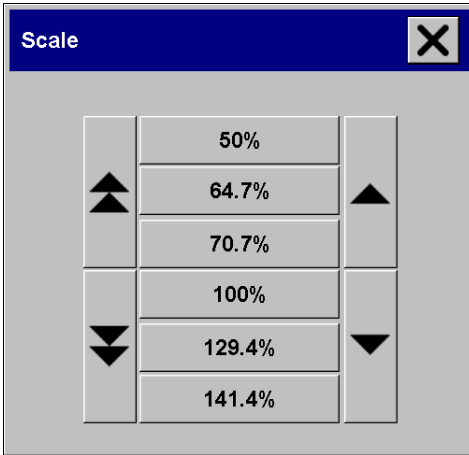


Fig. 3-8: *Scale Presets List*

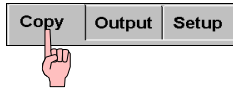
- Select one of the *Scale* factors from the list or else use a manual setting as describe below.
- To create a manual setting, select the button labeled *Value* in the *Scale Setup* dialog and enter your scaling value.
- Click *OK* in the *Scale Setup* dialog to accept the scaling factor and return to the *Copy Tab* dialog.



OK

3.2.6 Using Scale Factor Presets

JETimage supplies a number of predefined standard scaling options, fitted to the most common copy assignments. But as with special paper sizes, you may find you need a special scaling factor for a whole group of copies. In such cases you should create a *Scale* preset and add it to the list of available presets for repeated use.

Press the *Copy* Tab.



- Press the button labeled *Scale*.
- In the *Scale Setup* dialog, press the *New* button. 
- Enter and accept a name for your new scale preset like "Bob's Large Scale".
- Press the *Value* button and set the scale value.
- Press the *Save* button. 
- Your new scale will join the standard scales in the Scale Presets List as shown below.

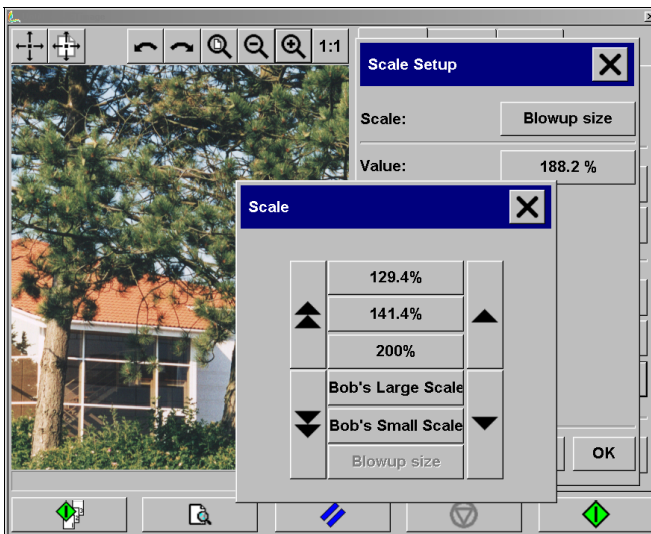





Fig. 3-9: Adding a New Scale Factor Preset

Changing Scale Presets

- Press the button labeled *Scale* in the *Copy Tab* dialog and again in the *Scale Setup* dialog.
- Select the scale preset, you wish to change, from the list.
- Only user created scale factors can be amended and saved. The standard scale presets delivered with JETimage are write protected.
- Make your changes to the scale through the *Value* button and value keyboard.
- Press the *Save* button when you are finished. 
- A changed Scale preset will be marked with an asterisk (“*”).
- You can also click *OK* instead of *Save*,  but then the preset will only be changed for the current job.

To delete an existing Scale Preset

- Press the *Scale* button in the *Copy Tab* dialog.
- Select the Scale preset you wish to delete from the list.
- Only scale presets that are user created can be deleted. Standard scale presets delivered with JETimage are protected.
- Press the *Delete* button. 

3.3 Output Settings

3.3.1 Setting the Output Margins

Your margin values will be deducted from the *Output size* you selected in the *Copy* tab. The effects of the margins on your copy will be displayed visually in the WYSIWYG Preview Window.

You can for example use margins to duplicate those of your original, crop poor quality edges or create new white edges around copied pictures for framing. Your assignment may involve following a dictated margins-standard and this option enables you to set that standard for all your copies.

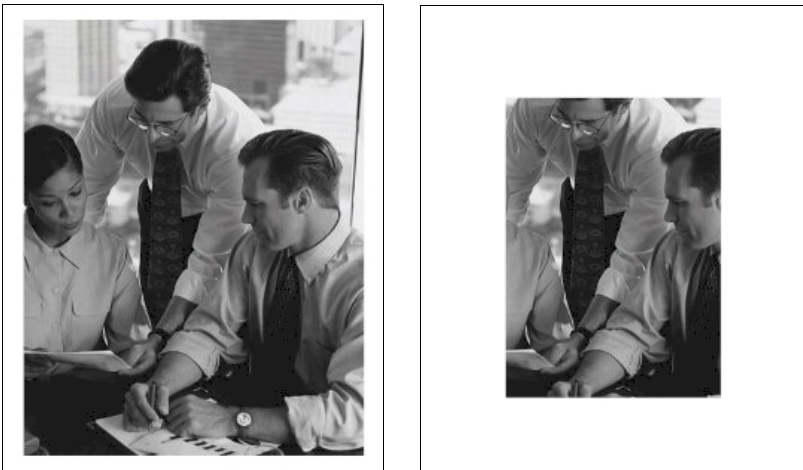


Fig. 3-10: Margin's Cropping Effect – Input and Output size is ANSI B with 1/2" Margin in the left example. On the right – same ANSI B Input and Output sizes but with a 3" Margin

For many copy assignments, you will leave the four *Margins* settings at the value of zero because you will want to capture the whole image without cropping off any of the original's edges. With the *Margins* set at zero, a thin-lined frame will still outline your input and output expectations in the WYSIWYG preview.

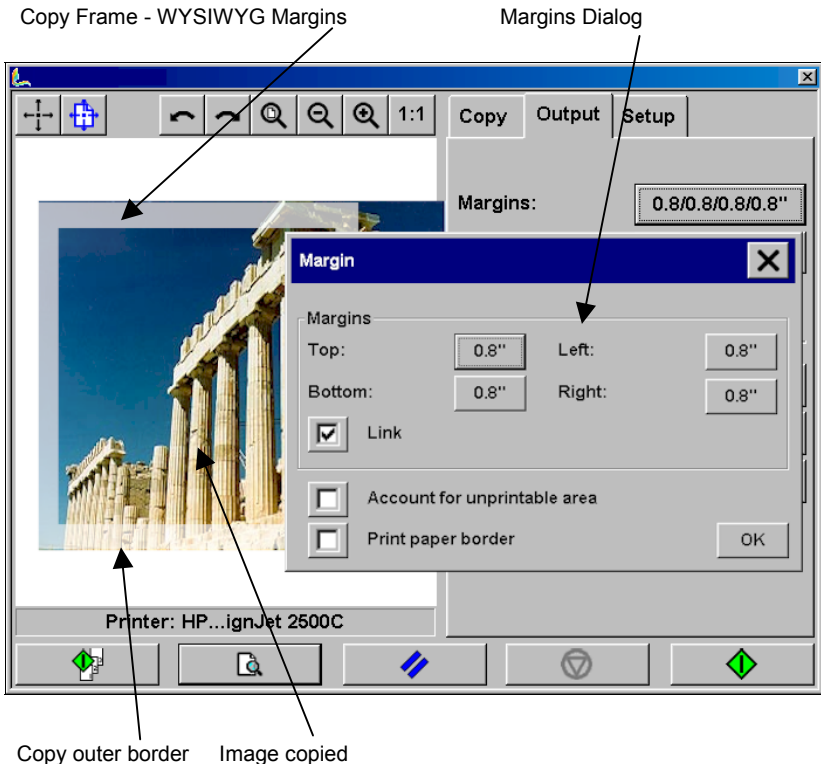


Fig. 3-11: Setting Margins

Setting Margins

- Margins will be calculated in the *Unit of Measure* you selected in the *Setup Tab* dialog. Go to the *Setup Tab* options if you wish to change the current measurement units for setting the margins. (mm, inches or Scan Units).
- In the *Output Tab* dialog, Press the *Margins* button.
- Set the Top, Bottom, Left and Right margins in the *Margins* dialog.
- Use the *Link* option if you want equal margins all around the image. With the *Link* option checked, you only have to enter the margin value in one of the four fields.

- Most printers cannot start printing at the very edges of the paper and thus enforce a margin on your output. You can choose to take this margin or so called “unprintable area” into account when you setup your own margins. More on this in the following section.
- Check the *Print Paper Border* option to get a thin black line around the output size boundaries. With wide format printing on large printer rolls, this option will give you a clear cutting line so you end with precisely the output size you defined.
- The thickness of the Paper Frame in the Preview Window will reflect your margin settings in relation to the output but also in relation to the input so you can see precisely how they will crop the input image.
- If you set *Margins* to zero, then a thin frame will still outline your current capture area in the Preview Window.

3.3.2 “Account for unprintable area” Option

The *Margins* we set in the *Output Tab* dialog are the copy’s “output margins”. But the printer itself also creates margins. The size of your printer’s margins or so called “unprintable area” depends on the printer model and cannot be changed. You should consider the printer’s margins as your minimum margins and they will be in your output whether you want them to or not.

The *Account for unprintable area* option is found in the *Margins* dialog and it lets you compensate for these uncontrollable margins. Selecting the option lets you economize paper usage by keeping unneeded margin space down to a minimum. Selecting the option will tell the application to deduct the printer’s enforced margins from your output *Margins* so the total margins are as you specified for the copy. For duplicating originals without margins, you would not want output *Margins* either and thus the option should be deselected.

To use the option, you have to enter your printer’s unprintable area values as specified in your printer documentation. This is done through the *Output Tab* -> *Printer* -> *Unprintable Area* button. See the section on Printer Selection and Setup in the reference guide.

Here are some guidelines on using the “*Account for unprintable area*” option:

If you select “Account for unprintable area”:

- You will also have selected a minimum output *Margin* at least equal to the printer’s margins. The program will automatically update the values in the *Output Tab’s Margin* values to reflect this. If you set output margins to zero or lower than the printer’s, then the printer’s margins are used and updated as the output *Margins*.
- If the output *Margins* you set are higher than the printer’s, then the printer’s margins are deducted from the output margins meaning JETimage only adds on the margins that the printer is missing. This means that your total margin, measured from the paper’s physical edges, will be as you specified in the *Output Tab – Margins* option.
- The cropping effect on the original is always determined by the value displayed on the *Output Tab’s Margin* button whether it was automatically calculated or not. The actual cropping effect will be as displayed in your WYSIWYG preview.

If you do not select “Account for unprintable area”:

- The output margins you set will be added to the printer’s, measuring from the paper’s physical edges.
- Only the specified *Output* margins will crop the copy as displayed in your preview.

You would typically want to use precise margins when copying on standard format sized sheets manually fed into the printer. When you print on paper rolls, you will often have to cut out the copy anyway.

Some examples:

- If you are copying an original photo without margins then set your output margins to zero and uncheck the “*Account for unprintable area*” option. Print the copy on a roll or a sheet larger than the specified output size to get the whole image because the printer’s enforced margins will offset your copy.
- Let’s say you are printing a D-size poster, you want a margin of 1,5” on the copy and your printer margins are 0,5”. You are duplicating the poster on a D-size sheet. Here you could select the *Adjust for unprintable area* option. You can then set your output *Margins* to 1,5” and you will also get only a 1,5” margin from the paper’s physical edges. Using the *Adjust for Unprintable area* option saves paper for jobs when margins and slight cropping are acceptable.

3.3.3 Printer Selection and Setup

The currently set printer will be named on the *Output Tab's Printer* button. If you want to change its settings or you wish to define and use another printer, then ...

- In the *Output Tab*, press the button labeled *Printer*.
- In the *Printer Setup* dialog, again press the *Printer* button.

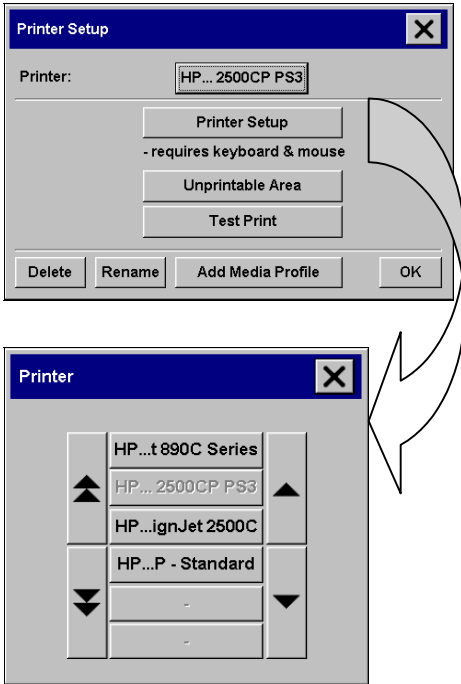


Fig. 3-12: Printer Selection

- Select the device you wish to use from the list of printers detected.
- Press the *Unprintable Area* button and enter the values for the printer's internal margins and *Media Width* capacity. These are used with the *Account for unprintable area* option in the *Margins* dialog. The values should be found in your printer's documentation.



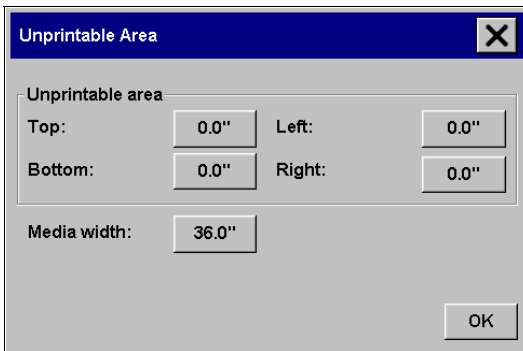


Fig. 3-13: Unprintable Area Dialog

- If you want to adjust the current printer's settings, or else select and setup a new printer, then Press the *Printer Setup* button.

Printer Setup

Setting the Printer properties

The *Print* dialog contains options for setting printer driver properties.



The *Print* dialog requires a mouse and keyboard hooked up on the system. This also applies to the JETimage touchscreen version.

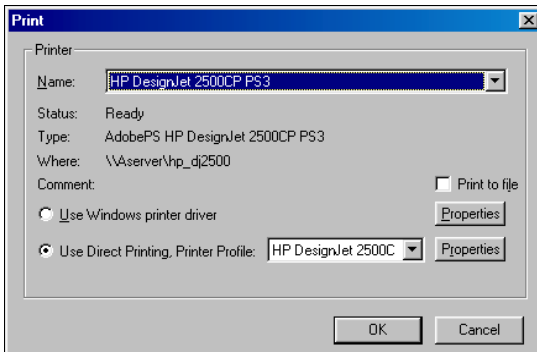


Fig. 3-14: Printer Setup dialog

The *Print* dialog informs you of the current settings for the selected printer and port. The dialog offers a wide range of options, allowing optimal flexibility in relation to your different printing needs.

Printer Name

Printing is always done through a printer that is defined in your operating system. Click the *Name* drop-down box to select one of the printers defined on your system.

Print To File

Check the *Print to file* option if you wish to redirect print output to a file. A file *Save As..* dialog appears when you start copying.

Select your Printer Driver

The printer driver selection area offers users optimal flexibility for obtaining perfect printer output at maximum speed. By clicking on *Properties* next to the selected driver type, existing printer settings can be changed or new printer profiles can be configured to fit specific requirements.

You can select either:

- *Use Windows printer driver*
- *Use direct printing.*

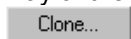
Use Windows printer driver

Select *Use Windows printer driver* to activate a printer driver loaded under Windows. Click on *Properties* to display the specified printer's configuration dialog. See your printer's documentation for details on configuration of the driver. Printing with the *Use Windows printer driver* option is slower than the *Use direct printer* option described below.

Use direct printing

Use direct printing gives you optimal speed and control over output results. With *Use direct printing* you can select one of the predefined and tested printer profiles available with JETimage. The print job is processed as a raw print that goes directly to the printer queue, which speeds up printing considerably.

Use direct printing also allows you to use and create your own printer profiles. User defined printer profiles can be added to the profile list by way of the *Properties* dialog's *Clone...* button.



Press the *Properties* button to reach the dialog shown overleaf.

Use direct printing - Properties

Pressing *Properties* after choosing *Use direct printing* will start a dialog with *Printer Specific* options. Here you can:

- Set the printing resolution.
- Set the Printer Language Properties - File formats and control.
- The *Properties...* button next to the Format box enables you to make settings specific to the format selected.

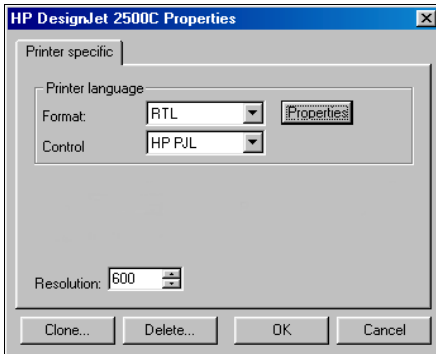


Fig. 3-15: Use Direct Printing - Properties Dialog

Creating User-defined Printer Profiles

- User-defined profiles are configured and saved in the *Use Direct Printing - Properties* dialogs.
- You configure new Printer Profiles by cloning from the currently selected profile. This is equivalent to borrowing properties from the current printer in order to define a new one. Select the printer you wish to borrow traits from.
- Click the *Clone...* button and enter your adjustments to the borrowed values.
- Enter a new printer profile name and save by clicking *OK*.
- To delete a printer profile, select the printer profile from the list and click *Delete*. Only user defined printer profiles can be deleted.

3.3.4 Copy Quality

You can define the quality of your copy. The quality settings represent different combinations of scanning and printing resolutions.



Fig. 3-16: Setting copy quality

3.3.5 Paper Roll

Some printers support more than one paper source or roll. Use this option to specify which paper source you want to use for the copy.

- Press the Roll button
- Select the paper roll number from the list or ...
- Use *Manual Feed* when inserting single sheets into the printer.
- Use *Auto* when you want the printer to pick its paper sources.

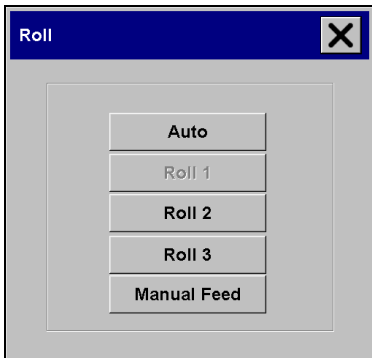


Fig. 3-17: Setting the Printer's Paper Roll

3.4 Media Profiles

3.4.1 Setting the Media Profile

Behind JETimage's *Media Profiles* lies one of the application's greatest strengths. When you select your printer and *Media Profile*, you are actually harmonizing scanner, printer and media color factors for achieving optimal color precision in your copies. More details on what lies behind *Media Profiles* follows in the section "Creating New Media Profiles" in this reference guide.

Selection of a *Media Profile* is only relevant for Color Copying.

A *Media Profile* becomes available on the internal list of output media only if such a profile exists for the printer and media type involved. A *Media Profile* can either be supplied with JETimage, installed later or else created through the *Media Profile Setup* option.

JETimage comes with standard *Media Profiles* for many common professional wide format printers. The standard *Media Profiles* work only with the *Direct Printing* option.

This means you will usually just choose a *Media Profile* from the list of predefined *Media Profiles* and thereby make optimal and tested color matching settings with only the one simple selection. But even if your current media is not in the list, don't despair. It will be, once and for all, after you run the media through the profile setup procedures.

To select the *Media Profile*:

- Open the Output Tab options.
- Press the button labeled *Media Profile*.
- Select the *Media Profile* that describes the media loaded in your printer. The list will only show you *Media Profiles* available with your printer model. Examples of media types are HighGloss Photo, SemiGloss Photo, Coated as shown overleaf.



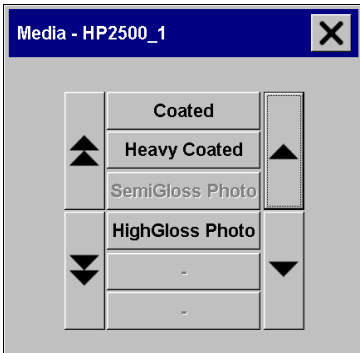


Fig. 3-18: Select your Media Profile

- If the media does not figure on the list, then you need to create a new *Media Profile*.
- You can create a new *Media Profile* through the *Printer Setup* dialog - *Media Profile Setup* (see the next section).

Note : To ensure stability of colors and optimal color matching, it is recommended that you color calibrate your scanner from time to time.

3.4.2 Creating New Media Profiles

A general problem with color scan-to-print copy processes is matching the original input colors with the printer's output colors. High quality scanners can see many more colors than printers can print, so some sort of solution must be found regarding all the unmatched colors. Furthermore, colors can change noticeably when printed on different types of output media.

JETimage supports an answer to this problem through "Closed Loop Color Calibration" that works by letting the scanner read the printer's entire color range before scanning. Saved inside JETimage is a special color patch chart that you print out with your printer, on the intended end-result **media**. Then you scan the printout on your scanner and JETimage then calculates the best possible mapping of your scanner colors to printer colors while incorporating the media type's effect on the colors.

In this way, the scanner's color interpretations are matched to the printer's output colors with the type of media taken into consideration.

These are stored as “*Media Profiles*” and you need one for each type of media you use on each of your printers.

The color matching process is hidden, and you don't have to worry about it. All you have to do is set the *Media Profile* in the *Output Tab* dialog, and adaptation to the media is activated behind the scenes.

Your JETimage application already contains a number of tested *Media Profiles* that cover the most popular large format printers and compatible media types. These *Media Profiles* should be sufficient for most of your copy jobs.

However, to support color matching on less common printers and special media types, JETimage offers the option to create your own *Media Profiles* through straightforward procedures. Once created, they are added to the list of available *Media Profiles* for the printer and can be reused for future jobs.

Note: Don't confuse JETimage's **Closed Loop Color Calibration** with the **Scanner's Color Calibration**. The scanner's color calibration involves stabilizing the scanner's color interpretation to a common and standard base point.

Scanner color calibration must be performed regularly and it is recommended to calibrate just before creating new *Media Profiles* through closed loop calibration. The scanner's calibration is crucial for the color matching process to work properly.

To create a new *Media Profile*:

Be sure to color calibrate the scanner before moving to the following steps.

- Press the *Output Tab*.
- Make sure the media is not already available in the list for *Media Profiles*. If it is, then you don't need to make a new one.
- Still in the *Output Tab*, press the *Printer* button.

- Press the *Add Media Profile* button in the *Printer Setup* dialog. The Media setup dialog is shown below.

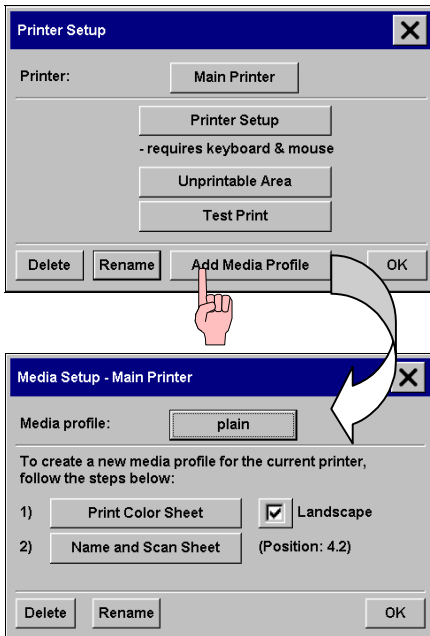
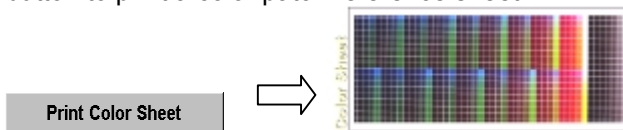


Fig. 3-19: Media Profile Setup

- In the *Media Profile Setup* dialog, press the *Print Color Sheet* button to print a color patch reference sheet.



- Load the color sheet into the scanner with the arrow at the position indicated in the dialog (given in the scanner units found on front of the scanner).

- Press the button: *Name and Scan Sheet*. Name and Scan Sheet

- Enter the name of your new *Media Profile*. Select a name that will enable you to identify the *Media Profile* in the future. Hit the return

button to accept the new name and initiate a scanning of the color sheet.



- The *Media Profile* will from then on be on the list of available profiles for that (and only that) printer.
- You can use the *Delete* button to delete *Media Profiles*. Only user created profiles can be deleted. Predefined Media types supplied with the application are protected.

Delete

- You can use the *Rename* button to rename *Media Profiles* if needed. Only user created profiles can be renamed.

Rename

Media Profile setup through closed loop calibration is illustrated overleaf.

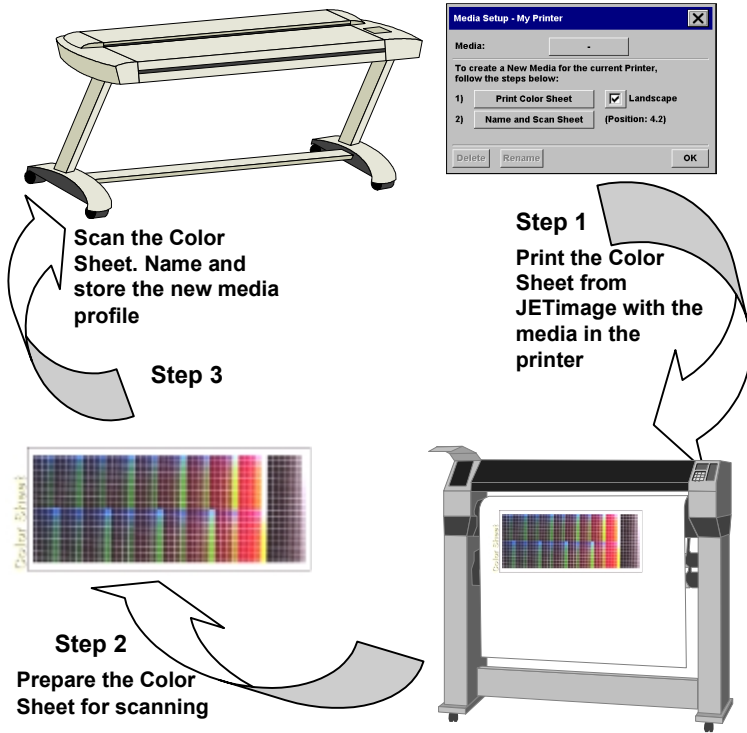


Fig. 3-20: Create New Media - Closed Loop Color Matching

3.5 Previewing

It is often a good idea to preview the image before copying to the printer. You may want to control your tonal settings such as lightness and saturation. You may also want to visually control the effect your document size and margins will have on the final output and find you need to readjust or relocate the *Paper Frame* on the image.

The *Preview* button loads a fresh preview of the copy each time it is selected. By the word “fresh” we mean that the loaded image always uses the last settings made and the effects of the settings will be visible in the new preview. This smart feature allows you to fine tune your settings as you watch them take effect before committing the copy to print.

Press the Preview button to load a fresh Preview.



3.5.1 The Paper Frame

The *Paper Frame* in the preview window fulfills two functions:

1. It frames the area in the original that will be copied and...
2. It shows how the *Margins* will crop the image in the end result.

Before you can see and use the frame, you have to have a preview of the copy loaded through the *Copy Preview* button.



The *Paper Frame's* size and thickness in the Preview Window will be determined by the *Input Size*, *Output Size* and *Margins* settings.

The Paper Frame gives a complete “What You See Is What You Get” (WYSIWYG) impression of your copy.

The frame's visual outer boundaries are determined by the *Input size* setting. The area inside the frame shows what will be copied.

The frame's thickness visualizes the margins in relation to the copy's size and shows how they crop the image. With margins at the value of zero, a thin frame will still be displayed to show the capture area.

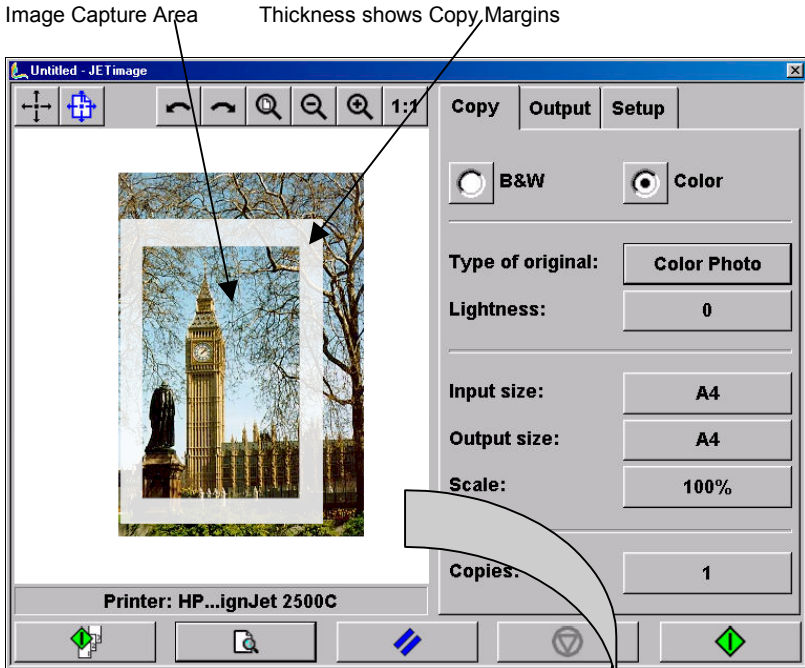


Fig. 3-21 : Paper Frame



Fig. 3-22: Copy Result

3.5.2 Zoom Tools




There are four zoom tools:

Display the whole image – Image Overview:




Copying large format originals means you can not see the whole image at one time in the *Preview Window* when presented at its normal size. Normally, and especially in connection with setting size parameters and margins, you will need an overview of the whole image. You can use the *Zoom All* tool to get such an overview.

- Press the *Zoom All* tool button. 
- No matter what zooming level you start from, the *Zoom All* tool resizes the image so that it exactly fits in the *Preview Window*.

To zoom in on a specific area:




Use this tool when you need to view details for making enhancement settings and for aligning.

- Press the *Zoom In* button. 
- Zooming takes place immediately with the zoom axis in the center of the *Preview Window*.
- If you need to enlarge the image further, then continue to press the *Zoom In* button until you get the required level of detail in the view.

To zoom out from a selected area:



This tool decreases the image size in the *Preview Window*. Use this tool in combination with the above *Zoom In* tool to get the perfect field of view and detail.

- Press the *Zoom Out* button. 
- Zooming takes place immediately with the zoom axis in the center of the *Preview Window*.
- If you need to decrease the image further, then continue to press the *Zoom Out* button until you get the required field of view.

One to One pixel viewing:

1:1

Use this tool to view the image with one scanned pixel shown as one screen pixel.

3.5.3 Move Tool



With this tool you can move the image in order to get any part of it centered or visible in the *Preview Window*. This tool is often used when zooming in on specific details or difficult areas that need to be examined with different tonal enhancement settings. You can move the image in any direction.

To move the image:



- Press the *Move* tool button.
- The Move mode becomes active.
- **There are two ways to move the image:**
- **Dragging:** Drag with your finger/mouse anywhere in the image window. Imagine you are gripping hold of the image and dragging it around inside the window.
- **Centering:** Touch/click a point on the screen and that point will then be centered in the preview window. The image shifts so that the point you selected becomes repositioned in the center of the screen. This method is especially useful when zooming in on image details. It lets you pick out important spots and center on them before zooming in.
- Both of the methods are at all times equally active when you select the Move tool and enter the Move mode. On touchscreens, the Centering method is easiest to control.

3.5.4 Position the Paper Frame



The *Paper Frame* defines the area of the image that will be copied. Its size is determined by the size settings made in the *Copy Tab* dialog. JETimage let you position the *Paper Frame* directly in the preview and thus visually set your copy area.




- Press the *Move Frame* tool
- The Move Frame mode becomes active.
- **There are two ways to move the frame:**

- **Dragging** : Drag with your finger/mouse anywhere on the screen. Imagine you are gripping hold of the frame and dragging it around over the image.
- **Centering** : Touch/click a point on the screen and that point becomes the new center for the *Paper Frame*. The frame shifts so that it positions itself with the point you selected directly in its center.
This method is especially useful when you are making spot test strips for outputting on the printer. It lets you continuously and rapidly reposition the frame on important areas that you want tested.
- Both of the methods are at all times equally active when you select the *Move Frame* tool and thus enter the move frame mode.

3.5.5 Align the Image



The original may have been inserted slightly off balance and appears crooked in the *Preview Window*. Correcting this does not mean you have to reload the original and start all over. You can adjust image alignment before copying with the two alignment tools : *Align Left* and *Align Right*.

In the example below, repeated pressing on the *Align left* button  will straighten the image in the copy.

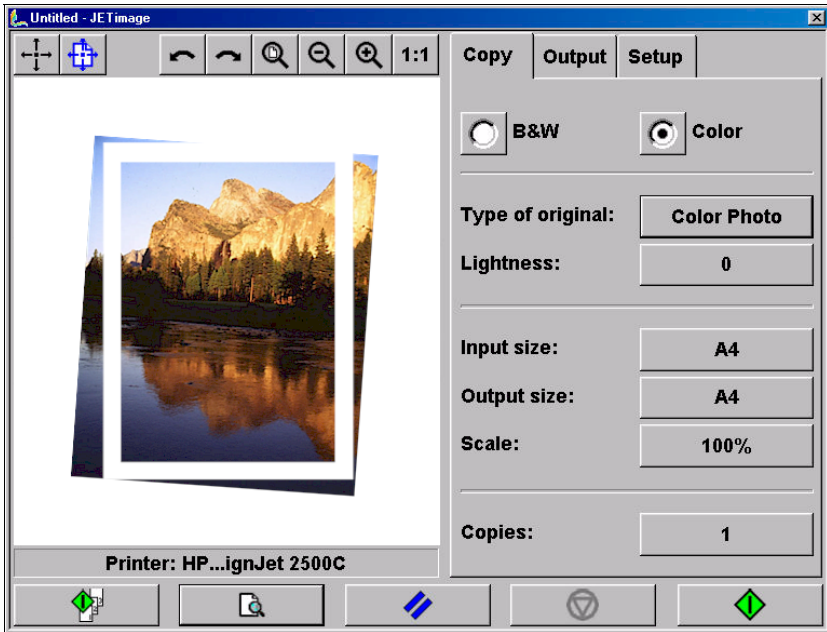




Fig. 3-23: An unaligned image can be corrected before copying

To align an image:

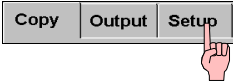
- Press the *Align Left* tool to tilt the image left. 
- Press the *Align Right* tool to tilt the image right. 
- You can use the perfectly aligned sides of the *Paper Frame* as references.
- When you press the *Copy* button, the image will be output as you realigned it in the *Preview Window*

3.6 Setup Preferences

3.6.1 Units of Measurement

Before setting any size parameters, you should determine the unit of measurement (inches, millimeters or scanner units) you prefer to use throughout the application.

To set your preference of size measurement units:

- Press the *Setup Tab* 
- In the *Setup Tab* dialog press the button labeled *Units of Measure*.
- Select the preferred *Units of Measure* - mm, inches or scanner-units.

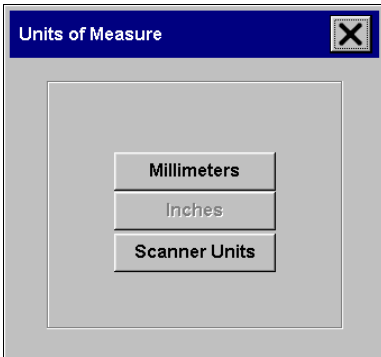


Fig. 3-24: Setting Units of Measurement

3.6.2 Loading Preferences

You can load your original into the scanner from the scanner's center or side. *Center* loading is handy with standard sized originals (A4, A3, E-size, etc). *Center* loading is strongly recommended when scanning thick originals such as cardboard, foam-board, etc. *Side* loading is convenient when you want to use the ruler imprinted near the scanner's insertion slot to read the width.

To set loading preferences:

- Press the *Setup Tab*.
- Press the *Load* button.

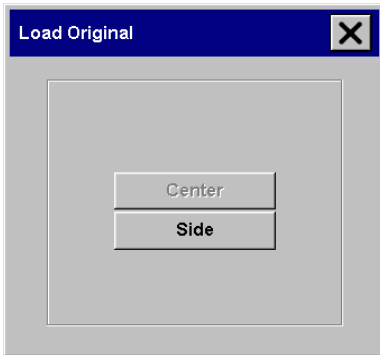
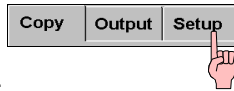


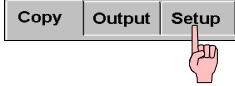
Fig. 3-25: Load original Preferences

- Select *Center* or *Side* loading:
 - Center loading** - An arrow on the scanner marks the center point. Insert your original so that its center is aligned with the arrow. Standard sizes are marked along the insertion slot.
 - Side Loading** - The edge of the document is inserted so that it is aligned with the zero point (marked "0") at the side of the scanner's insertion slot.

3.7 Scanner Settings

The *Scanner Setup* dialog contains options for scanner related settings. It is here you select the scanner, set *Paper Load* options, set your *Media Offsets*, and make adjustments for scanning thick originals through the *Extended Thickness* options.

- Press the *Setup Tab* to reach the scanner settings.



- Press the button labeled Scanner.
- Press the Scanner Setup button.



The setup dialog requires a keyboard/mouse hooked up on the system. This also applies for the JETimage touchscreen version.

3.7.1 Selected Scanner

JETimage detects which scanner models are accessible through your workstation. Selecting *Selected Scanner* displays a drop-down box containing a list of available scanners named by their model. Clicking on an item in the list makes it the active scanner.

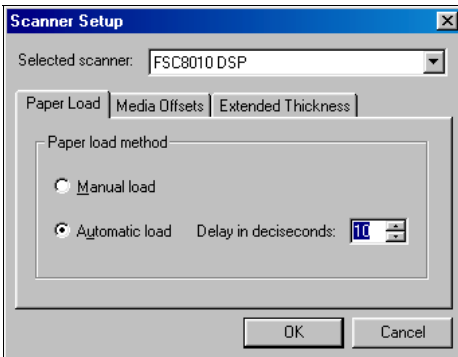


Fig. 3-26: *Scanner Setup Dialog*

The same setting can be made in the first scanner setup dialog after pressing the button labeled *Scanner* in the *Setup Tab*.

3.7.2 Paper Load

Select between *Manual load* or *Automatic load*. With manual loading, you position the original in the slot and then press the down button on the scanner. With automatic loading, the scanner detects and loads the original as soon as you insert it. A delay factor can be set for automatic paper loading giving you time to position the original correctly.

3.7.3 Media Offsets

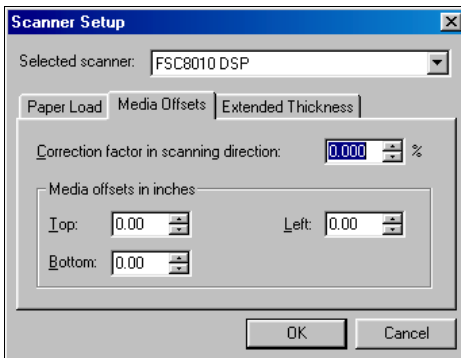


Fig. 3-27: Scanner Setup - Media Offsets

Correction Factor in scanning ... (Vertical Precision Setting)

This option allows you to fine-tune the scanner's vertical precision setting and mainly refers to copying where the relationship between lengths on the original must be kept in proportion. Such could be the case with for example engineering drawings, maps and perhaps even some types of art posters.

During scanning, an original image is digitized as it is propelled through the scanner. One at a time, thin strips of the image are processed as they pass the cameras. Vertical precision is directly affected by the speed in which this happens. Inaccurate vertical precision makes vertical lines in the scanned image become longer or shorter than the same lines in the original. The vertical scan accuracy is adjusted and set mechanically during production of the scanner. This setting, is extremely precise and more than adequate for most purposes.

However, should you require very high accuracy, you can modify the vertical precision from zero to a value between -1% and 1% . Positive settings mean that the distance between scan lines will be increased, and negative settings mean that the distance between scan lines will be decreased. When you exit the *Scanner Setup* dialog, the modified value is stored in non-volatile memory in the scanner and can only be changed by re-doing the setup.

The procedure for vertical precision adjustment would be to scan a precision original. Measure the vertical distance between points in the image in a CAD or GIS system. Then compare those with similar physical measurements between the points on the original. You should scan at the scanning resolution you will later be using for the end result.

3.7.4 Extended Thickness Settings

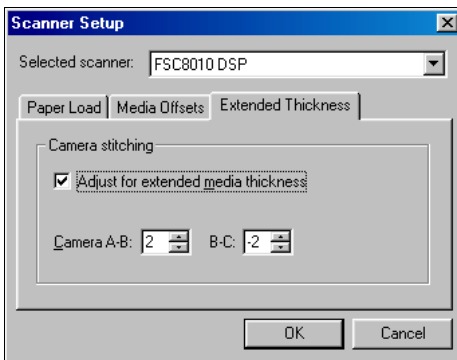


Fig. 3-28: *Scanner Setup - Extended Thickness*

Camera Stitching

Scanning needs are not always limited to convenient paper thin media. You might need to scan thick originals such as maps or posters pasted on cardboard. While some scanner models are built to scan very thick originals, others require a special “Extension Kit for Thick Media”. Scanning thick media can require enlarging the scanner’s insertion area and this can affect the scanner’s automatic control of border lines between the cameras – the so called *Stitching*. Stiff and unbendable media will affect *Stitching* most. The *Camera stitching* option allows you to adjust stitching parameters when scanning with thick and stiff originals.

To scan thick originals:

- Adjust the insertion slot to accommodate your thick media as described in the scanner's operations guide or Extension Kit guide.
- Load the thick original you wish to scan. Center loading is recommended with thick originals. The scanner's media transport rollers grip more evenly with center loading.
- Click *Scanner Setup* in the *Scan Menu*.
- Make a test scanning. Bulky thick media needs to be supported with both hands on its way in and out of the scanner.
- Stitching errors will be easiest to see on an image with one or more clear diagonal lines.
- Normally, only stiff media will affect stitching. A flexible media will usually be stitched correctly regardless of its thickness.
- If the lines seem uneven, check the box labeled *Adjust for extended media thickness*.
- Change the value for each of the scanner's cameras. Normally, only positive values should be used.
- Make test scans and readjust the values until you are satisfied that the lines are stitched correctly.
- Click OK to accept your settings.

Use extended thickness paper handling

Scanning thick originals can give distorted results at both the top and bottom edges where the edge meets the scanner's rollers. On some scanner models, you can omit edge distortion by letting the scanner skip the leading and trailing edges. This setting is only available on scanners originally constructed with thick media scanning capabilities. Edge skipping is the default setting on these scanners when they are set (see your scanner's Operator's Guide) in one of the extended media positions. Use the checkbox *Use extending thickness paper handling* to enable and disable skipping of the two edges.

3.8 Verifying Your Copy - Testing

Testing is of course optional. You may have perfected your copy techniques to such an extent that no testing is necessary or, you may just be the daredevil type. But for most professionals, testing has nothing to do with a lack of skills or courage. Testing is just good business because, in the long run, it saves time, ink and expensive printing media.

There are two verification methods - On screen verification through the *Preview Window* and output verification through trial copies. Neither of the two methods need take much time to perform and for large jobs with many copies involved, it is recommended to perform both.

3.8.1 On Screen Verification

At any point in the process of making adjustments to size, margins, color tones, lightness, sharpness, etc., you can hit the *Preview* button and see on screen how the latest settings affect image capture. Use the *Zoom* tools to get a better view of the image. As you make new adjustments, check the effects in a fresh preview by again selecting the *Preview* button.

3.8.2 Make a Trial Copy

Previewing is fine for many purposes but colors aren't completely accurate with screen output. You may want to see an example of "real-life" results on your printer. After all, the printout is what you are producing in the end.

Testing here should focus on shadow and highlight areas, where contrast and subtle color changes are crucial

Set a small *Input size* using numeric *Width* and *Length* values. Move the small *Paper Frame* to an area you wish to see printed and the press the *Copy* button. This could be an area with shadows or difficult color transactions. Use the *Move Frame* tool to position the frame on different areas.



Reset your *Input size* in the *Copy Tab* dialog when you are satisfied with the quality in your test strips.

Tip : Test your Layout

You can also test your layout settings by scaling down to 25%, giving you a rapidly produced and miniature version of your end result.

4. Appendix A: Glossary

Acquire:	A command in some programs that starts the HP PhotoSmart PhotoCapture software, to scan a picture directly into a program.
Activate:	To activate an open window, click anywhere on it or choose its name from the Window menu. To activate a window that is not open, open the window.
Active Window:	The window currently in use or currently selected. If a window is active, its title bar changes color to differentiate it from other windows. Only one window can be active at a time; the other windows are inactive.
AdaptiveThresholding	Advanced 2-D Adaptive Thresholding estimates the background gray level in a window area around each pixel. The difference between the actual pixel value and the background is then compared to the adaptive settings to determine if a pixel is thresholded as a black or a white pixel
Additive Colors:	The additive primary colors are red, green and blue. These additive primaries represent the three main components of white light. Used individually or together, these three colors of light can be mixed to create nearly all colors. When these three primary colors are mixed in equal parts they produce white. Additive color is used in scanners and computer displays.
ADL+ Error Diffusion Halftoning	Image Processing that supports visibility of graytones in printed output by adding toned shades of gray in regions between black and white. Carried out as a segment of Dual 2D-Adaptive enhancement processing in copy modes.
Automatic Exposure:	A feature of the HP PhotoSmart PhotoCapture software that automatically sets brightness and contrast levels to optimize the quality of the final scanned picture.
Bitmap:	A type of computer image made from a matrix of individual pixels. .bmp.
Bitmapped Image:	A bitmapped image is a computer file representing a line-art image that was scanned with a scanner. Refers to the pattern (map) of bits that are either black or white.

Black Level:	The Black Level is a setting in scan programs used to change dark graytone colors to true black. For example, if one is copying a brochure with a mixture of text and pictures, the text will often be digitized to a color that we may see as black but really is a dark graytone. When the printer digests this graytone data, it will print the original's text with a halftone pattern, meaning scattered dots instead of solid black. By increasing the Black Level value, one can get the text to be copied in real black and it will therefore appear clearer.
Black Point Adjustment:	An adjustment made that will determine the amount of shadow detail in an image. It is considered proper to set the black point so that the darkest part of an image will only just have zero detail.
Blueprint:	A process of photographic printing used mainly for copying architectural and mechanical drawings; produces blue lines on a white/bluish background.
Blur:	The averaging of pixel elements.
Brightness Adjustment:	An adjustment on a scanner that allows the user to compensate for a light or dark original.
Byte:	A unit of digital information made up of a string of 8 bits.
Calibration:	<p>Adjusting a device so that it performs in accordance with an established standard.</p> <p>Scanner calibration is minimizing color deviation between scanned ANSI IT8 reference color patches and the known color reference values. Generally, Calibration is the process of setting a device to known color conditions – stabilizing the device to a known and quantifiable state.</p> <p>Calibration is commonly done with devices that change color frequently, such as monitors (phosphors lose brightness over time), scanners (light changes) and printers (proofers and other digital printing devices can change output when colorant or paper stock is changed).</p>
CALS:	Computer-aided Acquisition and Logistics Support (CALS) standard, a U.S. Defense Department and industry initiative that addresses the design, manufacture, and support issues of generation, access, management, and use of technical data in digital form.

CCD:	Charge Coupled Device, CCD is the image sensor in the scanner that converts light to voltages. These voltages are converted by the scanner into the image.
CCITT Group3:	Standard runlength compression format used with FAX transmission. It utilizes modified Huffman coding to further compress the runlength numbers. Most scanner file formats are dialects of this format.
CCITT Group4:	Two-dimensional compression format, giving very compact image files. Standardized by CALS (MIL 28002) and ISO-ODA for Drawing Archival and Interchange.
Check Box:	Check boxes turn a feature on or off. The feature is on when the box contains an "X." or "(." Click the box to check or uncheck it as required.
Choose:	Select an item from a menu. Click the main menu item and then click the item in the drop-down menu; or, click the menu item, drag to the drop-down menu item, and release the mouse button.
CIE LAB:	A device-independent color space specified by CIE, used in modern color management software to facilitate conversion of data from a scanner to a display, or from a display to an output device.
CIE:	Centre Internationale d'Eclairage (CIE) is an international organization that establishes methods for measuring color. These color standards for colorimetric measurements are internationally accepted specifications that define color values mathematically. The first color space model, the CIE xyz, was developed in 1931. CIE defines color as a combination of three axes: x, y, and z. The two color spaces released in 1978 are CIE Lab and CIE Luv. The goal was to provide an accurate and uniform reference of visual perception.
Click:	Position the mouse cursor on top of an object and press and release the left mouse button once.
Clipboard:	A temporary storage place used for copying and pasting pictures between programs.
CMYK:	The subtractive printing colors. Cyan, Magenta, Yellow, Black.
Color Balance:	The visual effect of an image when the amount of each color and the overall amount of color are balanced.
Color bit depth:	The simplest pixel has two options: black or white. (A pixel with two choices is known as a 1-bit image, or

two raised to the power of one). Adding more bit information increases the number of color options. The number of potential color options for a pixel is called color bit depth. For example a 4-bit pixel would have 16 color options, and an 8-bit pixel would have 256 color options, while a 24-bit pixel would have 16,777,216 color options.

- Color Cast:** An image is said to have a color cast if its colors are not true. A color cast will usually be described by stating the particular color predominant in the image, e.g., the grass appears to have a red color cast.
- Color Correction:** To improve the color rendition. Correcting for, and eliminating an unwanted color cast.
- Color Management System:** Color Management System (CMS) software increases the accuracy of color interchange between scanners, displays and printers based on profiles for each device. The CMS is a layer of software resident on the computer that negotiates color reproduction between the application and color devices. The CMS performs the color transformations necessary to exchange accurate color between diverse devices. The Color manager needs access to characterization data for the device. The format and content of such device profiles is standardized by the International Color Consortium (ICC.)
- Color Separation:** Process of separating colors, in an image, into primary color components for printing. Converting an RGB color image into CMYK color image. Color separation is a technical function during which critical settings such as GCR, black ink limit and total ink limit are applied to the image.
- Color Space:** A color space is a particular language used to describe color. Examples of color spaces are: RGB, CMYK, HSV, CIE LAB.
- Color:** Electromagnetic energy that exists in the form of wavelengths creates the perception of color. There is a huge difference between the visible spectrum we can see with our eyes and the colors which can be reproduced on a computer screen and then printed on a color printer. The total number of colors that a device can produce is called its color gamut. The visible spectrum is larger than the color gamut of a color monitor, which in turn is larger than that which can be reproduced by a color printer. No system can produce all the colors visible to the human eye.

Contrast:	The difference between the lightest and darkest significant areas in a picture. A picture with high contrast has nearly white areas and nearly black areas with sharp changes in brightness between them. The picture seems dominated by stark light and dark tones.
Copy:	To duplicate an image and place it on the clipboard.
Crop Box:	A box drawn in the picture when the Size tools are visible. It shows the area that will be scanned when saving or printing the picture.
Crop:	To select the part of the picture desired. Only the part of the picture inside the crop box is saved or printed.
Density units:	Photographers and printers measure transmission in base-10 logarithmic density units, where transmission of unity corresponds to a density of 0, transmission of 0.1 corresponds to a density of 1, transmission of 0.01 corresponds to a density of 2, and so on
Density:	The light stopping ability of a film. Density is inversely proportional to the amount of light reflected or transmitted by an image.
Destination:	The program or device where the scanned picture will be printed or used. This information lets the software produce the highest-quality picture based on the characteristics of the selected device.
Device Dependent Color Space:	For example RGB. A device dependent color space, e.g., the same scan file will appear different when viewed on different computer displays.
Device Independent Color Space:	For example CIE LAB. A device independent color space is one in which color values are absolute, e.g., defined by CIE standard. CIE LAB is the central color space in color management systems (CMS) and is used to translate between different device dependent color spaces such as scanner RGB and display RGB.
Device Profile:	A file used as part of a Color Management System (CMS). A device profile contains information about the characteristics of a scanner, computer display or printer. The format for device profiles (Win95, Colorsync. etc.) is standardized by ICC (International Color Consortium).

Dialog Box:	A window that appears to request or supply information. Many dialog boxes have options which must be selected before the program can carry out a command.
DIP	<u>D</u> igital <u>I</u> mage <u>P</u> rocessor. Hardware embedded function that does image enhancement in real-time while scanning.
Dither:	To use patterns of different colored pixels to create blended colors; or, to use dots of different sizes to simulate grayscale images. (see below)
Dithering:	A printing or display device may have only a small number of grayscale or color values for each device pixel. However, if the viewer is sufficiently distant from the printed page or display, the value of neighboring pixels can be set so that the viewer's eye integrates several pixels to achieve an apparent improvement in the number of levels or colors that can be reproduced.
Dots Per Inch (dpi):	A measure of dots in a square inch where the individual element is a round dot on the printed page.
Double-click:	Position the mouse cursor on top of an item and press and release the left mouse button twice, in quick succession. If the clicks occur within the time set in the MS Windows Control Panel, it interprets the two clicks as a single gesture.
DPI:	Dots Per Inch, equivalent to Pixels Per Inch. An expression of resolution of a scanned image.
Drag:	Press the left mouse button and move the mouse while keeping the button pressed. When the desired action is completed, release the mouse button. Drag refers to an action sequence (mouse down, mouse move, mouse up), such as "Drag the button in the scroll bar. . ."
DSP:	<u>D</u> igital <u>S</u> ignal <u>P</u> rocessor, does image enhancement in real-time while scanning.
Dual 2D-Adaptive Enhancement	Enhancement processing on the foreground and background separately. Processing is performed on-the-fly. The separate enhancement processes are simultaneously performed on different drawing aspects.
Dynamic Range:	A measurement of scanner quality; the density difference between highlights and shadows.

Edit:	Modify an entry using standard Windows text-editing techniques.
Emulsion:	The light sensitive silver, coated on the clear acetate film base, that forms the photograph when a picture is taken and the film is developed.
Equalizing:	Distributing all color or tone equally along a density range.
Export:	To send a copy of the picture to a file.
Exposure:	The overall lightness or darkness of a picture. Exposure is determined automatically when the film or photograph is pulled into the HP PhotoSmart photo scanner, but can be manually adjusted before saving the picture.
File Format:	The format in which a scanned picture is saved. Many programs can insert or import a picture from a file, if it is saved in a file format that the program supports. Common file formats include TIFF (Tagged Image File Format), BMP (Windows bitmap), JPEG (Joint Photograph Expert Group), and FPX (FlashPix format).
Flip Horizontal:	To flip the picture left/right.
Foreground:	Foreground when scanning raster data (black and white, or monochrome data) refers to the pixels that represent data of interest (background refers to everything else). Typically, lines and shapes are represented by black pixels (foreground) and empty space is represented by white pixels (background). When scanning grayscale data, background means the gray level of a region of pixels that surrounds some desired foreground data.
Gamma Adjustment:	An adjustment that makes the tone distribution lighter or darker in an image.
Gamut Transformation:	Color Management System function, where out-of-gamut colors are converted to colors within the gamut of the targeted device, e.g., a printer.
Gamut:	The color range scanable, printable or displayable by a device; e.g., if some of the displayable colors are outside of the gamut of the printer they cannot be printed.
GCR:	Gray component replacement. A color separation setting used on color photographs where cyan, magenta and yellow inks are replaced by black ink (in a balance that would yield a gray value). The advantages are a reduction in overall ink usage and

some increase in image detail.

- Grayscale:** A term for a black and white photographic image or a scanner setting. Refers to the range of 256 gray tones that make up the image.
- Halftoning:** The processes of offset printing and laser printing are intrinsically bilevel. However, these devices can reproduce a range of tone levels by halftoning; e.g., an array of widely spaced dots produces the perception of light gray, and an array of tightly spaced dots produces dark gray. Halftone dots are usually placed in a regular grid. In color printing it is conventional to use cyan, magenta, yellow and black grids that have exactly the same dot pitch but different carefully-chosen screen angles.
- Highlights:** The lightest part of a picture--reproduced as white on the screen or when printed.
- Histogram:** A bar graph representing the statistical distribution of Graytones or colors in an image. Each column represents the number of pixels at that gray level or color.
- HLS:** A color space with the three variables of Hue, Lightness, Saturation. See HSV.
- HSV:** A color space with the three variables of Hue, Saturation, Value. Hue means color (as in the color wheel.) Saturation is an indication relating to the richness or vibrancy of the color. Value is a term best related to the intensity of light illuminating the object.
- Hue:** A named color. In discussions of color that relate to photography, scanning, and printing, six hues are especially important: red, yellow, green, cyan, blue, and magenta. These hues make up every color we can see, and are the designated hues on color wheels.
- Hue:** A measurement of color that can be related by pointing towards a certain color on the color wheel. Hue indicates the relative redness, blueness, greenness, yellowness, etc., of a color.
- ICC:** The International Color Consortium (ICC) was formed to address the need for a common color framework. The ICC has developed a standard device profile that contains information about how various devices render color. This concept is supported by Apple (Colorsync), Microsoft for Windows 95, Sun for Solaris, and by Silicon Graphics for Irix.

- Image Editor:** A program used to edit pictures to change colors, increase detail, scale or otherwise alter the picture.
- Import:** A command in many computer programs, that brings a scanned picture which has been saved to a file, into a document.
- Indexed color:** Indexed color (or pseudo-color) is the provision of a relatively small number, say 256, of discrete colors in a colormap or palette. For each pixel in the image, the index number of a color is then stored. When retrieving the image, a lookup table uses the index to retrieve red, green and blue components that are then sent to the display. In graphic file formats such as PCX or TIFF, an indexed color image is accompanied by its colormap.
- Interpolation:** Using the interpolation method of resampling generates values for points in between the actual pixels by looking at the surrounding colors or intensities. In a scanner resolution is increased beyond the actual number of CCD cells. As each line of pixel data arrives from the cameras, new interpolated pixels are added between original pixels. The added pixels enhance line edge definition.
- JPEG Compression:** Joint Photographic Experts Group Compression. A method to save storage space by compressing files. JPEG achieves a high degree of compression by discarding non-important picture detail.
- JPEG:** A compressed file format for images. Named after the Joint Photographic Expert Group, JPEG images feature small file size and speed, but lower quality than other formats.
- Landscape Photograph:** A photograph in which width is greater than height when properly oriented. A photo in which the height is greatest is called a portrait photograph.
- Lossless Compression:** File compression and subsequent de-compression without any loss of data.
- Lossy Compression:** File compression that will compress data to a high degree. When subsequently un-compressed, data will have been lost.
- LZW:** Method of lossless compression used with many file formats; developed by Lempel, Zev and Welch.

Midtones:	The most important part of a picture between black (shadows) and white (highlights).
Negative:	A reversed photographic image used to produce a positive print or a scanned image.
Noise:	A term used to describe the occurrence of pixels that contain random colors within an image.
Original:	The paper, negative, slide, or film to be scanned.
Palette:	The set of colors available for an image.
Paste:	To insert a copy, to the clipboard, of whatever was last cut or copied.
PICT:	A file format for pictures used primarily on the Macintosh.
Pixels Per Inch (ppi):	A measurement of resolution for scanners, where the individual element is a square picture element (pixel).
Pixels:	The word pixel is a combination of the two words picture and element. It is the smallest building block within a scanned line-art or photographic image. A pixel is the small square picture element that is filled with a color, black or white. The value of a pixel depends on the luminance of the area, and is either a single bit for a black and white image, or multi-bit for a color or gray-tone image. Pixels come in various sizes and their size is expressed in terms of resolution. Resolution is measured in pixels per inch (ppi) or the equivalent dots per inch (DPI.)
Portrait Photograph:	A photograph in which height is greater than width when it is properly oriented. A photo in which the width is greatest is called a landscape photograph.
PostScript:	A computer language developed by Adobe (R) Systems, Inc. for printing text, graphics, and scanned images. PostScript (R) is a vector format that can include scanned bitmapped images.
Raster File:	Also called Raster Image or Bitmapped Image. A picture composed of individual dots (picture elements, pixels) the way a scanner perceives it. The rows in a high-resolution raster file typically contain 200 or 300 dots per horizontal inch of the original drawing, and there are typically 200 or 300 rows per vertical inch. As each of these dots is defined by location, and by whether it is on or off, raster images generally result in large data files.

- Resolution of a Scanner:** Expressed as DPI (dots per inch) or the equivalent ppi (pixels per inch). The higher the resolution of a scanner, the smoother the scanned images.
- Resolution:** A measure of how many pixels per inch are scanned. Generally, more pixels per inch means more detail in the picture and a larger file when saved. Defines the level of detail that can be captured or shown by a scanner, display, or output device. For scanners, the resolution is defined by the number of dots (pixels) per inch (DPI) that can be captured horizontally and vertically, e.g. 300 DPI equals 90,000 pixels per square inch. Screen Resolutions are normally 72 pixels per inch of screen. Additional detail is thrown away by the screen display driver, anyway. For Printer Resolution scans, you need 150 dots per inch and above for good results on the printed output. One must find the level of detail that is still visible in printed output on the printer in question, and not dramatically increase the size of a saved file without bettering the result.
- RGB:** Red, Green, Blue. These additive primary colors are the basic elements of white light. By mixing them on a computer monitor or in a scanned image file, other colors can be created. For instance, Red and Green produces Yellow, and equal amounts of all three produce gray.
- RIP:** Raster Image Processor. A RIP is a special software that converts scanned images into a color dithered (halftone) image that can be output directly. An image must be 'ripped' before it can be output on a CMYK device, e.g., an inkjet printer.
- Rotate:** To turn the picture left (clockwise) or right (counterclockwise) from the orientation in which it was scanned.
- Runlength Encoding:** A method of compressing raster or bitmap data by representing "runs" of white or black dots along a scanned line as the number of dots in each run. Many variations of this scheme exist, with varying compression efficiency. Typically, runlength compression formats yield a file 20-25% the size of an uncompressed file.
- Saturation:** The level of colorfulness of the picture. A picture with high saturation has vivid color. A black and white picture has zero saturation. The purity of a color or the degree to which it is diluted with white light. Red is a highly saturated color. Pink is a diluted red (has lower saturation).

- Saturation:** Saturation is one attribute of color in the color space called HSV (Hue Saturation, Value). Saturation is a characteristic indicating the vibrancy or intensity of a hue. A color with high saturation will appear more intense than the same color with less.
- Scale:** To reduce or enlarge the size of a picture proportionally.
- Scanner Calibration:** A program that helps adjust the scanner to achieve stable colors and work with a printer. Calibration gives better scanning results. The program should be run whenever changing printing equipment, toner, and inks, and whenever getting poor results when printing pictures.
- Screen Calibration:** A program that helps adjust the computer screen to get the best display of scanned pictures and documents. This program is run during installation and should be used again any time that the computer screen or the lighting around the computer is changed.
- Scroll:** Move through a list or window by dragging the scroll bar button to the desired position, clicking the scroll arrows, or using the up-arrow and down-arrow on the keyboard. Clicking the scroll bar itself moves the window or list faster than clicking the scroll arrows.
- SCSI (Small Computer System Interface):** An interface that allows hard disks and other high-performance peripherals to be attached to Macintosh and PC computer systems.
- SCSI Card:** The printed circuit card that came with the scanner. With its driver software, the card allows the computer to talk to the scanner. The card is ASPI compatible with a SCSI-II output connector.
- SCSI:** Small Computer System Interface. Specification of interface to computer equipment like disks, printers, scanners etc.
- Select Source:** The command in some programs that allows choice of where the Acquire command will get its picture.
- Shadow Detail:** The amount of detail contained in the dark parts of an image. It is desirable to maintain shadow detail, but there is a risk of decreasing overall contrast if one lightens the shadow too much in an attempt to expose additional detail. If an image is scanned without shadow detail, it will be impossible to regain detail using an image editing program.
- Shadow:** The darkest part of a picture; reproduced as black

onscreen or when printed.

Sharpness:

An attribute of a scanned image and also an attribute of scanner quality.

Source:

When using either the Insert Object (OLE) or Acquire (TWAIN) commands to scan a picture into a program, such as a word processor, the source is the program where the picture is acquired or retrieved. The scanner software is the source that controls the HP PhotoSmart photo scanner.

SRGB:

Hewlett-Packard and Microsoft proposed the addition of support for a standard color space, sRGB, within the Microsoft operating systems, HP products, the Internet, and all other interested vendors. The aim of this color space is to complement the current color management strategies by enabling a third method of handling color in the operating systems, device drivers and the Internet that utilizes a simple and robust device independent color definition. This is to provide good quality and backward compatibility with minimum transmission and system overhead. Based on a calibrated colorimetric RGB color space well suited to Cathode Ray Tube (CRT) monitors, television, scanners, digital cameras, and printing systems, such a space can be supported with minimum cost to software and hardware vendors.

Stitching:

In large format multiple CCD camera scanners, electronic stitching adjusts for overlap in the field of view of adjacent cameras. Automatic stitching at start of scan ensures that each camera captures the correct number of pixels independently of mechanical and thermal changes.

Subtractive Colors:

The subtractive primary colors: cyan, magenta, yellow. As ink applied to a piece of paper by a printer, these colors absorb light and alter the colors seen by looking at the printed paper. Cyan ink absorbs the red third of the spectrum, magenta ink absorbs the green third, and yellow ink absorbs the blue third. This should theoretically cause the viewer to see a black color, but due to unavoidable impurities in the inks, there is still light reflected and the viewer sees a muddy brown. The absence of CMY pigments results in white.

Thumbnail:

A very small, low resolution version of a picture that shows just enough detail to tell which picture it represents. In the HP PhotoSmart PhotoCapture software, the thumbnails allow resetting of any changes made to the picture and, for negatives, allow picking which negative will appear in the preview area.

- TIFF:** Tagged Image File Format. One of the most common graphic file formats for line-art and photographic images.
- Tonal Distribution:** Tonal Distribution describes the distribution of various bright or dark tones within an image. During the scanning or image editing stage, tones can be redistributed, lightening a dark image or darkening a light one.
- Tone Compression:** A term used in scanning and image editing that refers to compressing the broad range of tones and colors in an image down to the narrower range available on a printer.
- Tone Curves:** The shape of the tone transfer curves can be adjusted by the user to alter color or tone correction. The lower left end of the curve typically represents the dark portions of a picture and an upward bend will typically lighten the shadows. Similar capabilities exist by working with the middle or highlight parts of the curve. In this way it is possible to alter only certain tonal ranges of an image without making un-wanted changes to other parts of the image.
- Tone:** Any color or neutral that is denser than white.
- True color:** True color systems provide eight bits for each of the three components (red, green and blue). Therefore true color is often referred to as 24-bit color.
- TWAIN:** A standard method of communications that programs can use to send instructions to hardware (such as scanners) and receive data back from them (such as pictures).
- UCR:** Under Color Removal. A color separation setting used on color photographs where cyan, magenta and yellow inks are removed from dark, neutral areas and substituted by black ink. The advantages are a reduction in overall ink usage. See also GCR.
- Vector Drawing:** Also called Vector File. Consists of mathematically defined elements, such as "Line from A to B", "Circle with center and radius", etc. CAD systems use vector drawings because of their accuracy, relatively low memory requirement and data-file sizes compared to raster images.

Vector File:	Also called Vector Drawing. Consists of mathematically defined elements such as: Line from A to B, Circle with center and radius etc. CAD systems use vector drawings because of their accuracy and relatively low memory and data file sizes compared to raster images.
Vectorization:	Also called raster-to-vector conversion (RTV). The process of automatically converting a raster (bit-mapped) image into a vector (CAD) drawing.
Video Card:	Expansion card installed inside the computer. Different types of video cards support varying monitor sizes and number of displayable colors.
White Level:	White Level is a setting in scan programs used if one has an original with a background that is not completely white. To get the background to appear as pure white one can set the White Level to a lower value.
White Point Adjustment:	An adjustment made that will determine the amount of highlight detail in an image. The white point should be set so that the lightest part of an image will only just have zero detail
WYSIWYG -	What You See Is What You Get. Pronounced "wizzywig." Screen output that exactly (or very closely) matches the appearance of printed output.
XYZ:	The CIE system is based on the description of color as a brightness (luminance) component Y (as described above), and two additional components X and Z. The spectral weighting curves of X and Z have been standardized by the CIE, based on statistics from experiments involving human observers. XYZ tristimulus values can describe any color.
Zoom:	The ability to enlarge or shrink the view of the picture in a window. Zoom does not alter the size of the final scanned picture; it only provides a better view while creating a selection border on the screen.

5. Appendix B: Program License Agreement

You should carefully read the following terms and conditions before opening the diskette package. Opening the diskette package indicates your acceptance of the terms and conditions. If you do not agree with them you should promptly return the package unopened, and your money will be refunded.

Contex provides this program and licenses its use. You assume responsibility for the selection of the program to achieve your intended results, and for the installation, use and results obtained from the program.

License

1. You may use the program on a single machine.
2. You may modify the program and/or merge it into another program for your use on the single machine.
3. You may copy the program into any machine readable or printed form for backup or modification purposes in support of your use of the program on the single machine.
4. You may not use, copy, modify or transfer the program, or any copy, modification or merged portion, in whole or in part, to another party, except as expressly provided for in this license. If you do so you terminate your license.

Term

The license is effective until terminated. You may terminate it at any time by destroying the program together with all copies. The license will also terminate upon conditions set forth elsewhere in this Agreement or if you fail to comply with any term or condition of the Agreement. You agree upon such termination to destroy the program together with all copies, modifications and merged portions in any form.

Limited Warranty

This warranty is provided as is, without warranty of any kind, either stated or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the program is with you. Should the program or hardware provided with the program prove defective, you (and not Contex or an authorized dealer) assume the entire cost of all necessary servicing, repair or correction.

Some states do not allow the exclusion of implied warranties, so the above exclusion may not apply to you. This warranty gives you specific legal rights; you may also have other rights which vary from state to state. Contex does not warrant that the functions or the operation of the program will be uninterrupted or error free.

However, Contex warrants the diskette on which the program is furnished to be free from defects in materials and workmanship under normal use for a period of one (1) year from the date of delivery to you, as evidenced by a copy of your receipt.

Limitations of Remedies

Contex's entire liability and your exclusive remedy shall be:

The replacement of any diskette not meeting the Contex "Limited Warranty" and which is returned to Contex or an authorized Contex dealer with a copy of your receipt, or If Contex or the dealer is unable to deliver a replacement diskette which is free of defects in materials or workmanship, you may terminate this Agreement by returning the program and your money will be refunded.

In no event will Contex be liable to you for any damages including any lost profits, lost savings, or other incidental or consequential damages arising out of the use or inability to use such program, even if Contex or an authorized Contex dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

General

You may not sublicense, assign or transfer the license of the program except as expressly provided in this Agreement. Any attempt otherwise to sublicense, assign or transfer any of the rights, duties or obligations hereunder is void.

This Agreement will be governed by the laws of Denmark. Should you have any questions concerning this Agreement, you may contact Contex.

You acknowledge that you have read this Agreement, understand it, and agree to be bound by its terms and conditions. You further agree that it is the complete and exclusive statement of the agreement, oral or written and any other communications between us relating to the subject matter of this Agreement.

CONTEX

6. Appendix C: Index

- A
- Account for unprintable area 3-21
- Align 3-38
- Application's main features 2-3
- Auto Length 3-11, 3-12
- B
- B&W Photo template 3-2
- Black & White Level 3-5
- Blowing up 3-11
- Blur 3-6
- Brochure template 3-2
- C
- Calibration - scanner 3-30
- calibration wizard 3-28
- CALS 4-2, 4-3
- Camera Stitching 3-44
- Closed Loop Calibration 3-30
- Collate Copy 1-7, 2-14
- Color Matching Scheme 3-29
- Color Photo template 3-2
- Continuous tone 3-3
- copies - set how many 1-6
- Copy Area Frame 3-38, 3-39
- copy option section 2-14
- Copy Quality 3-26
- Copy sets 1-7
- Copy System Configuration 2-3
- Copy system setup 2-7
- Copy Toolbar 2-14
- Copy Verification 2-11
- Correction Factor in scanning 3-43
- D
- Default settings 2-12
- Demo scanner 2-9
- E
- Edge Paper Loading 3-41
- Extended Thickness 3-44
- G
- Glossary 4-1
- H
- hue 3-4
- I
- Image Overview 3-36
- Image Toolbar 2-13
- Input Size 3-10
- Installation - printer 2-5
- Installation - scanner 2-5
- Installation - Windows 2-5
- Installing the software 2-5
- Interface keyboards 2-15
- L
- Length 3-11
- Lightness 3-4
- Load (paper) button 3-41
- Load edge 3-41
- Load paper - center 3-41
- Loading paper - edge 3-41
- Loading Preferences 3-40
- M
- Map template 3-2
- Margins - output 3-19
- Margins - printer's 3-20
- Media 3-29
- Media Offsets - set 3-43
- Media Profile 3-28
- Media Profile - select 3-28
- Media Profiles - Create 3-29
- Media Profiles - standard 3-28
- Media type 3-28, 3-29
- Method 3-3
- Miniature copy 3-12
- Move Tool 3-37

- N
- Name and Scan Sheet 3-31
- Normal template 3-2
- Number of copies 1-6
- O
- Output Margins 3-19
- Output Size 3-10
- P
- Paper Frame 3-21, 3-34, 3-37
- Paper Frame Move tool 3-37
- Paper loading - center 3-41
- Paper Loading - edge 3-41
- Paper Roll 3-27
- Paper Series 3-15
- Presets - Scaling 3-17
- Preview Window 2-13, 3-19, 3-21,
3-34, 3-36, 3-38, 3-46
- Previewing 3-34
- Print
- Dialog 3-25
 - Direct printing 3-25
 - Printer profiles 3-25
 - Properties 3-26
 - queue (printer name) 3-25
 - To file 3-25
 - WINDOWS printing 3-25
- Print Color Sheet 3-31
- Print Paper Border 3-21
- Printer Driver select 3-25
- Printer properties - Drivers 3-24
- Printer Selection and Setup... 3-23
- Printer setup 2-7
- Printer's margins 3-20
- Properties
- (of print) 3-26
- R
- Red, Green, Blue setting 3-5
- Reset 1-6
- S
- Saturation 3-4
- Scale 3-10, 3-15
- Scale button 3-16
- Scaling Presets 3-17
- Scan options
- Vertical Precision 3-43
- Scanner - test your 2-10
- Scanner Settings 3-42
- Scanner setup 2-9
- Sharpen 3-6
- Size Preset List 3-15
- Size Presets 3-12
- Size Relationships 3-10
- Size settings 3-10
- Standard presets 2-1, 2-3
- Stop button 1-6
- T
- test copy 2-11, 3-12
- testing 3-46
- trial copy 3-12, 3-46
- Type of Original - setting 3-1
- Type of Original button 3-2
- Type of Original Standard
templates 3-2
- Type of Original template - create
..... 3-8
- U
- Units of Measurement 3-40
- Unprintable area 3-21
- Unprintable Area - Set for Printer
..... 3-23
- Use extended thickness paper
handling 3-45
- user interface 2-13
- V
- Vertical Precision Setting 3-43
- viewing section 2-13

W

White Level	3-5
Width	3-11
WINDOWS printer	3-25
WYSIWYG	3-19

Z

Zoom All tool	3-36
Zoom In button	3-36
Zoom 1:1	3-37
Zoom out	3-36
zoom tools	3-36