

What is file compression?

If you download many programs and files off the Internet, you've probably encountered ZIP files. This compression system is a very handy invention, especially for Web users, because it lets you reduce the overall number of bits and bytes in a file so it can be transmitted faster over slower Internet connections, or take up less space on a disk.

Once the file is downloaded, your computer uses either its built in compression utility or a third party program to expand the file back to its original size. If everything works correctly, the expanded file is identical to the original file before it was compressed. Only then can the file actually be used for its intended purpose.

How do I know if files are compressed?

The most common types of compressed files are .zip or .sit. In the past .zip was primarily used for PC and .sit was mostly used for Macs. With the arrival of newer Mac operating systems, the common format is leaning towards .zip, which is built in.


How do I compress and decompress files?

There are actually many different ways to do this. We're only going to cover the basics to get you started. Depending on which operating system you are on, this process can vary.



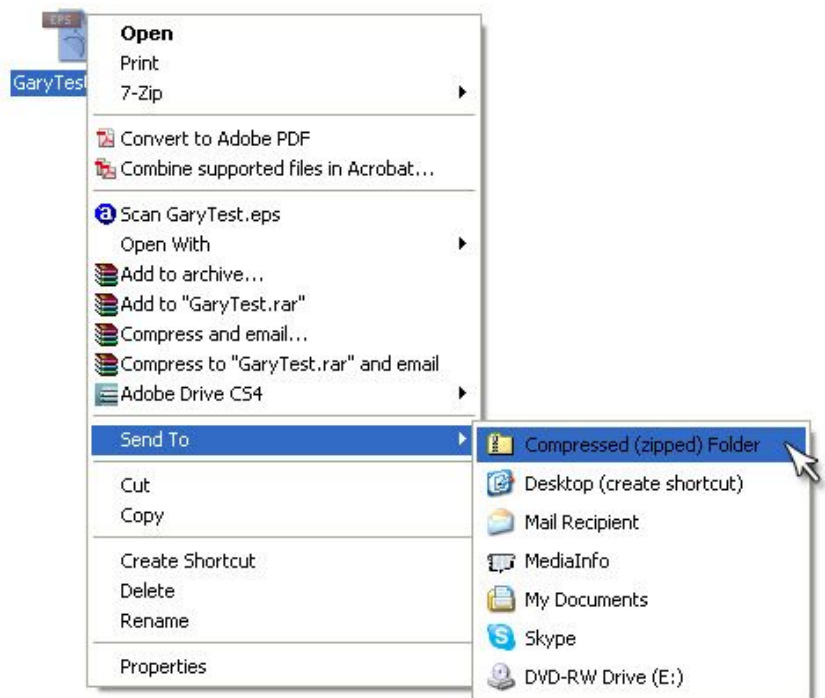
Windows ME/XP/7

COMPRESSING (AKA ZIPPING OR ARCHIVING)

These versions of Windows have built-in zip capability so that you can compress files by using the *Compressed (zipped) Folder* feature. Folders compressed by using this feature are identified by a zippered folder icon. 

Windows 7 simply uses "Windows Explorer" to handle zip files.

As shown to the right, simply right click on a file, point to *Send To* on the shortcut menu and then click *Compressed (zipped) Folder*. You should then see a new zip file appear in that same directory.



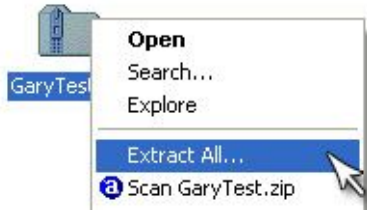
NOTE: Windows Vista does NOT have this built in and requires the use of a 3rd party compression application. You can install compression software on ALL operating systems to get enhanced features that improve functionality. More information on page 3.



Windows ME/XP/7

DECOMPRESSING (AKA EXTRACTING, UNZIPPING OR EXPANDING)

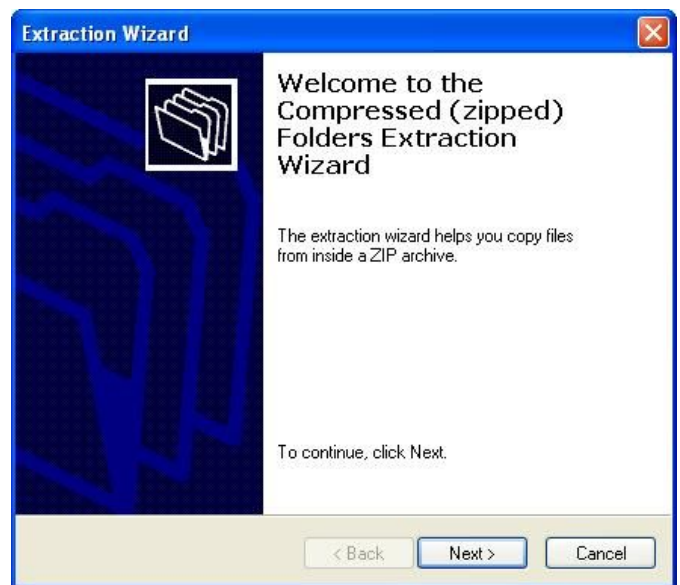
Once again, these versions of Windows have built-in zip capability called *Compressed (zipped) Folder*, so it is easy to get your files. Below is just one way to do this.



1. Right-click on a ZIP file and select the Extract All... menu option as shown in the image to the left:

2. You will now be presented with a screen similar to the one to the right.

Press the Next button.



3. At this next screen, as shown in the figure to the left, enter the path to where you would like the files to be extracted. In the image below we are extracting the files in the ZIP archive to the directory *C:\ExtractFilesHere*. If that directory does not exist, it will be created.

After you type in the location where you wish the files to be extracted to, press the Next button.



NOTE: *Windows 7* combines 2 and 3 into one window.



4. The files have now been extracted and you are presented with a screen similar to the one above asking if you would like to open the folder to where you extracted the files. If you want to see the extracted files, leave the check mark in place; otherwise uncheck the box labeled *"Show extracted files."* Then press the Finish button. Now your files are extracted into the directory you have specified and you can begin to use them.



Windows 98/2000/Vista

DECOMPRESSING (AKA EXTRACTING, UNZIPPING OR EXPANDING) Unfortunately, earlier versions of Windows and some newer (Vista) did not incorporate Compression utilities in the Operating System. In this case, you need 3rd party software to be able to compress and decompress.

3rd party Windows compression software

There are several applications that can compress and decompress, i.e., WinZip, WinRAR, Stuffit Expander, 7-zip. Most all of them are shareware. Some will give you a specific trial time period (30 days, usually); then it will give you a “nag screen” in which they try to entice you to purchase the software.

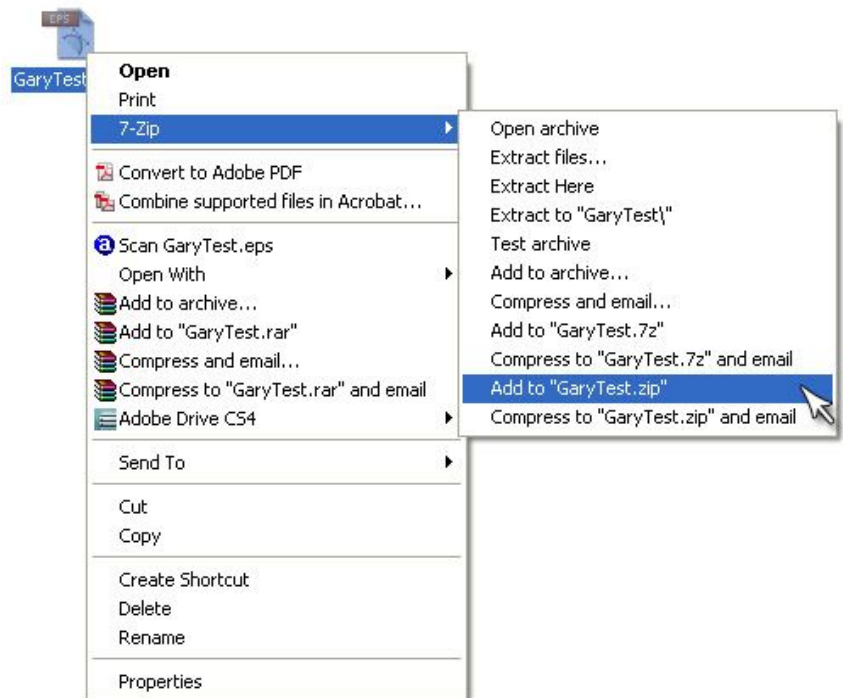
Usually, you can close that box and continue using the software.



We recommend 7-zip (www.7-zip.org) because it is totally free (no nag screen), light weight, easy to use and handles many other compression file types that the other ones do not.

Whichever software you choose, it should add some new options in the contextual menu (the menu when you right click on a file) as shown to the right.

Some of the options may include: Open Archive, Extract All, Extract Here, Compress, Compress and email, Archive, etc. When doing any of the commands to compress or decompress, the new file should appear in the same directory as the one you right clicked (unless otherwise specified).



NOTE: More information about the software’s options should be found in their “Help” menu or at their individual websites.

7-ZIP: www.7-zip.org

WINZIP: www.winzip.com

WINRAR: www.rarlab.com

STUFFIT EXPANDER: www.stuffit.com



SIT files on the PC

SIT files require Stuffit Expander on either Macintosh or PC. This page covers the PC.

1. Download and install Stuffit Expander: <http://www.stuffit.com/win-stuffit-download.html>
The screen shot below is shown downloading the PC version.

STUFFIT TRIAL DOWNLOADS

The installers below will give you 30 days of the full feature set. After 30 days, several features will no longer be available and you will be asked to purchase a serial number to unlock the application.

Stuffit 2010 Windows

English Only - 13.7 MB(.exe)

Stuffit 2010 Windows Multi-Language

Multi-Lanugage - 106.7 MB(.exe) (Includes English, French, German, Japanese)

Start File Download Now

2. Once installed, your Stuffit file icons should look similar to this.

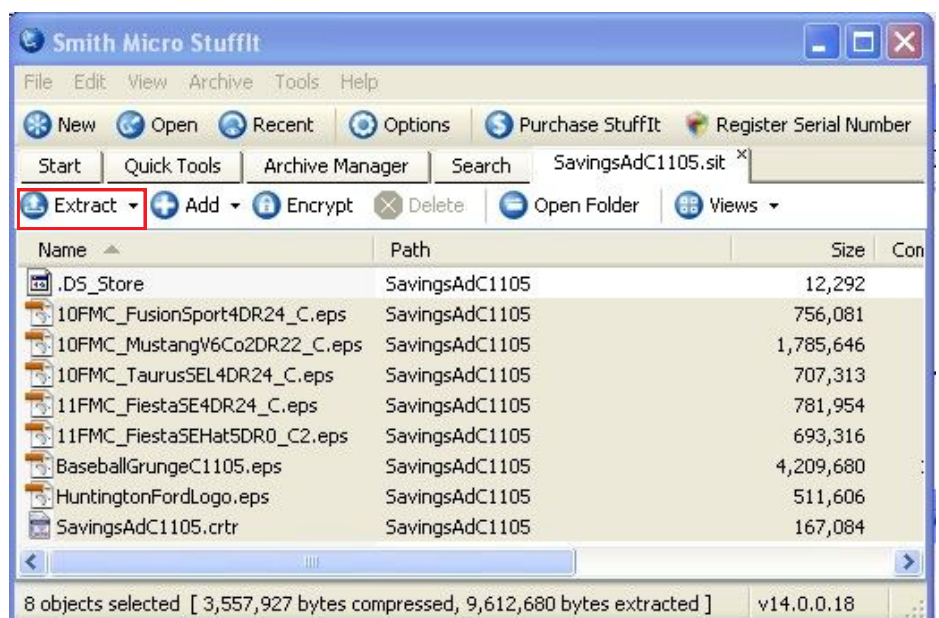


3. Double click on a .sit file to extract the contents. A window should open up like the one to the right. To extract, select all of the files in the window and click on the Extract button.

3. Choose your destination folder and click OK.

4. Now the files have all been extracted to the destination and are ready to be used.

Note: Stuffit may pop up messages trying to get you to purchase their program. You do NOT have to purchase.





Macintosh OSX

ZIP files (compressed files) in one click



One of the great Mac OS X features is the ability to create ZIP compressed files from within the OS. Available in 10.5.x+.

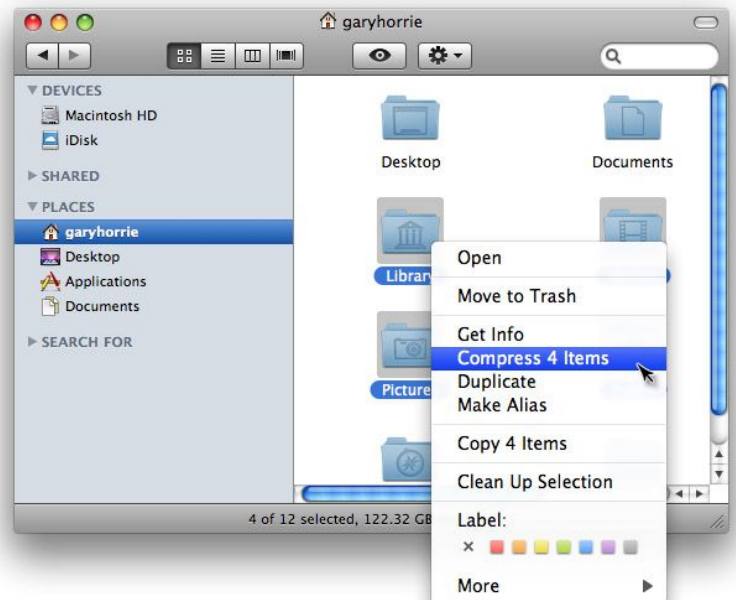
Compressing...

To create a compressed file, either Control-click on the file and choose Create Archive (which is Apple-speak for “make a compressed ZIP file”). Or you can click on a file, then go to the Action menu (the button that looks like a gear up in the Finder window’s toolbar), and choose Create Archive from there. Either way, it quickly creates a new file with the file extension “.zip.” This is the compressed file.

You can also compress several different files (like three, for example) into one single archive file — just Command-click (or Shift-click adjacent files) on all the files you want included, then choose Create Archive of X Items from the Action menu. A file will be created named “Archive.zip” (that’s it!).

Decompressing...

By the way, if someone sends you a ZIP file, don’t sweat it — just double-click it and OS X will automatically decompress it into the same directory as the original file.



Prior to OSX’s built-in ZIP feature, users needed an application called *MacZipit* to manage their zip files (www.MacZipit.com). This software can still be used in OSX to enhance the options for ZIP files. Please refer to their website for more information.



Macintosh OS X

SIT files on Mac OSX using Stuffit Expander



For .sit files on the Mac, you will need a 3rd party application called Stuffit Expander. Once installed, it only takes a double click on the .sit files to automatically extract the containing files. These files extract to the same directory as the file on which you double click. Once extracted, the files become usable.

Stuffit software is made by Smith Micro Company and is available as a trial at either of these links below.

http://my.smithmicro.com/downloads/trials/expander_mac.html

or

http://www.apple.com/downloads/macosx/system_disk_utilities/stuffitexpander.html

More information about the advanced features can be found at the Smith Micro website.



Macintosh OS X

DMG files on Mac OS X



Another one of the great Mac OS X features is the Disk Utility. With this, you can create a Disk Image, an alternative to ZIP or SIT files in OS X.

You can use **Disk Utility** (*Applications > Utilities > Disk Utility*) to create a disk image of a disk, volume, or folder. You can use disk images to move files from one computer to another or to send to other people in email messages.

You can also use a disk image to burn a CD or DVD disc to send to other people or to back up the contents of your disk so that you can restore it if something happens to your information.

When you create a disk image, you choose the format of the image:

- Choose “compressed” to save space.
- Choose “read only” to prevent the contents of the disk image from being changed.
- Choose “read/write” to allow changes to the disk image.
- Choose “DVD/CD master” to create a disk image you can use to make copies on DVD or CD discs.

Creating the disk image

1. If the files you want in the disk image are in different locations, move them to a folder or volume before you begin.
2. To create a disk image from a disk or volume, select it in the list of disks and volumes.
3. Choose *File > New* then the type of image you want to create.
To create a disk image from a *folder*, choose “Disk Image from Folder.” Select the folder you want, then click Image.
To create a disk image from a *disk* or *volume*, choose “Disk Image from Disk Name.”
4. Type a name for the image and choose where you want to save the image.
5. Choose one of the disk formats from the Image Format pop-up menu.
6. To require a password to access the contents of the image, choose “AES-128 (recommended)” from the Encryption pop-up menu.
7. Click Save.
8. If you are creating an encrypted disk image, enter the password when you are asked.

The name of the disk image is followed by the filename extension “.dmg.”