



GIF CONSTRUCTION SET ULTRALIGHT

GIF Construction Set UltraLight is a reduced version of Alchemy Mindworks' popular GIF Construction Set software. It's a powerful tool for creating web page animations, as well as transparent and interlaced GIF files.

Note that the full version of GIF Construction Set can do a lot that the UltraLight edition cannot. We invite you to visit our web page at <http://www.mindworkshop.com/alchemy/gifcon.html> to download the full version. See <http://www.mindworkshop.com/alchemy/gcsdemo.html> for an extensive interactive demonstration of what the GIF Construction Set can do.

The GIF Construction Set UltraLight application is part of the Graphic Workshop Professional bundle. Registering Graphic Workshop Professional also registers GIF Construction Set UltraLight. Please note that this registration does not extend to the full version of GIF Construction Set.

Quick Start

Even if you really hate to read extensive documentation, read this first section. It will get you up and running with GIF Construction Set for the most commonly performed tasks.

This section will show you how to use GIF Construction Set to:

- Create a transparent GIF file
- Create an animated GIF file
- Create an animated GIF file with transparency
- Create an interlaced GIF file

This is a very cursory tutorial which discusses the most commonly used functions of GIF Construction Set. For complete information about all the features of GIF Construction Set, please see the latter portion of this document.

Create a Transparent GIF File

This section will discuss adding transparency to an existing single-image GIF file. A transparent GIF file is one in which one of the palette colours of the file is defined as transparent - everywhere the transparent colour would normally appear, the background will appear instead. Only one colour can be declared as transparent for each image in a GIF file. If the background area of your GIF file actually consists of more than one colour, such as a dither pattern, the whole area will not appear transparent. Some image editing might be called for.

1. Select **Open** from the **File** menu of GIF Construction Set.
2. Select the GIF file you wish to make transparent.
3. When your file is open, click once on the block immediately before the **Image** block - this will usually be the **Header** block.
4. Select **Insert** from the button bar of GIF Construction Set.
5. Select **Control** from the **Insert** dialog. A new Control block will appear immediately before the Image block in your GIF file.
6. Double click on the **Control** block. A Control block editor will appear.
7. Enable the **Transparent Colour** option.
8. Click on the **Eyedropper** tool. The image in your GIF file will appear.
9. Click somewhere in the area you wish to make transparent. The image will vanish and you'll be returned to the Control Block editor.
10. Click on **OK** and save your GIF file.

You can preview your GIF file to make sure the transparency is behaving as you wish by selecting **View** from the **File** menu. In some cases, it's difficult to see transparent areas in a GIF file you've created - if the background colour of your GIF file is white, for example, and the area you made transparent was also originally white, not much will appear to have changed. You can get around this as follows:

1. Double click on the **Header** block of your GIF file. A Header block editor will appear.
2. Click on the **Background** button. A colour selector will appear.
3. Select a fairly obvious colour, one which is unlike the original background colour of your GIF file before you made it transparent.
4. Click on **OK** and select **View** from the **File** menu to preview your image. The background colour should show through the transparent areas.

Note that the Background colour in the Header block of a GIF file is ignored by web browsers, which use the background of your page as the image background. As such, you can leave the Header block Background colour set to anything you like.

Create an Animated GIF File

This section will discuss the simplest way to create an animated GIF file with GIF Construction Set. There are others - this approach assumes that all the cells of your animation exist as individual GIF files, and that they have more or less similar content and colour palettes. If either of these assumptions is not the case - or if your resulting GIF file doesn't look like you think it should - you probably need to get more deeply into GIF Construction Set's features.

Having said this, most animated GIF files can be successfully created this way.

1. Select **Animation Wizard** from the **File** menu of GIF Construction Set.
2. Click on **Next** to accept each of the defaults until you reach the file selection screen.
3. Select the individual source GIF files which will comprise your animation. You can do this one at a time, or all at once by holding down the **Ctrl** key and clicking on each file name in sequence. Click on **Open** when you're done. Note that you must select at least two images to create an animation.
4. When you have finished selecting files, click on the **Cancel** button in the **Open** dialog, which will return you to the Animation Wizard window. Click on **Next**.
5. Click on **Done**. Animation Wizard will build your animation and open it in the main GIF Construction Set window when it's done.
6. You can preview your animation by clicking selecting **View** from the **File** menu. Save your animation to a new GIF file by selecting **Save As** from the **File** menu.

Note: this process discards any transparency information which might exist in your source GIF files. See the next section for a discussion of transparent animated GIF files.

Create an Animated GIF File with Transparency

An animated GIF file with transparent elements is identical to the a non-transparent GIF file, save that transparency is enabled in one or more of its Control blocks. Note that Animation Wizard only imports images - it does not import transparency information.

1. Begin by creating an **animated GIF file** as discussed in the previous section of this document.
2. When your new GIF file has been opened in GIF Construction Set, double click on the first **Control** block.
3. Enable the **Transparent Colour** option.

4. Click on the **Eyedropper** tool. The first image in your GIF file will appear.
5. Click somewhere in the area you wish to make transparent. The image will vanish and you'll be returned to the Control Block editor.
6. Open the **Remove By** combo box near the bottom of the Control Block editor and select **Background**.
7. Click on **OK** and save your GIF file.
8. Repeat this procedure for each of the Control blocks in your GIF file.

See the discussion of transparency in the section of this document dealing with single-image transparent GIF files.

Create an Interlaced GIF File

An interlaced GIF file displays in coarse pixels in a web browser when it begins to download, and becomes more clearly defined as the download proceeds. It displays in single lines in GIF Construction Set, which are ordered to ultimately display the entire image. Interlaced GIF files offer no performance improvements - they're wholly cosmetic.

Note that while you can create interlaced animated GIF files with GIF Construction Set, web browsers will not display them as such - they'll de-interlace the downloaded image frames before they're displayed. There's no worthwhile reason for creating such a GIF file.

1. Select **Open** from the **File** menu of GIF Construction Set.
2. Select the GIF file you wish to make interlaced.
3. When your file is open, double click on the **Image** block. An Image block editor will appear.
4. Enable the **Interlaced** option.
5. Click on **OK** and save your GIF file.

Select View from the File menu to see your GIF file displayed in an interlaced pattern. Note that this differs visually from the way web browsers display interlaced images.

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A single-image GIF file usually consists of two blocks, to wit, a Header and an Image. However, the structure defined by the GIF 89a specification allows for GIF files which contain multiple images, and several additional optional block types. These types are:

Comment blocks, which can include text describing the image in question, defining its creator or copyright status or anything else you want to say about it. Comment blocks are not displayed as part of a GIF file.

Plain text blocks, which specify text to be overlaid on an image. The position and colour of the text can be defined. Unlike merely adding text to an image with a paint program, plain text blocks don't damage the underlying image. Sadly, Plain Text blocks are not supported by all browsers, and should not be used in web page GIF files.

Control blocks, which define image transparency and allow for user input. The transparency field of a control block will let you specify that one colour in an image or a colour used by the text in a plain text block is to be regarded as transparent by a GIF viewer, allowing the underlying image to be visible wherever it occurs.

Application blocks, which allow private application data to be included in a GIF file. Application blocks can't be created or edited with GIF Construction.

Loop blocks, which define looping for multiple image GIF animations to be used with web pages. These are actually specialized application blocks.

Every GIF file begins with a Header block, which defines the size of the screen the GIF files should be displayed on if possible, and an optional global palette.

It's important to understand how palettes work in GIF files. A palette defines the colours to be used by any images in a GIF file. A global palette, defined by the header block of a GIF file, pertains to all the images in the file. Alternately, individual image blocks are permitted to have palettes of their own, called local palettes.

Because many display devices are colour mapped, and can only work with one palette at a time, attempting to display multiple GIF images, each with its own local palette, will usually leave you with something that looks like bad abstract art or the aftermath of an all you can eat spaghetti dinner. As such, multiple image GIF files should have all their images referenced to the global palette of the.

GIF Construction Set will let you open existing GIF files to modify their block parameters or create new GIF files and add blocks, modify the various data fields of blocks and delete blocks.

When you open a GIF file, the main application window of GIF Construction will list each of the blocks in the GIF file, beginning with the header. Click once on an image block to select it. Double click on any block that GIF Construction Set recognizes will call up a dialog to edit it. GIF Construction Set for Windows does not allow application blocks or blocks of unknown types to be edited.

Editing the Header Block

You can modify the following fields of the header block of a GIF file:

Screen width and Screen depth: These are the dimensions in pixels of the screen the GIF file would like to be displayed on. They can be any value greater than zero. Note that the screen dimensions do not affect the dimensions of images displayed from a GIF file, but they may affect where on your screen the images are placed in a fully compliant GIF viewer. For GIF files destined for web pages, these fields should define a rectangle which just encloses all the other elements in your file. GIF Construction Set will set these fields correctly each time you save a file.

Background: The background is the colour of the area around the images to be displayed if the images in question don't fill your screen. The background is actually a number drawn from the current global colour palette. To change the background colour, click on the colour button in the Edit Header dialog and select a new colour. The number in the Background colour button is the actual palette index being used. Note that the background colour value is ignored by web browsers.

Global Palette: The global palette flag tells GIF viewers whether a GIF file includes a global palette. If you change this flag, *GIF Construction Set for Windows* will look at the GIF file you're working on to see if there are images which expect a global palette and prompt you accordingly. In most applications of GIF files, it's desirable to have a global palette.

Sorted: The Sorted flag of Edit Header box allows you to set the state of the sorted palette flag in the header of GIF files. This flag has no affect on how GIF Construction displays images - it may be of importance to other applications which read your GIF files.

When you create a new GIF file, a header block will be created automatically. The colour depth is set to 256 colours, and a default palette is applied to the header.

Editing Image Blocks

The Edit Image dialog includes the following fields:

Left and Top: These fields determine where the image in question will be displayed on your screen relative to the upper left corner. The values are in pixels.

Interlaced: This flag determines whether the image in question will be stored interlaced or normally.

Local Palette: You can enable a local palette for any image block in a GIF file. By default, the palette for the image in question will be used.

Editing Comment Blocks

A comment block consists entirely of text. The Edit Comment Block dialog is a text editing window in which you can add, modify and delete the text of a comment block. Under GIF Construction Set, a comment block can include up to 32,767 characters.

Editing Plain Text Blocks

Plain text blocks consist of text and some information about how to display it. The text can be edited the same way comment block text is handled. The following fields define how plain text blocks will be displayed:

Text left and Text top: These fields define where the text will appear on your screen, relative to the upper left corner of the viewing area. These values are defined in pixels.

Foreground and Background: These are the colours used to display the text in question. Note that if a plain text block is preceded by a control block which defines a transparent colour, one of these colours can become transparent. You can select these colours either by clicking on their colour buttons or by using the eyedropper tool to pick colours from the previous image block if one is present. The eyedropper tool will not be active if there is not at least one image block before the current plain text block.

Editing Control Blocks

A control block includes the following fields:

Transparent Colour: If this switch is turned on, one of the global palette colours in subsequent image or plain text blocks will be regarded as being transparent by GIF Construction Set for Windows when you view a complete GIF file. This means that rather than displaying areas of this colour, it will allow whatever is underneath the displayed image or text to show through. You can select this colour either by clicking on the colour button to the right of the switch or by using the eyedropper tool to pick a colour from the next image block if one is present. The eyedropper tool will not be active if there is not at least one image block after the current plain text block.

Delay: This is the number of 100ths of a second a GIF viewer will pause after displaying the next image or plain text block.

Remove by: This tells a GIF viewer what do with an image after it has been displayed. Be careful of the Previous Image option - some web browsers don't support it.

Editing Loop Blocks

A loop block includes one field, to define the number of times the images in the GIF file in question will repeat. Note that a Loop block will always appear as the second block in a GIF file, no matter where you insert it. Only one Loop block can appear in a GIF file.

Inserting Blocks

You can add blocks to a GIF file by selecting Insert from the File menu of GIF Construction Set. A dialog will appear to allow you to select the type of block you wish to insert. Inserted blocks are always inserted immediately after the currently selected block.

If you attempt to insert an image block into an existing GIF file, a dialog will appear prompting you for the file to insert from. Source images for GIF Construction Set UltraLight must be in the GIF format.

You can insert multiple images into a GIF file at once - each one will appear as a separate Image block. Select multiple images in the Open dialog by holding down the Ctrl key and clicking on each image you want to insert. Hold down the Shift key and click to select a range of images.

Note that if you import an image from a GIF file using the Insert function, the first image in the file will be read, even if the file actually contains multiple images.

If you attempt to insert an image which has a different palette from the current global palette of your GIF file, a dialog will appear asking how you'd like to handle the new image's palette. These are the available options:

Remap this Image to the Global Palette: This is a good choice for mechanical images... drawings and such... and a really bad choice for photographs. Each colour in the source image will be replaced by the closest match from the global palette. This will usually make photographs look posterized.

Dither this Image to the Global Palette: This is a good choice for photographs. It will give you the best colour match... and usually the most attractive results... with a slight loss in detail resolution.

If you insert other types of blocks... specifically control, comment or plain text blocks... default blocks will be created which you can subsequently edit, as has been discussed.

The Use This Selection for Subsequent Images option will save time if you're importing multiple images into a GIF file in one pass. It will apply the current selection in the dialog to the remainder of the images to be imported. Note that this item will not be enabled if you have selected Use This Image as the Global Palette, as a GIF file can only have one global palette.

Deleting Blocks

You can delete any block save for the header by selecting it and then selecting Delete from the File menu. Note that once a block is deleted, it's gone for good.

Viewing GIF Files

Select View from the File menu of GIF Construction Set to display a complete GIF file in real time. You can terminate the display any time you like by clicking the right button of your mouse or hitting the Esc key.

Creating New GIF Files

To create a blank GIF file, select New from the File menu. A blank GIF file always includes a header block. You can add blocks to a new GIF file with the Insert and Merge functions.

Opening and Saving GIF Files

Any GIF 87a or 89a file can be opened into GIF Construction Set. Files created with GIF 87a headers will be converted internally to GIF 89a files.

The Save and Save As functions of the File menu will save your current GIF file to disk. All GIF files written by GIF Construction Set will have GIF 89a headers.

Unregistered copies of GIF Construction Set will add a comment block to any GIF file you save. This comment block will not appear once you register Graphic Workshop Professional.

Using Animation Wizard

The Animation Wizard feature of GIF Construction Set will walk you through creating an animated GIF file. It offers fewer options than you'd have if you were to create an animated GIF file from scratch, but it's dead easy to use. It will prompt you for information about the animation you want to create, assemble all the necessary blocks and finally open the file in GIF Construction Set's main window. You can edit it further, or just save it to disk.

To create a GIF file with Animation Wizard, simply select this feature from the File menu of GIF Construction Set and follow the prompts. You can fine tune your GIF file after it has been created by Animation Wizard. The most important questions are:

- Do you want to create an animated GIF file for use in World Wide Web Page?

If you answer Yes to this question, Animation Wizard will choose a palette for your GIF file which is optimally compatible with Netscape Navigator.

- Are the images for your GIF file photorealistic or drawn?

Photorealistic images are scanned graphics and computer generated art which has gradients. Anything that looks as if it might have started life as a photograph should be regarded as photorealistic. Drawn images are graphics with hard lines, such as text and line art. Draw images with sixteen colours are text and line art which are constrained to use the default Windows palette, that is, graphics with very few colours.

The Match to Superpalette option of Animation Wizard will create a new optimized palette for your animation based on the palettes of all the source images you have selected. This will usually produce the best looking animations.

The Match to First Palette option of Animation Wizard will match all the colours in all the images you select to the palette of the first image. This will eliminate dithering problems when you assemble an animation from source GIF files as long as you choose the first image appropriately

Especially if you're new to using animated GIF files in a web page, it's a really good idea to start with Animation Wizard.

Important: GIF Construction Set UltraLight makes calls to the main executable file of Graphic Workshop Professional. It will not run if it's moved to a directory other than that of GWSPRO.EXE, or if it's distributed without the rest of Graphic Workshop. If you register Graphic Workshop Professional by entering your registration code and name in the Graphic Workshop Setup dialog, GIF Construction Set UltraLight will not recognize the code until you have exited Graphic Workshop once. Registered users of Graphic Workshop Professional will not see GIF Construction Set UltraLight's beg notice when it runs.