



# SWF Protection User Guide

Version 2.6

Magic Hills Pty Ltd

<http://www.magichtml.com>



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# 1 About SWF Protection

## 1.1 Overview

SWF Protection is a strong and easy to use Flash SWF encryption tool which helps you protect SWF files from Flash decompilers. SWF Protection protects not only Actionscripts, but also all images, sounds, buttons and sprites resources in your SWF files.

SWF Protection can also stop your SWF files from opening on local computer and limit SWF files to be hosted on specified domains, which enables you to prevent others from downloading your SWF files, then opening them from their local computers or uploading to their own websites.

With the built-in Preloader maker, SWF Protection can help you add professional and customizable Flash Preloader to your Flash movie in just a few clicks.

## 1.2 Requirements

SWF Protection works with AS2 and AS3, Adobe Flash Version 6, 7, 8, 9 and 10.

The program runs on all versions of Windows, including 98, ME, XP, 2000, 2003 Server, Vista and 7, 32bit and 64bit.

You need to install Adobe Flash Player 9 or above in Internet Explorer of your computer. You may visit the page <http://www.adobe.com/products/flashplayer/> with Internet Explorer and install the free Adobe Flash Player.

## 1.3 What's New

Version 2.6

- Adds password protection to Flash SWF file

Version 2.4

- Fixes “Out of memory” bug when the Flash SWF file is large

Version 2.2

- Adds logo image to protected Flash movie

Version 2.0

- Adds options to customize stage scale mode and align mode
- Fixes a bug of protecting Flex SWF files

Version 1.8:



- Launch new website <http://www.magichtml.com>

Version 1.6:

- Retrieves background color information from original Flash SWF file

Version 1.4:

- Fixes a bug of protecting Flash SWF 10 files

## 2 Download an Installation

### 2.1 Download Full Version

Please visit the page <http://www.magichtml.com/order.html> and order the product. Once you order is placed, the download link of full version will be sent to you in minutes.

### 2.2 Download Trial Version

The product is distributed under "try-before-you-buy" principle. This means that you can download the program for free, try it, and make sure the program works for you before you make a purchasing decision. We encourage you to try it out first!

You may download the trial version for free at page <http://www.magichtml.com/download.html> .

Trial Version Limitation:

- The trial version will add a small watermark which says "Flash Protected by SWF Protection". Full version will remove this watermark.
- The trial version is NOT time limited, you can keep and use it as long as you wish.

### 2.3 Installation

**Step 1:** Unzip the downloaded ZIP file.

**Step 2:** Launch setup.exe by double-clicking, then follow the on-screen instructions.

Please note, the software only runs on Windows system, it does not work on Mac and Linux.

## 3 Order the Product



We use Paypal for online order processing. It's easy, fast, secure and trusted. You can pay directly from your Paypal account or pay with your credit card.

Please visit the page <http://www.magichtml.com/order.html> and order the product. Once you order is placed, the download link of full version will be sent to you in minutes.

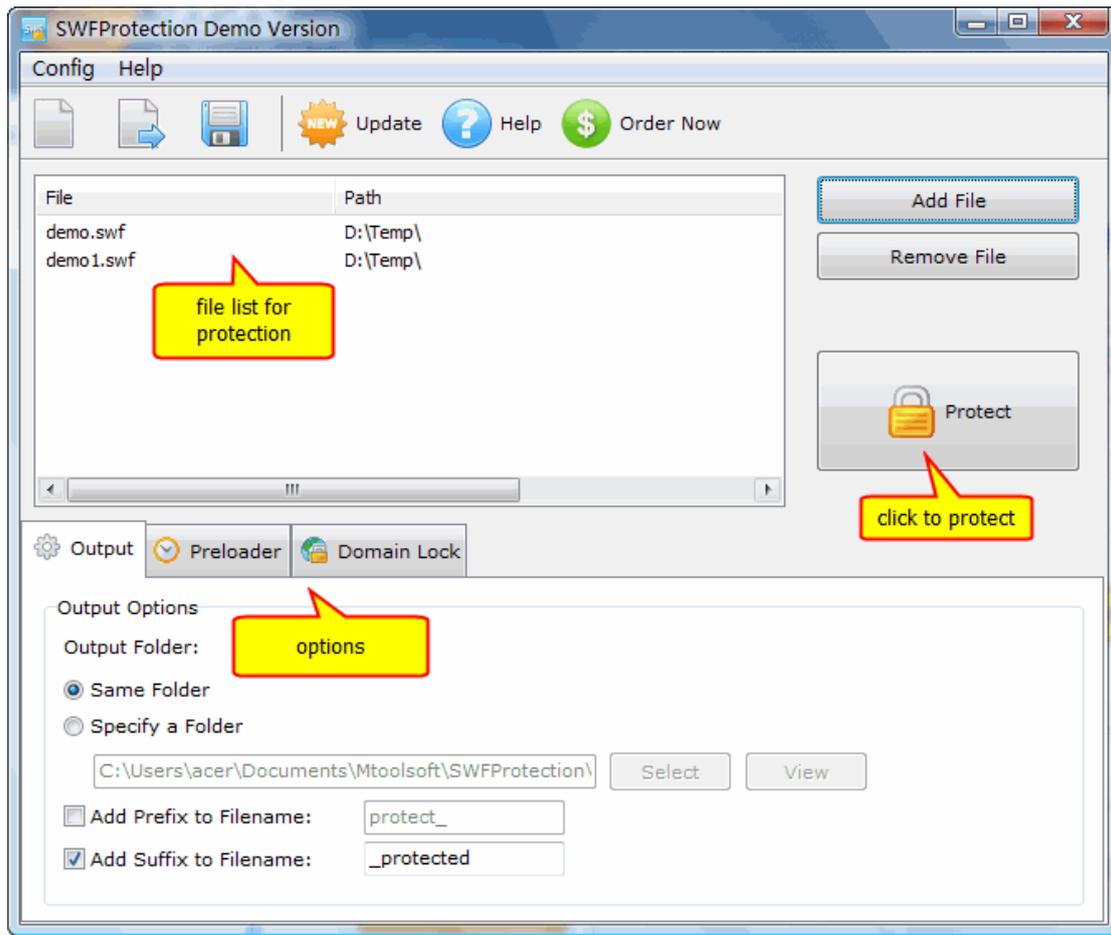
SWF Protection comes with two kinds of Licenses.

- **Personal License:** You may install the software on one desktop computer and one laptop computer solely for your personal, educational, non-profit, non-commercial and home-based business usage.
- **Commercial License:** You may install the software on one computer at home and another at work for your commercial usage.

Features	Personal License	Commercial License
<b>SWF Encryption</b>	Yes	Yes
<b>Stop Flash Decompilers</b>	Yes	Yes
<b>Actionscript Obfuscation</b>	Yes	Yes
<b>Protect Actionscripts</b>	Yes	Yes
<b>Protect All Resources including Images, Sounds, Buttons and Sprites.</b>	Yes	Yes
<b>Disable Offline Viewing</b>	Yes	Yes
<b>Lock Hosted Domains</b>	Yes	Yes
<b>Add Flash Preloader</b>	Yes	Yes
<b>Free Upgrade</b>	3 Months	12 Months
<b>Usage</b>	Personal, Educational, Non-profit, Non-commercial, Home-based Business	Commercial
<b>Allowed Computers to install and run the Software</b>	One desktop computer and one laptop computer	One computer at home and another at work

## 4 Help Manual

### 4.1 Main Window, Menu and Toolbar



## Config Menu

A configuration .spt file is an XML file to save all protection options. You can create a new config, open a saved config file or save the current config with menu item New Config, Open Config and Save Config.

## 4.2 Output Options

The Output Tab enables you to configure how to save the protected SWF files.

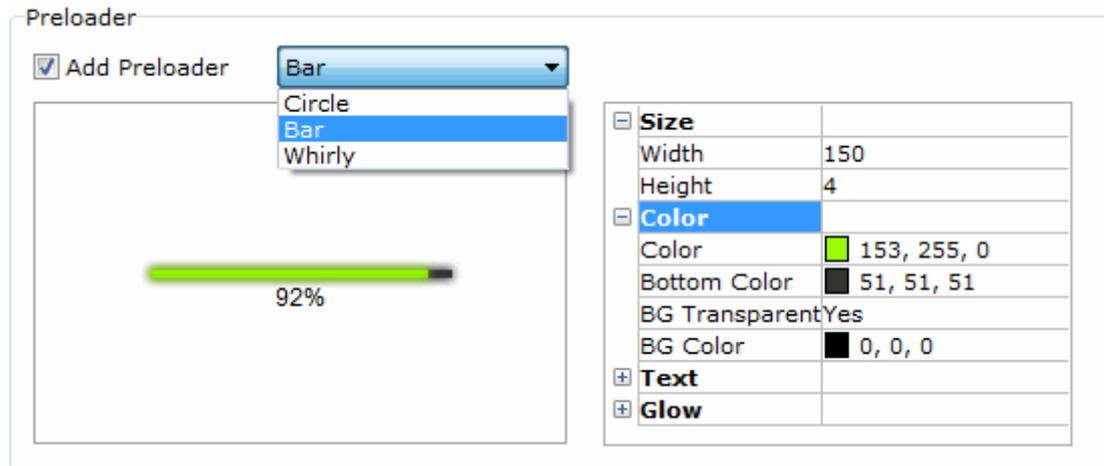
**Same Folder:** The protected SWF files will be saved to the same folder as the original SWF files.

**Specify a Folder:** The protected SWF files will be saved to the specified folder.

**Add Prefix to Filename:** Add prefix to the filename of the protected SWF files.

**Add Suffix to Filename:** Add suffix to the filename of the protected SWF files.

## 4.3 Flash Preloader Options



The Preloader Tab enables you to add a Flash preloader to your Flash movie.

**Add Preloader:** Whether to add a preloader to the protected SWF file.

You can customize the size, color, display text and glow effect of the preloader.

The display text of preloader supports HTML tags, you can use the font tag to define the font face, color, size of the text. The text also supports three regular expressions:

#PL#: precent loaded

#BL#: bytes loaded

#BT#, bytes total

When using regular expression, please make sure to include the “#” before and after the two characters.

For example, the following text will display the text of precent loaded, with black color, font size as 12 and font face as Arial, if Arial is not available, it will use font Times New Roman.

```
<font face='Arial,Times New Roman' color='#000000' size='12'>#PL#%</font>
```

The following text will display the text of bytes loaded and bytes total, with red color, font size as 12 and font face as Arial.

```
<font face='Arial' color='#FF0000' size='12'>#BL# of #BT#</font>
```

## 4.5 Domain Lock Options



Stop illegal distribution of SWF file

Disable viewing SWF file from local hard disk

Only allow SWF file hosted on domains:

http://www.mtoolsoft.com  
http://www.swfprotection.com

Add  
Remove

When domain is incorrect

Display message: `<p>You are not allowed to view this Flash movie.</p><p>Please vi`

Transparent Background

The Domain Lock Tab enables you to configure whether to disable offline viewing, the domains that the SWF files are allowed to be hosted, the displayed error message when the domain information is incorrect.

**Disable viewing SWF file from local hard disk:** This option will disable offline viewing of SWF file. If someone tries to open the SWF file from local computer, it will not display the content and will show the error message that you defined in the "Display message" field.

**Only allow SWF file hosted on domains:** When you check this option, only the listed domains are allowed to host the SWF files. You must define at least one domain, otherwise, this option will be ignored.

**Display message:** The text supports HTML tags, you can use the font tag to define the font face, color, size of the text. You can also add hyperlinks in the message. The option Transparent and Background define the background color of the error message.

For example, the following text displays an error message with a hyperlink to our website <http://www.magichtml.com>.

```
<p>You are not allowed to view this Flash movie.</p><p>Please visit <u><a href='http://www.magichtml.com'>http://www.magichtml.com</a></u> for more information.</p>
```

## 4.6 Known Issues

This section contains the known issues of SWF Protection. You may need to modify your Flash design to avoid possible problems caused by the protection.

### LoaderInfo.loaderURL

In Actionscript 3, we normally use LoaderInfo.loaderURL to get the URL address of current Flash SWF file, then we can use this address to calculate the address of external images or SWFs and load them.

But after protection, the URL value will be different. For example,



*stage.root.LoaderInfo.loaderURL*

The result in an unprotected SWF file will be:

*http://www.magichtml.com/test/test.swf*

But in a protected SWF file, the result will be

*http://www.magichtml.com/test/test.swf/[[DYNAMIC]]/1/[[DYNAMIC]]/2*

You may use following function to remove the redundant suffix:

```
function getSWFLocation()
{
    var pathURL:String = stage.root.LoaderInfo.loaderURL;
    var suffixPos:int = pathURL.indexOf("/[[DYNAMIC]]/");
    var resultURL:String = (suffixPos > 0)? pathURL.substr(0, suffixPos) : pathURL;
    return resultURL;
}
```

## 5 Frequently Asked Questions

### 5.1 Why do I need to encrypt my SWF files?

Adobe Flash SWF comes with open format or open specification, that means, it does not have any native protection for its content.

With a piece of Flash Decompiler or SWF Decompiler software, normally just costs about \$50, anyone, even without any SWF specification knowledge, can easily crack your Flash SWF file, peek at your Actionscripts, copy your images, sounds and movies. With the decompiler software, they can even convert your Flash SWF to original FLA source file, modify and redistribute it as its their own.

SWF Protection can stop all Flash decompilers, thus helps you protect your valuable design, hard working and intellectual properties from being stolen.

### 5.2 Is SWF Protection another Actionscript Obfuscator?

Before the release of Actionscript 3 and Flash 9, the only way to protect SWF is Actionscript obfuscation, so most SWF encryption software on the market are in fact Actionscript obfuscators. Actionscript obfuscator can protect Actionscripts to some extent, but there are three drawbacks. Firstly, it can only protect Actionscripts, it does nothing with other SWF resources, such as images, sounds, buttons and movies. Secondly, most Actionscript obfuscators work well with Actionscript 2, but for Actionscript 3, the result is not so good. Thirdly, most obfuscators come with a lots of



options, you need to figure out and configure the options carefully to avoid ruining your Actionscripts.

SWF Protection uses a new capability of Flash 9 and Actionscript 3, it encapsulates your whole SWF file into a ByteArray based data structure, then encrypts the data and embeds it into a new Flash SWF file. In this way, your SWF file is protected as whole, so all resources including Actionscripts, images, sounds, sprites and movies will be encrypted. SWF Protection also enhances the encryption further with Actionscript obfuscation.

### **5.3 Will SWF Protection protect my SWF resources (images, sounds, sprites, buttons, movies)?**

Yes.

SWF Protection uses a new capability of Flash 9 and Actionscript 3, it encapsulates your whole SWF file into a ByteArray based data structure, then encrypts the data and embeds it into a new Flash SWF file. In this way, your SWF file is protected as whole, so all resources including Actionscripts, images, sounds, sprites, movies will be encrypted. SWF Protection also enhances the encryption further with Actionscript obfuscation.

### **5.4 Is the encrypted SWF file 100% secure?**

Adobe Flash SWF is a kind of open format file, so theoretically, there is no 100% secure in SWF protection. A cracker, if he or she is smart enough, knowledgeable enough, persistent enough and with time enough, can crack any encryption. What we can do is increasing the difficulties of cracking, so crackers have to stop cracking, because it's beyond their abilities or it's not worth it, due to the time and expense of cracking are much longer and bigger than designing the Flash by themselves.

SWF Protection is a perfect combination of Actionscript obfuscation, data encryption and ByteArray based data embedding technology in Actionscript 3, it gives the best protection for your Flash SWF file, also your valuable design, hard working and intellectual properties from being stolen.

### **5.5 After protection, my SWF file does not load external images/SWFs? What should I do?**

After protection, the address of the SWF file will be changed, and the address relative to the SWF file will also be changed. If you are using a relative file address in your Flash design, it may not work anymore.

For example, if you are using a sentence like this:

```
var myfile = "music.mp3";
```



Before protection, this file will address to the "music.mp3" in the same folder as your SWF file. But after protection, it will not work. You now need to get the full URL address of your SWF file, and calculate its full URL address.

The ActionScript 3 codes are as following:

```
function getSWFFilePath()
{
    var pathURL:String = stage.loaderInfo.loaderURL;
    var suffixPos:int = pathURL.indexOf("/[[DYNAMIC]]/");
    var resultURL:String = (suffixPos > 0)? pathURL.substr(0, suffixPos) : pathURL;
    suffixPos = resultURL.lastIndexOf("/");
    resultURL = (suffixPos > 0) ? resultURL.substr(0, suffixPos) : resultURL;
    resultURL = resultURL + "/";
    return resultURL;
}

var myfile = getSWFFilePath() + "music.mp3";
```

The ActionScript 2 codes are as following:

```
function getSWFFilePath()
{
    var pathURL = _root._url;
    var suffixPos = pathURL.indexOf("/[[DYNAMIC]]/");
    var resultURL = (suffixPos > 0)? pathURL.substr(0, suffixPos) : pathURL;
    suffixPos = resultURL.lastIndexOf("/");
    resultURL = (suffixPos > 0) ? resultURL.substr(0, suffixPos) : resultURL;
    resultURL = resultURL + "/";
    return resultURL;
}

var myfile = getSWFFilePath() + "music.mp3";
```

## 5.6 How can I get the current URL address of SWF file?

In Actionscript 3, we normally use *stage.loaderInfo.loaderURL* to get the URL address of current Flash SWF file. In ActionScript 2, we use *\_root.\_url* to get this value. But in a protected SWF file, this value will be changed.

For example, before protection, the value is as following:

```
http://www.magichtml.com/test/test.swf
```

But in a protected SWF file, the value will be

```
http://www.magichtml.com/test/test.swf/[[DYNAMIC]]/1/[[DYNAMIC]]/2
```

You may use following function to remove the redundant suffix.



For ActionScript 3:

```
function getSWFLocation()
{
    var pathURL:String = stage.loaderInfo.loaderURL;
    var suffixPos:int = pathURL.indexOf("/[[DYNAMIC]]/");
    var resultURL:String = (suffixPos > 0)? pathURL.substr(0, suffixPos) : pathURL;
    return resultURL;
}
```

For ActionScript 2:

```
function getSWFLocation()
{
    var pathURL:String = _root._url;
    var suffixPos:Number = pathURL.indexOf("/[[DYNAMIC]]/");
    var resultURL:String = (suffixPos > 0)? pathURL.substr(0, suffixPos) : pathURL;
    return resultURL;
}
```

## 6 HTML Tags Supported

This section defines the HTML tags supported by the software.

### Font tag (<font>)

The <font> tag specifies a font or list of fonts to display the text. The font tag supports the following attributes, and you need to use the single quotation mark ' to quote the value text.

#### color

Only hexadecimal color (#FFFFFF) values are supported. For example, the following HTML code creates red text:

```
<font color='#FF0000'>This is red text</font>
```

#### face

Specifies the name of the font to use. As shown in the following example, you can specify a list of comma-delimited font names, in which case Flash Player selects the first available font:

```
<font face="Times, Times New Roman">Times or Times New Roman...</font>
```

If the specified font is not installed on the user's computer system or isn't embedded in the SWF file, Flash Player selects a substitute font.



## size

Specifies the size of the font, in pixels, as shown in the following example:

```
<font size='24' color='#0000FF' face='Times, Times New Roman'>This is blue, 24-  
point text</font>
```

## Anchor tag (<a>)

The <a> tag creates a hypertext link, for example:

```
<a href='http://www.mtoolcomponents.com' target='_blank'>Home</a>
```

## Bold tag (<b>)

The <b> tag renders text as bold, as shown in the following example:

He was <b>ready</b> to leave!

## Italic tag (<i>)

The <i> tag displays the tagged text in italics, as shown in the following code:

That is very <i>interesting</i>.

## Underline tag (<u>)

The <u> tag underlines the tagged text, as shown in the following code:

This is <u>underlined</u> text.