



SURESIGN

SureSign Photoshop Plug-ins

User's Guide

Preface

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Distributing the Detector

The SureSign Detector Software Licence gives you permission to make an unlimited number of copies of the SureSign Detector Plug-in and to distribute them freely.

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1 INTRODUCTION

This chapter describes:

- 1.1 SureSign fingerprinting.
- 1.2 The Registry.
- 1.3 Becoming a registered SureSign user.
- 1.4 SureSign fingerprint structure.
- 1.5 The SureSign Plug-ins suite.

Signum Technologies' Web site address can be found at the bottom of every page of this manual.

1.1 SureSign Fingerprinting

SureSign is a powerful new technology which helps protect your work by embedding an invisible and secure identifier or 'fingerprint' within a digital image. SureSign provides a simple but highly effective method for communicating copyright information which helps image users quickly identify and contact the copyright owner.

SureSign reduces the unauthorised use of valuable work, increases copyright awareness amongst image users, and deters piracy because it furnishes useful evidence of copyright or ownership in the event of a dispute. A fingerprinted image can be identified in both printed and digital form, and this allows an audit trail so that image providers can monitor and track the use of their material.

The highly robust SureSign fingerprint is part of the image file data itself (but does not increase the amount of raw image data) and it is impractical to remove the fingerprint as this renders the image unusable.

SureSign fingerprints are designed to be detectable even after the file has been cropped, re-sized, compressed or copied, and even when the image is re-used as part of a composite picture. Furthermore, the fingerprints are visually imperceptible and will not degrade high-quality images, including those intended for pre-press use.

SureSign fingerprint detectors are widely distributed and available free from the Signum Web site and also via third parties. This means that everybody can easily identify fingerprinted images held or used by them.

SureSign fingerprinting tools are very affordable with solutions designed to match the cost and productivity needs of both individual and corporate image providers. The technology can be used on its own or in combination with other protective devices such as encryption or visible watermarking.

Signum Technologies is committed to providing new and innovative copyright protection and communication solutions for creators, providers and consumers of digital content.

1.2 The Registry

The Registry is an interactive database, accessed through the Signum Web site, which contains up-to-date contact details of users who have fingerprinted their images with SureSign software. The Registry is readily accessible from a workstation, 24 hours a day, which makes it simple for image users to identify and contact copyright holders, thereby reducing the risk of copyright law infringement.

Signum Technologies (and some third parties) freely provide SureSign detection software so that image users can examine images for SureSign fingerprints. When a fingerprint is found, the Fingerprint ID (the image provider's unique identifying code) is entered into the Registry's search facility on the Signum Web site and the image provider's contact details are displayed, for example:

Fingerprint ID: 01-ST-99	
Contact name: The Manager	
	Address: The Manager Media Relations Department Signum Technologies Ltd 2-6 St George's Business Park Alstone Lane Cheltenham Gloucestershire GL51 8HF United Kingdom
	Phone: +44 (0) 1242 580555 Fax: +44 (0) 1242 251600
URL: http://www.signumtech.com	

In addition to providing a postal address, telephone and fax numbers, hot links are also shown for email and URLs to allow rapid contact with the image provider.

Users who do not have access to the Internet may fax Signum who will search the Registry on their behalf. Signum can be faxed on: +44 (0) 1242 251600.

1.3 Becoming a Registered SureSign User

Until you register, the SureSign Writer runs in Demonstration Mode and will apply a non-unique Fingerprint ID to your images. This is useful if you wish to evaluate the software, but it does not provide you with any protection because the fingerprint applied to your images does not identify you as the provider of the image. (Please refer to *Running the SureSign Writer in Demonstration Mode* on page 21, for more information.)

To take full advantage of the benefits of the SureSign fingerprinting system, you need to become a registered SureSign user. To do this, you pay an annual fee which gives you:

- **A unique Fingerprint ID** which identifies your images as exclusively belonging to you.
- **An Access Code** which unlocks your copy of the SureSign Writer so that you may fingerprint images with your unique Fingerprint ID.
- **An entry in the Registry database**, for one year, so that you can be identified as the provider of an image.

To register as a SureSign user, complete the order form for an Access Code to unlock the SureSign Writer (you can find a link to this form on the *How to License* page of the Signum Web site – prices and methods of payment are shown on the order form). When we have processed your order, we will issue you with an Access Code, which allows you to embed your unique Fingerprint ID into your images.

As a registered user, if your contact details change, you should advise Signum as soon as possible so that your contact information on the Registry can be updated.

1.4 SureSign Fingerprint Structure

The SureSign fingerprint consists of two distinct elements which are embedded into the image data:

1. The **Fingerprint ID** which identifies the originator of the image. All registered SureSign users have a unique Fingerprint ID which is applied to every image that they fingerprint.

2. The **Image ID** which is used to identify images. The flexibility of the Image ID means that you can use it to identify your images in a number of ways, for example:
 - You can give each image a unique ID.
 - You can use one ID for all images in a batch.
 - If you are sending the same image to different clients, you can give each image copy a different ID so that you may track its subsequent movement.

1.5 The SureSign Plug-ins Suite

The SureSign Plug-ins suite, which can be downloaded for free from the Signum Web site, contains two easy-to-use SureSign Plug-ins for Photoshop:

1. The **SureSign Writer** which embeds a fingerprint in an image.
2. The **SureSign Detector** which searches for a fingerprint in an image.

- ◆ **Notes:** The SureSign Writer runs in Demonstration Mode until you become a registered user (see sections 1.3 and 3.5).

Installation of the Plug-ins is covered in Chapter 2, and use of the Plug-ins is covered in Chapter 3 of this manual.

1.5.1 System Requirements

We recommend the following minimum system specification:

- 486- or Pentium-based PC running Windows NT (versions 3.51, 4.0 or higher), or Windows '95.
- Enough RAM to run Photoshop with your images.
- Photoshop v3.0.4, or later.
- The two SureSign Plug-ins together require 1MB of disk space.

For optimum performance we recommend a Pentium-based PC with a minimum of 32MB of RAM.

1.5.2 Distributing The Detector

To provide open access to fingerprint detection, the SureSign Software Licence allows you to make an unlimited number of unaltered copies of the SureSign Detector Plug-in and to distribute them freely. The SureSign Detector is available free from the Signum Web site (follow the link from the *Our Products* page).

1.5.3 Range of Operation

SureSign Writer

Our tests have shown that the smallest image a SureSign fingerprint can be embedded into and recovered from is 100 x 100 pixels (30KB uncompressed RGB) when no editing or manipulation of the image has taken place after the fingerprint has been applied. Tests have also shown that SureSign fingerprints can be read from as little as 80 x 80 pixels of uncompressed RGB image data taken from a larger sample but, as with compression schemes, the results will vary according to the subject matter.

We recommend that the images you fingerprint are at least 150 x 150 pixels in size (66KB uncompressed RGB) although, when fingerprinting very small images, you should run your own tests to determine whether the fingerprints can be detected on them.

- ◆ **Note:** The detectability of a fingerprint varies according to the amount of 'noise' in an image, i.e. the more noise an image contains the harder the fingerprint is to detect. Therefore, you should be able to apply a detectable fingerprint to an image which is smaller than the guidelines above, if the image has a relatively low noise level.

SureSign Detector

As a guide, SureSign fingerprints can be detected on the following images:

- A fingerprint on a typical 20MB image should survive JPEG compression up to 10:1. Higher compression levels may also be possible.
- Fingerprints can be detected on images that have been rotated in 90 degree increments ± 1 degree (i.e. 0, 90, 180 and 270 degrees).
- If possible, the fingerprinted image should be returned close to its original size (between 50% and 200% of the original size) before running the SureSign Detector on it.

2 INSTALLING THE PLUG-INS UNDER WINDOWS NT/95

This chapter covers:

2.1 Downloading the Plug-ins from the Web site.

2.2 Installing the Plug-ins.

2.1 Downloading the Plug-ins from the Web Site

- ◆ **Note:** You will need a copy of *WinZip* or *PKUnzip* to decompress the SureSign Plug-ins. Both these applications are available free from the following Web sites:

WinZip <http://www.winzip.com>
PKUnzip <http://www.pkware.com>

If you have not already done so, locate the SureSign Plug-ins from the Signum Technologies Web site by following the *Our Products* link.

When you have found the required file, click on its name to download it and, if asked to do so, select a drive and directory into which the compressed file should be copied.

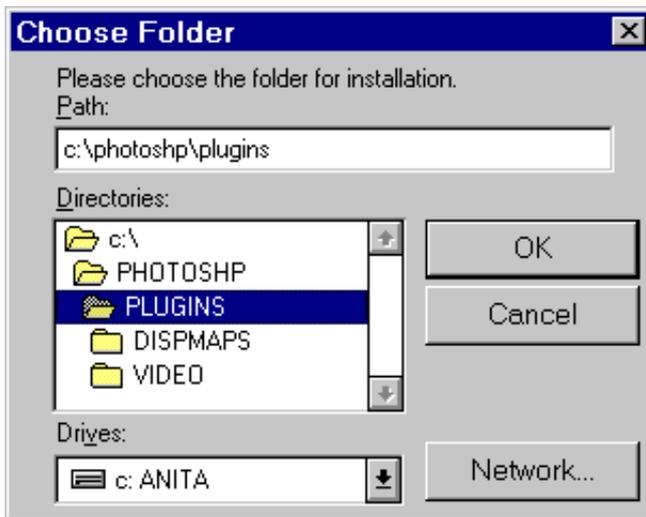
Now, use either *WinZip* or *PKUnzip* to decompress the downloaded file. Please refer to the documentation supplied with these applications for instructions on how to decompress the file.

2.2 Installing the Plug-ins

1. Before you install the new software, make sure your hard disk is backed up.
2. Do either of the following to launch the Installer:
 - In Windows, run the SETUP.EXE file to launch the Installer (for example, by double clicking on the file name in *Windows Explorer*).
 - Open an MS-DOS window. Change to the drive and directory where you decompressed the SureSign Plug-ins Installer and, at the DOS prompt, type **SETUP**.
3. The Installer displays a progress meter as it prepares to start the installation, and then it displays the introductory screen.
4. Click on **Next** to continue with the installation or on **Cancel** if you need to close any running applications, or if you do not wish to proceed.
5. Next, the Plug-ins Licence Agreement is displayed. Please read this licence carefully. *If you do not accept the terms and conditions of the Software Licence,*

click on **No** and **do not** install the software. Otherwise, click on **Yes** to continue with the installation.

6. If you are continuing with the installation, you need to choose the Photoshop Plug-ins directory where the Plug-ins are to be installed. Click the **Browse...** button to display the Choose Folder dialog:



7. Locate the Photoshop Plug-ins directory then click on **OK**. The directory you have selected is displayed in the Destination Folder window:



- ◆ **Note:** The Destination Folder **must** be Photoshop's Plug-ins folder. If it is not, the Plug-ins will not be available when you run Photoshop.
8. Click the **Next** button. The Installer now installs the SureSign Plug-ins into the Photoshop Plug-ins directory you specified, and then displays a dialog telling you

that the installation is complete. Click on **OK** to remove the dialog and to exit the Installer.

9. The SureSign Plug-ins will be available the next time you run Photoshop.

3 USING THE SURESIGN PLUG-INS

This chapter describes:

- 3.1 SureSign fingerprints.
- 3.2 Using the SureSign Writer Plug-in.
- 3.3 The Fingerprint Options dialog.
- 3.4 Running the SureSign Writer in Demonstration Mode.
- 3.5 More about using the SureSign Writer.
- 3.6 Using the SureSign Detector Plug-in.
- 3.7 More about using the SureSign Detector.

3.1 SureSign Fingerprints

A SureSign fingerprint consists of a Fingerprint ID and an Image ID:

Fingerprint ID – The Fingerprint ID is unique and identifies you as the provider of an image. It remains the same for every image that you fingerprint and it cannot be edited. The Fingerprint ID is a six digit code of the form **nn-XX-nn**, where **n** represents a number between 0 and 9, and **X** represents a capital letter of the alphabet between A and Z.

- ◆ **Note:** If you have not registered as a SureSign user, the SureSign Writer will run in Demonstration Mode – the Fingerprint ID will be fixed at 00-AA-00 and **it will not identify you as the image provider**. Refer to section 1.3, *Becoming a Registered SureSign User*, for more information.

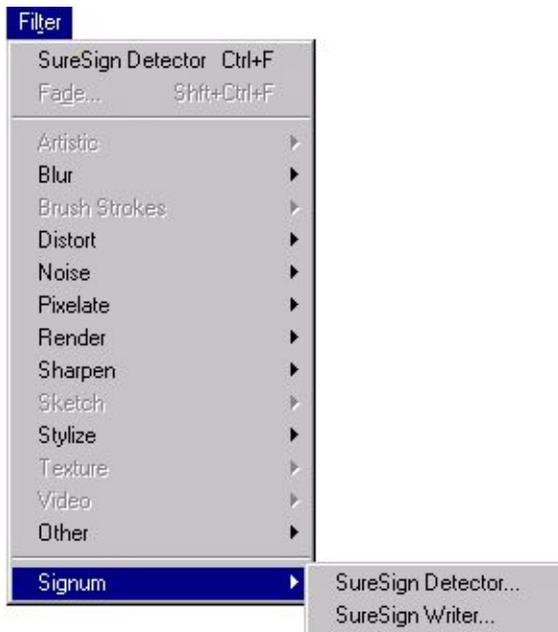
Image ID – The Image ID is a non-unique, user-definable seven digit code which identifies an image. It is of the form **XXnnnnnn**, where **n** represents a number between 0 and 9, and **X** represents a capital letter of the alphabet between A and Z.

3.2 Using the SureSign Writer Plug-in

- ◆ **Notes:** If you do not have an Access Code, go straight to section 3.5, *Running the SureSign Writer in Demonstration Mode*.

We suggest that you *always* keep a master copy of your original unfingerprinted images for your archive because, once an image has been fingerprinted and saved, the fingerprint cannot be removed, altered or overwritten with another fingerprint.

1. Open the image you want to fingerprint in Photoshop.
2. Select **Signum** from the **Filter** menu, and then select **SureSign Writer...** from the sub-menu (shown overleaf):



3. If this is the first time you are running the SureSign Writer Plug-in, the Demonstration Mode dialog is displayed:



4. To unlock your copy of the software, click on **Enter Access Code...** to display the following dialog:



Type your **Access Code** into the box, then click on **OK**.

5. Next, the Fingerprint Writer dialog is displayed:



6. If required, edit the **Image ID** – remember that the first two characters must be capital letters (A-Z) and the last five characters must be numbers (0-9), for example, **AA00003**.
7. If you want SureSign to increment the Image ID automatically for all subsequent images that you fingerprint make sure the **Increment Image ID** box is checked.

- ◆ **Notes:** If you select this option, the Image ID is automatically incremented by 1 each time you fingerprint an image. A typical Image ID sequence, therefore, would be **AA99998**, **AA99999**, **AB00000**, **AB00001**, etc.

You do not need to check the **Increment Image ID** box each time you run Photoshop.

8. Clicking the **Options...** button displays the Fingerprint Options dialog which has other features that you may find useful. For further details about these options refer to *The Fingerprint Options Dialog* on page 18.

When you have finished with the Fingerprint Options dialog, click its **OK** button.

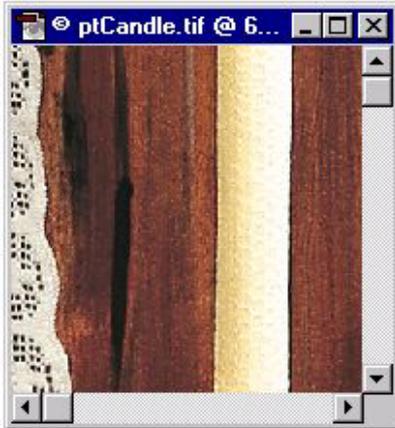
9. You have now finished setting up the fingerprint. Click **OK** on the Fingerprint Writer dialog to apply the fingerprint to the image.

- ◆ **Note:** If you have entered an invalid Image ID, SureSign will beep and will mark the incorrect characters: an asterisk (*) signifies an incorrect letter, and a dash (-) signifies an incorrect number. Enter a valid code and then click on **OK**.

10. Before applying the fingerprint to your image, the SureSign Writer checks that the image is not already fingerprinted. If it is, the following message is displayed:



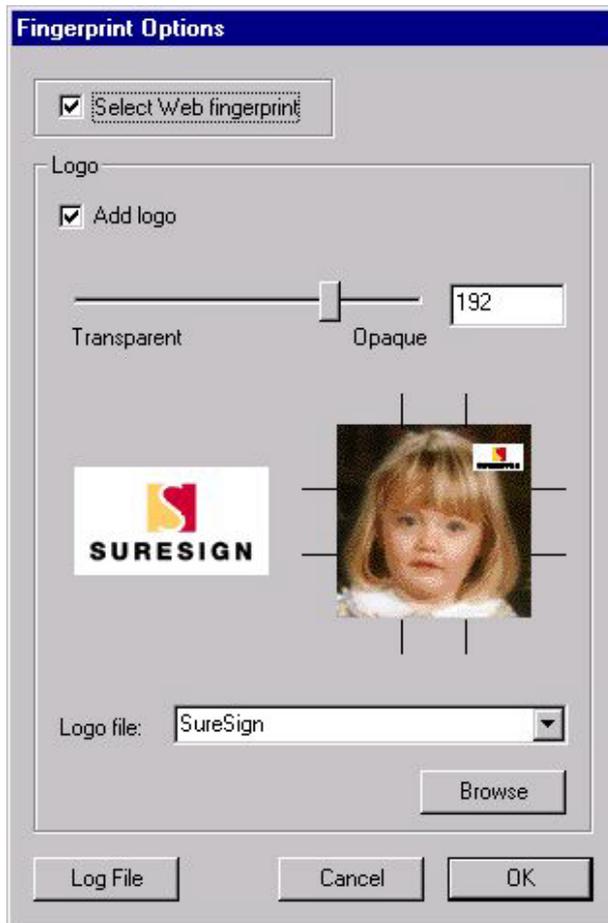
11. If a fingerprint is not detected in the image, SureSign applies the new fingerprint.
12. *If you use Photoshop 4:* To indicate that the image has been fingerprinted, the copyright (©) symbol is displayed before the file name at the top of the image window: See *Photoshop Copyright & URL* on page 29 for further details.



13. Now that the fingerprint has been applied, save the image.

3.3 The Fingerprint Options Dialog

Click on the **Options...** button on the **Fingerprint Writer** dialog to display the Fingerprint Options dialog:



Select Web fingerprint

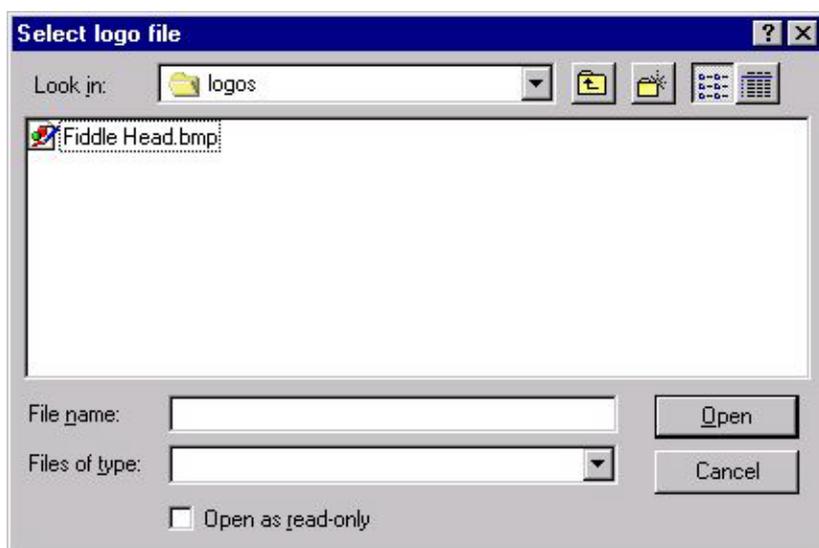
This option allows you to apply a heavier fingerprint to images. Only use this option with images that are intended for use on a Web site - these are typically smaller RGB images under 100KB in size. The heavy fingerprint will enable better detection on these types of images but is not appropriate, or necessary, with other types of images.

Add logo

You can add the SureSign logo or a logo of your choice to your fingerprinted image. If you create your own logos, you can store them anywhere on your hard disk or network. You must save logos as 24-bit BMP files.

To add a logo:

1. Check the **Add logo** box.
2. The default logo is the SureSign logo. If you want to change this, select a different logo from the **Logo file** pull-down list, or click on the Browse button and locate the logo file.



A preview of the selected logo will be displayed on the Fingerprint Options dialog.

3. Select a position for the logo by clicking on one of the nine sectors in the sample image under the **Select logo position** heading. The logo will be added to your image when the fingerprint is applied.
4. Adjust the 'heaviness' of the logo (from transparent to opaque), depending upon how visible you want the logo to appear on the fingerprinted image.
5. When you have finished with the Fingerprint Options dialog, click **OK** to save any changes you have made.

3.4 Log Files

SureSign automatically logs information about the images which have been fingerprinted, and about the fingerprints that have been detected on images.

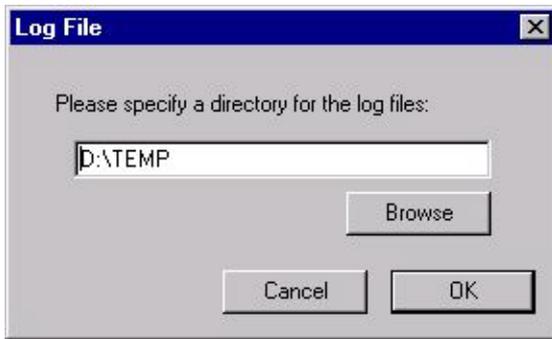
The log files are simple text files and there is a separate log file for each day that you use the SureSign Writer or Detector. The following information will be added to the day's log file each time you run the SureSign Writer or Detector on an image during that day:

- The image file name.
- Whether a fingerprint was added or detected.
- The Fingerprint ID and Image ID that was added or detected.
- The time and date that the fingerprint was added or detected.
- The Photoshop Plug-in used (either SureSign Writer or SureSign Detector).
- The machine owner's name and the machine's name.

To set up the log file directory:

When you first use SureSign to write or detect a fingerprint, you need to tell it where to store the log files. You can do this from either the Fingerprint Options or the Fingerprint Detector dialog. It uses the same directory for both. You cannot set up separate directories to hold the log files for writing and detecting fingerprints.

1. Click on the Log File button.



- ◆ **Note:** If you forget to set up the directory, SureSign will display the above prompt when you try to write or detect your first fingerprint.
2. Either type in the full directory name, or use the **Browse** button to select the required directory, and click on **OK**.
 3. SureSign will use this directory until you change it again from either the **Fingerprint Options** or the **Fingerprint Detector** dialogs.

To view the log file:

1. Use Explorer to select the log directory
 2. Locate the log file and double click on the file name to open it.
- ◆ **Note:** The log files only contain text entries, and do not require a lot of disk space. However, we recommend that you archive old log files on a regular basis.

3.5 Running the SureSign Writer in Demonstration Mode

If you do not have an Access Code you can only run the SureSign Writer in Demonstration Mode. This means that the fingerprint applied to your images will not be unique, and you will not be able to remove or alter the fingerprint at a later date. Also, you will not be able to access the Fingerprint Options dialog (described in section 3.4).

If you wish to evaluate a fully functioning version (with the Fingerprint Options dialog enabled), please contact Signum Technologies for a special evaluation Access Code.

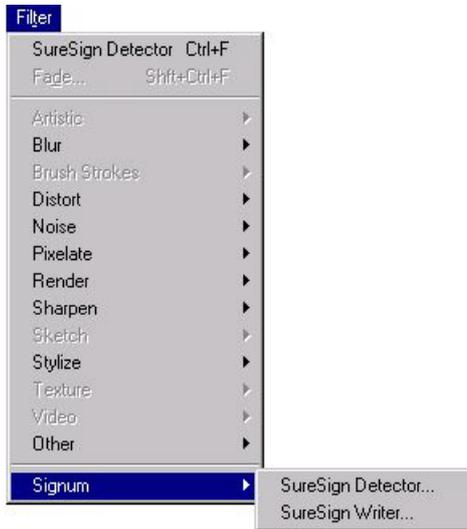
When you use the software in Demonstration Mode, the Fingerprint ID is fixed at **00-AA-00** and the Image ID is fixed at **AA00000** (you will not be able to edit these IDs). Demonstration Mode is useful if you are evaluating the SureSign software, but it will not provide any protection for the images you fingerprint. Only use Demonstration Mode if you do not require a unique fingerprint on your images.

- ◆ **Note:** We advise you not to publish or provide images marked with a Demonstration Mode fingerprint, for third party use.

Please refer to section 1.3, *Becoming a Registered SureSign User*, for further details about ordering an Access Code, a unique fingerprint, and an entry into the Registry database.

To run the SureSign Writer in Demonstration Mode:

1. We strongly recommend that you first make a duplicate copy of your image(s) because, once an image has been fingerprinted and saved, the Demonstration Mode fingerprint cannot be removed, altered or overwritten with another fingerprint.
2. Open the image in Photoshop.
3. Select **Signum** from the **Filter** menu, and then select **SureSign Writer...** from the sub-menu (as shown overleaf):



4. The Demonstration Mode dialog is displayed:



5. If you want to contact Signum Technologies to purchase an Access Code to unlock the SureSign software, click on **Contact Information....** When you have finished with the contact information, click on the dialog to remove it.

6. Click on **Demo mode** to fingerprint your image with the non-unique demo fingerprint (00-AA-00, AA00000).
7. When the fingerprint has been applied, save the image to retain the fingerprint. (If you do not already have a master copy of this image, as suggested, we advise you to save this fingerprinted image under a new name.)

3.6 More About Using the SureSign Writer

Increment Image ID

If you want SureSign to automatically give your images different Image IDs then make sure that the **Increment Image ID** box is checked in the Fingerprint Writer dialog when you select your first image ID.

'Last Filter' short-cut keys

Using the **Last Filter** short-cut keys (**Ctrl-F**) will run the SureSign Writer on subsequent images but without displaying the Fingerprint Writer dialog. You can continue to use this key combination until you select a new filter or exit Photoshop, and the SureSign Writer will apply either the same fingerprint to your image, or will automatically increment the Image ID if you checked the Increment Image ID box. If you wish to specify a different Image ID, you need to run the SureSign Writer by selecting **SureSign Writer** from the **Signum** sub-menu.

Image manipulation and compression

Carry out any image manipulation, such as rotation and re-sizing, before you fingerprint your image. Avoiding excessive compression levels will help to ensure that fingerprints can be detected on images.

Working with layers in Photoshop 4.0

As with most Photoshop filters, the SureSign fingerprint is applied to the current layer only. Therefore, you should flatten your image before applying a fingerprint.

Colour modes

The table overleaf shows in which colour modes you can apply a fingerprint:

Colour Mode	Apply Fingerprint?
RGB Colour	Yes
CMYK Colour	Yes
Grayscale	Yes
Indexed Colour	Convert to RGB first (also see <i>GIF format</i> below)
Lab colour	Convert to RGB first
Multichannel	Yes
Duotone	Yes
Bitmap	No

GIF format

The Photoshop filters are not available when you work in Indexed Colour mode (used for GIF images). Therefore, if you wish to fingerprint a GIF image, convert it to RGB first, then apply the fingerprint before converting back to Indexed Colour.

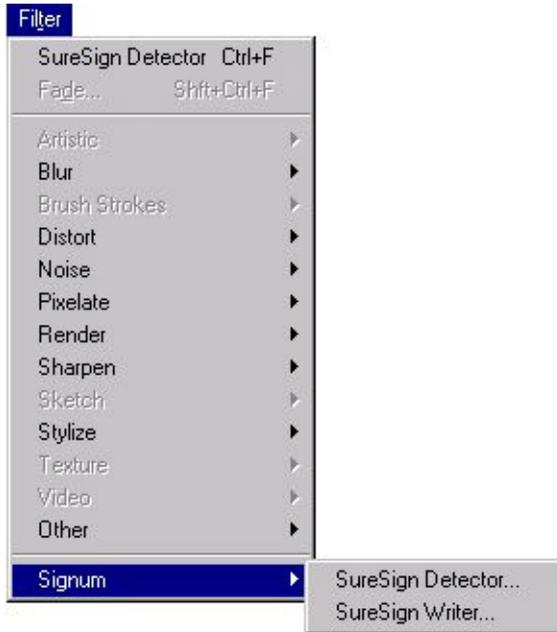
Conversion to Indexed Colour is a process which destroys image data, so very small GIF files, such as thumbnail images, cannot be expected to carry a detectable SureSign fingerprint. Therefore, we recommend using RGB, CMYK, or grayscale colour modes and saving as JPEG, TIFF, PICT, BMP, etc. formats wherever possible. If you wish to save the fingerprinted image in GIF format, we recommend that your image has a file size of 75KB or greater (in RGB mode), although you may still get a satisfactory result when fingerprinting smaller images. We also recommend using the **Adaptive Palette** with dithering set to **None**. If the end use for your images is primarily for screen display, for example on a Web site page, we would suggest that you select the Web fingerprint option (see page 19).

The colour depth of an Indexed Colour image affects the Detector's ability to read the fingerprint. For example, if you save as '3 bits per pixel' the fingerprint will be harder to detect than if you save as '8 bits per pixel' because more image information is lost at lower colour depths.

In all cases, when working with GIF files and small images, we advise you to conduct your own tests to establish the most suitable parameters for your images and their intended use.

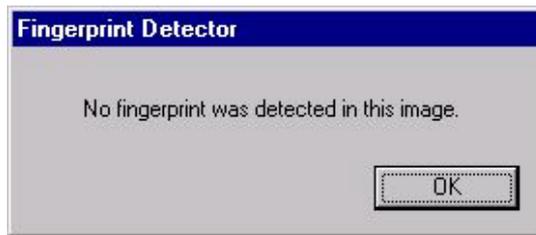
3.7 Using the SureSign Detector Plug-in

1. In Photoshop, open the image that you want to search for a fingerprint.
2. Select **Signum** from the **Filter** menu and then select **SureSign Detector...** from the sub-menu:



3. SureSign displays a progress meter as it checks for a fingerprint on the image, and then it displays the results of its search:
 - If this is the first time that you have used either the SureSign Writer or Detector, you will be prompted to select a directory for your log files. See page 20 for further details.

- If no fingerprint is detected on the image, the following message is displayed:



Click on **OK**.

- ◆ Note: This message does not necessarily mean that there is no fingerprint on the image. For guidance about advanced detection techniques, please refer to Section 3.8 *More About Using the SureSign Detector* on page 31, or to the Signum Web site (see the *Support* pages: *Getting the Best Out of SureSign*).
- If a fingerprint is detected, its Fingerprint ID and Image ID are displayed:



- ◆ **Note:** If you want to change the directory for log files, click on the Log File button. See page 20 for further details about log files.

Now you should contact the Registry to identify the image provider. To do this:

- Either click the **Instant Web lookup** button. This automatically launches your Web browser (if it is not already running), loads the Signum Technologies Web site and displays the image provider's details (including hot links for email and URLs).

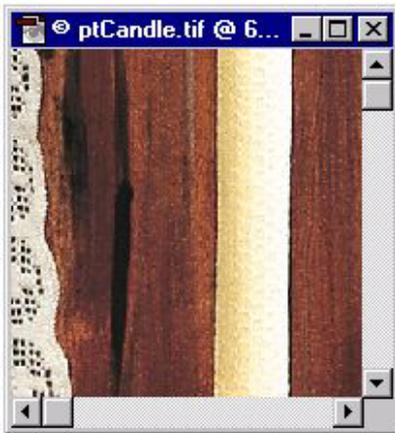
Fingerprint ID: 01-ST-99	
Contact name: The Manager	
	Address: The Manager Media Relations Department Signum Technologies Ltd 2-6 St George's Business Park Alstone Lane Cheltenham Gloucestershire GL51 8HF United Kingdom
	Phone: +44 (0) 1242 580555 Fax: +44 (0) 1242 251600
URL: http://www.signumtech.com	

- Or click the **Post/Phone/Fax Details** button. This displays contact details for the Registry including hot links for Signum Technologies' Web and email addresses:

	How to contact the Registry
The Registry c/o Signum Technologies Ltd Alstone Lane Cheltenham Glos. GL51 8HF UK	Tel: +44 (0) 1242 580555 Fax: +44 (0) 1242 251600 http://www.signumtech.com/ mail to: signum@signumtech.com

Photoshop Copyright & URL

If you use Photoshop 4: On some fingerprinted images, the copyright symbol (©) is displayed before the file name at the top of the image window.

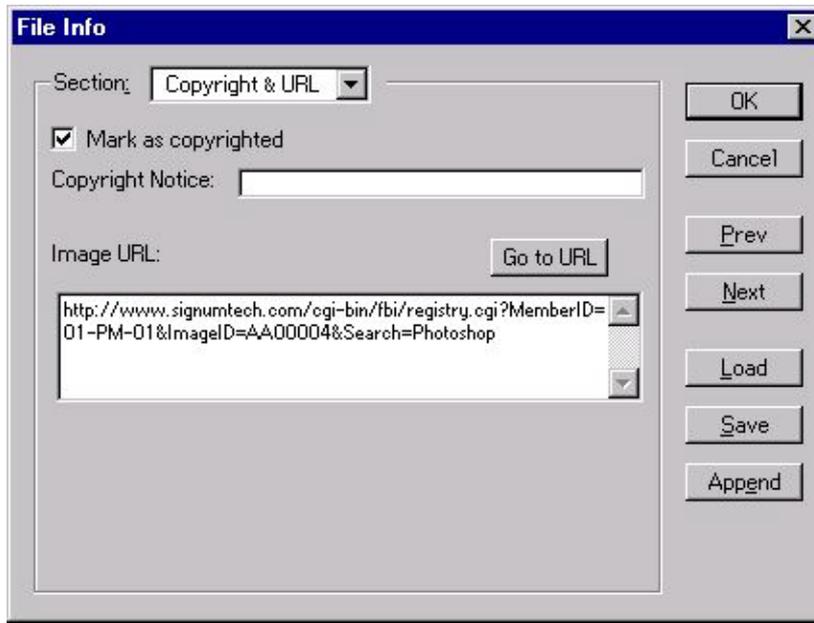


This *may* indicate that the image has a SureSign fingerprint on it. However, it is not a reliable way of checking for a fingerprint, as Photoshop does not display the copyright symbol if the image, or part of it, is copied into a new document. The fingerprint will still be there, but you will need to run the SureSign Detector to locate it.

- ◆ Note: By running the Detector, you also switch on the copyright symbol in the title bar.

To look at the copyright information:

1. Select **File Info** from the **File** menu, then select **Copyright & URL** from the **Section** pull-down menu. The following dialog is displayed:



2. If there is a SureSign fingerprint on the image, the **Image URL** is displayed. Click on **Go to URL** to launch your Web browser (if it is not already running) and to load the Signum Technologies Web site. The image provider's details (including hot links for email and URLs) are displayed, as described on page 26.

3.8 More About Using the SureSign Detector

Colour modes

The table below shows which colour modes support fingerprint detection:

Colour Mode	Fingerprint Detection?
RGB Colour	Yes
CMYK Colour	Yes
Grayscale	Yes
Indexed Colour	Convert to RGB first
Lab colour	Convert to RGB first
Multichannel	Yes
Duotone	Yes
Bitmap	No

'Last Filter' short-cut keys

Use the Last Filter short-cut keys (**Ctrl-F**) to run the SureSign Detector on subsequent images. You can continue to use this key combination until you select a new filter or exit Photoshop.

Minimum image size

You can run the Detector on a whole image or on part of an image (by using Photoshop's marquee tool). If you select part of the image, we recommend a minimum area of approximately 100KB.

Processed images

If a fingerprint cannot be found on an image which has been excessively resized or manipulated, try applying the sharpen filter before running the SureSign Detector (you may find it helpful to apply the sharpen filter several times).

Dithered images

If a fingerprint cannot be detected on a dithered image (such as a GIF image), apply a blur filter before using the SureSign Detector. A subsequent sharpen filter can also help to reveal a fingerprint.

- ◆ **Note:** Dithering may render an image grossly distorted and, for this reason, fingerprint detection may fail.

Composite images

If you run the Detector on the whole of a composite image, SureSign will report the first fingerprint that it finds. Use Photoshop's rectangular marquee tool to define an area within the relevant section of the composite image before you run the Detector:



Image manipulation

If possible, return the image close to its original size (between 50% and 200%) and orientation (± 1 degree) before running the SureSign Detector.

4 PHOTOSHOP ACTIONS

This chapter covers:

- 4.1 A description of Photoshop actions.
- 4.2 Creating an action to fingerprint an image.
- 4.3 Creating an action to fingerprint a batch of images.

4.1 Photoshop Actions

The Actions palette is a Photoshop 4 feature which lets you record a set of actions and replay them back at any time. You can make use of actions to automate SureSign tasks, and the examples in the next two sections show you how to set up actions to fingerprint an image and fingerprint a batch of images.

Before you start

- It will be helpful if you have some knowledge of Photoshop's Actions palette, or some experience of recording macros. (Please refer to the Photoshop user guide for more information on actions.)
- You should record actions on a test file (in case you make mistakes), then, when you are sure the action is correct, you can run it on 'real' images.
- When you are creating an action, everything you do is recorded until you press the stop button. However, as the action can later be edited, it doesn't matter if you make mistakes during the recording process.
- Once a fingerprint has been saved in an image, it cannot be removed, altered or overwritten with another fingerprint. Therefore, we recommend that you *always* keep unfingerprinted master copies of your images.

4.2 Creating an Action to Fingerprint an Image

This example shows you how to create an action to add a fingerprint to an image.

- ◆ **Note:** This action will not be useful to you if you are running the SureSign Writer in Demonstration mode, or if you want to apply different fingerprints to images (unless you are making use of the Increment Image ID facility). However, if you are going to set up the action to fingerprint a batch of images (described in the next section) then you should first set up this action.

To set up the action:

1. Create a new small test image by selecting **New...** from Photoshop's **File** menu. Make sure that the new image is in a colour mode that can support a fingerprint (for

example, **RGB Colour**), and make sure that the image's background is not transparent (if it is, you will not be able to fingerprint the image).

2. If the Actions palette is not visible, choose **Show Actions** from the **Window** menu.
3. Select **New Action...** from the **Actions** sub-menu. The New Action dialog appears:



4. Type in a new **Name** for the action, for example, **Fingerprint Image**.
5. You can specify a function key to run this action; select one from the **Function Key** pull-down menu and, if you also want to use the shift key as part of the key combination, check the **Shift** box.
6. You can give the action a colour to identify it when you are working in 'Button Mode' (this is available from the Actions sub-menu); choose a **Color** from the pull-down menu.
7. When you have finished with this dialog, press the **Record** button. Everything you now do in Photoshop will be recorded until you press the stop button (this can be found at the bottom of the Actions palette).
8. Select **Signum** from the **Filter** menu, and then select **SureSign Writer...** from the sub-menu. The Fingerprint Writer dialog is displayed (shown overleaf):



9. Set all the fingerprint options you require, for example, choose an **Image ID**, check the **Increment Image ID** box, or use the **Options...** button to add a logo and specify a corner position for it. When you have finished, click on **OK** to add the fingerprint to the image.
10. You have now finished recording the action, so press the stop button at the bottom of the Actions palette.
11. Now, every time you want to fingerprint an image, you can do so by running this action in any of the following ways:
 - Highlight the action's name in the Actions palette and press the play button (marked >).
 - Press the function key assigned to that action (if you chose one).
 - Highlight the action name in the Actions palette and select "**Play <action name>**" from the **Actions** sub-menu.
12. Once the image has been fingerprinted, remember to save it.

4.3 Fingerprinting a Batch of Images

You can use the Actions palette to set up an action to automatically fingerprint a folder of images without you having to open each file individually. However, this is only productive with a small volume of images, approximately 50 to 100 per week. For large volumes of images we recommend that you use SureSign Server. You can obtain further details about SureSign Server from our Web site.

To create an action to fingerprint a folder of images:

1. Copy all the images you wish to fingerprint into a folder. (Make sure all the images are in a colour mode which supports a fingerprint. See the table on page 27 for more details.)
 - ◆ **Warning:** We recommend that you *always* keep unfingerprinted master copies of your images, as a fingerprint cannot be removed, altered or overwritten with another fingerprint once it has been saved in an image.
 2. In Photoshop, if you have already created the action to fingerprint an individual image (described in the previous section), highlight this action in the Actions palette. If you have not already set up this action, please do it now and then highlight the action.
 3. From the Actions sub-menu select **Batch...** to display the Batch dialog.
 4. Select **Folder** from the **Source** pull-down menu.
 5. Press the **Choose** button then, from the file dialog, select the folder that contains the images you want to fingerprint.
 6. Select the name of the action to fingerprint an image from the **Action** pull-down menu.
 7. From the **Destination** pull-down menu, choose **Save and Close**.
 8. Click on **OK**, and the action will start running – each image in the folder you specified will be opened, fingerprinted, saved and closed.
- ◆ **Note:** If any errors occur during processing, the action cannot continue while an error message is displayed on the screen.