

KNOW YOUR FILE TYPES: WHEN TO USE JPEG | GIF & PNG

Digital images fill up our inboxes, take up computer memory space and take time to load on a web page. When working with digital image files there are certain file types to use for each circumstance.

JPEG

File extension: JPG or JPEG

"JPEG" stands for "Joint Photographic Experts Group."

The group designed the format in **1986**

Pronounced "jay-peg"

Uses a very complex compression algorithm

Can display millions of colors

16-bit data format

Standard file format of most digital cameras.

In March 2014 Mozilla created the mozjpeg format.

Works within the current, recognizable jpeg format.

Works with existing platforms, such as web browsers.

Reduces the file size up to 15% more without losing quality.

Useful for web pages, especially Facebook, for faster upload.

Smaller file sizes mean less storage space needed and quicker upload.

Compatible across many platforms (PC and Mac), and other programs (web browsers and image editors).

JPEG Mini Tool

Tools like JPEG Mini let you compress photos up to 5 times without losing quality.

Let image details be "forgotten" and then filled in when displayed. Called "lossy" compression for the lost data.

The human eye doesn't see color detail as well as it does light and dark detail, so some color detail can be sacrificed to save file space.

60%-75% compression is usually optimal for website usage.

To reduce file size

Use when a small file size is more important than maximum quality.

BEST USES:

- STILL IMAGES ONLY
- REAL-WORLD IMAGES LIKE PHOTOS
- COMPLEX COLORING
- SHADING OF LIGHT AND DARK

GIF

File extension: .GIF

"GIF" stands for "Graphics Interchange Format"

Pronounced "jif"

Public debate over "gif" or "jif"

Creator Steve Wilhite stated that the correct pronunciation is "jif."

Created by CompuServe in **1987** to transfer images quickly across slow connections.

Uses 256 indexed colors

Uses dithering, a process where two pixel colors combine one to reduce number of colors needed.

Can be interlaced. Progressive loading shows a low-quality version first and then better detail is added.

Allows for single-bit transparency. One color can be chosen to be transparent.

Can be animated

Uses lossless compression

Fewer colors means files start even smaller than JPEG. Compression does not lose any data.

BEST USES:

- WEB GRAPHICS WITH FEW COLORS
- SMALL ICONS
- ANIMATIONS
- SIMPLE IMAGES
- LINE DRAWINGS
- SINGLE-COLOR BORDERS
- SIMPLE CARTOONS

PNG

File extension: .PNG

"PNG" stands for "Portable Network Graphics"

Pronounced "ping" or "P-N-G"

Designed in the **mid-1990s** as a way around patent issues with the GIF format, including benefits from both GIF and JPEG.

Lossless compression, so no data loss.

PNG-8

Very similar to GIF

256 colors and 1-bit transparency

PNG-8 files are even smaller than GIF files

PNG-24

24-bit color, similar to JPEG

Can include over 16 million colors

Lossless compression means larger files than JPEG

Alpha-channels

PNG files allow transparency to be set on a scale between opaque and completely transparent, allowing for a faded, translucent look.

PNG images can be put on any color background and maintain original appearance.

Some older browsers may have trouble supporting PNG files because of alpha-channels.

BEST USES:

- WEB IMAGES SUCH AS LOGOS THAT INVOLVE TRANSPARENCY AND FADING.
- IMAGES IN THE MIDDLE OF THE EDITING PROCESS.
- COMPLEX IMAGES LIKE PHOTOGRAPHS IF FILE SIZE IS NOT AN ISSUE.

What Should You Use?

FILE TYPE	BEST USES
JPEG	<ul style="list-style-type: none"> Still Images Photographs Many colors Shading of light and dark
GIF	<ul style="list-style-type: none"> Animations
PNG	<ul style="list-style-type: none"> Web Images (PNG-8) Logos which involve transparency and fading Images in the editing process (PNG 24) Complex Images like photographs if file size is not an issue (PNG-24)

With the variety of image file formats available you can use the right format for your images to save quality and space on your website, in your emails, and your personal digital scrapbooks.