

DATA ARCHIVING and COMPRESSION

(WinZip, WinRAR)

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Note that new versions of Microsoft Windows (Windows Millennium Edition and Windows XP) have an embedded function for creating and handling ZIP archives. This function is called "**Compressed (zipped) Folders**", works similarly to WinZip, and is accessible with the help of the right mouse button. You can create a new ZIP archive by clicking "**New -> Compressed (zipped) Folder**". Then, Windows treats this archive like a regular folder, and you can copy, move, or delete files or folders to/from archive in the usual way. Also, you can archive selected files or folders by right-clicking them and selecting "**Send To -> Compressed (zipped) Folder**". So, there is no need to install WinZip under Windows ME or Windows XP if you want to use only the basic functions of WinZip.

Also, note that most current versions of WinZip and WinRAR can have menu items named and designed differently from those described in this manual.

WinZip

One of the leading and most universal utilities for Windows, which considerably simplifies work with file archives.



Basic Capabilities and Advantages

Integration with Windows 95/98/NT:

WinZip WinZip is very well integrated into the Windows 95/98/NT shell: it supports long filenames, "drag and drop," and file zipping and unzipping without requiring WinZip to be launched first.

Internet Support:

WinZip has built-in support for popular file formats, used on the Internet: TAR, gzip, UUEncode, XXencode, BinHex and MIME. ARJ, LZH and ARC are supported through plug-ins. You can use WinZip to access practically any files downloaded from the Internet. If you use browsers such as Internet Explorer or Netscape Navigator, you can open these archives with a single mouse click.

WinZip Wizard:

Two interface versions are provided. You can use the classic interface, or else WinZip Wizard, which is designed for less experienced users. If you need WinZip's more advanced capabilities, you can switch to the classic interface.

Selected Folders:

WinZip lets you organize all archive files into a single convenient date-ordered list without regard for their actual location. Unlike the standard File-Open, Favorite Zip Folders handles the contents of nested folders as if they were a single folder.

Creation of Self-Extracting Files:

WinZip Self-Extractor Personal Edition has now been combined with WinZip and lets you create self-extracting files. Self-extracting files are an ideal option for sending compressed files to those who may not have the corresponding software.

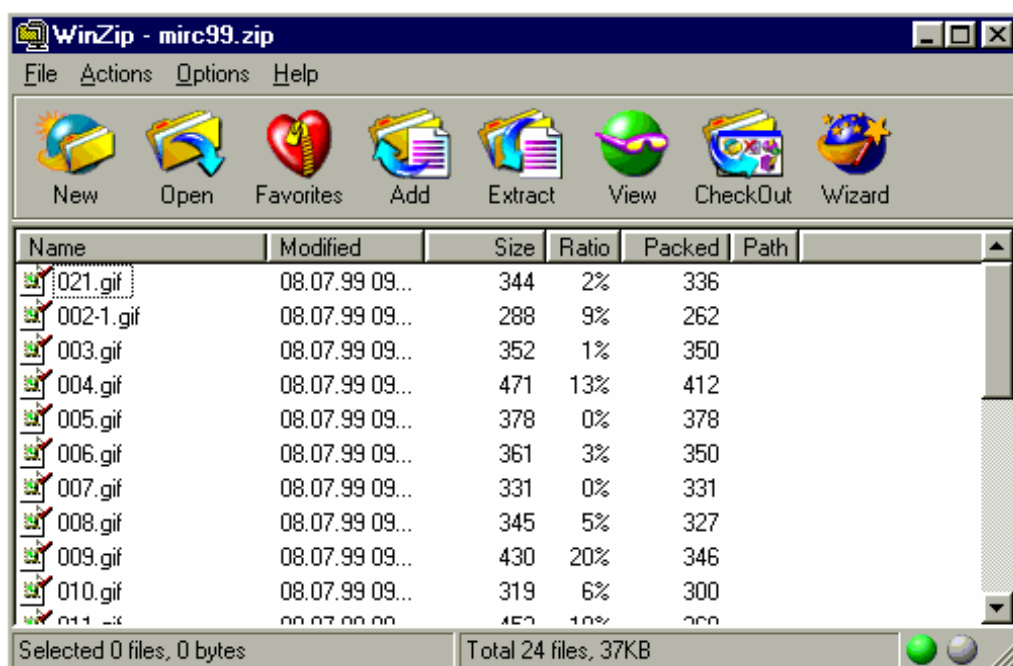
Antivirus Program Support:

WinZip can be configured to work with most antivirus programs.

WinZip: Description of Basic Operations

The ACTIONS Menu

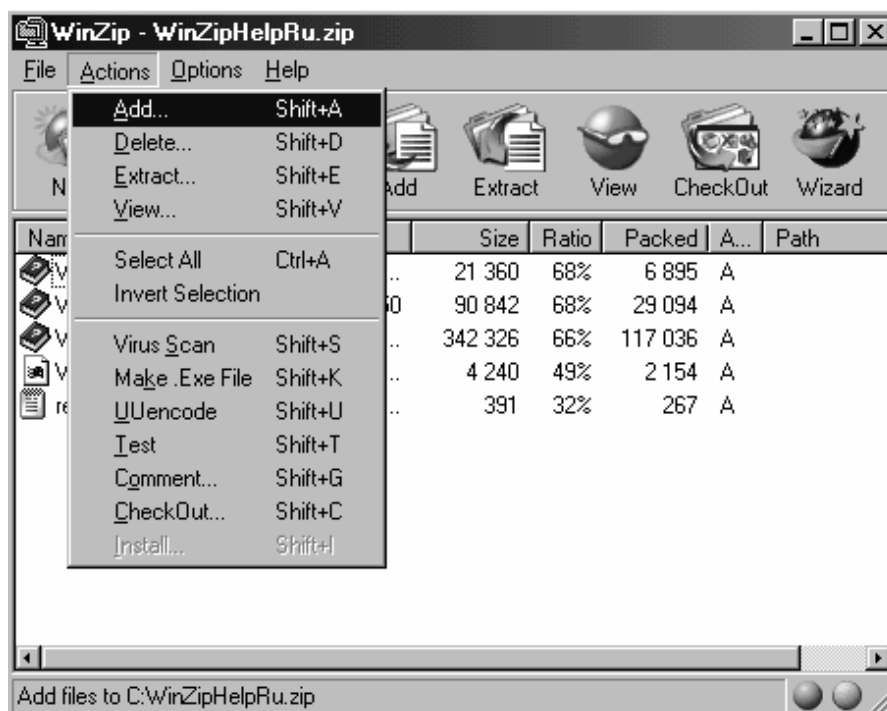
The system ACTIONS menu contains various modes aimed at performing various operations on files making up a particular archive. Using this menu, the user can add, copy, delete, rename, and even virus-check files. (The latter is actually only true if antivirus software has been installed on the computer).



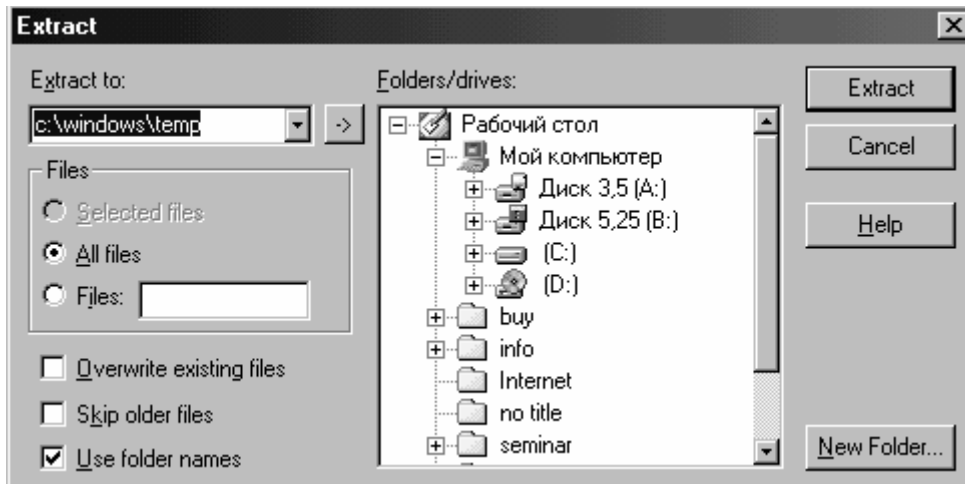
Using ADD mode, one or more new files may be added to the current archive. Highlighting the new file addition mode launches the familiar wizard, which is operated exactly the same way as for the operations that must be performed when creating a new archive.

DELETE mode is used when one, several, or even all the files must be deleted from the current archive. In the last case, a sort of empty shell remains, an archive with practically zero size, which can later be filled with any other files. When the DELETE mode is activated, WinZip displays a special dialog. If you want to delete a particular file from the current archive, you must specify its name in the “Files” field. If you need to delete the entire contents of the archive, the “Entire Archive” field should be highlighted.

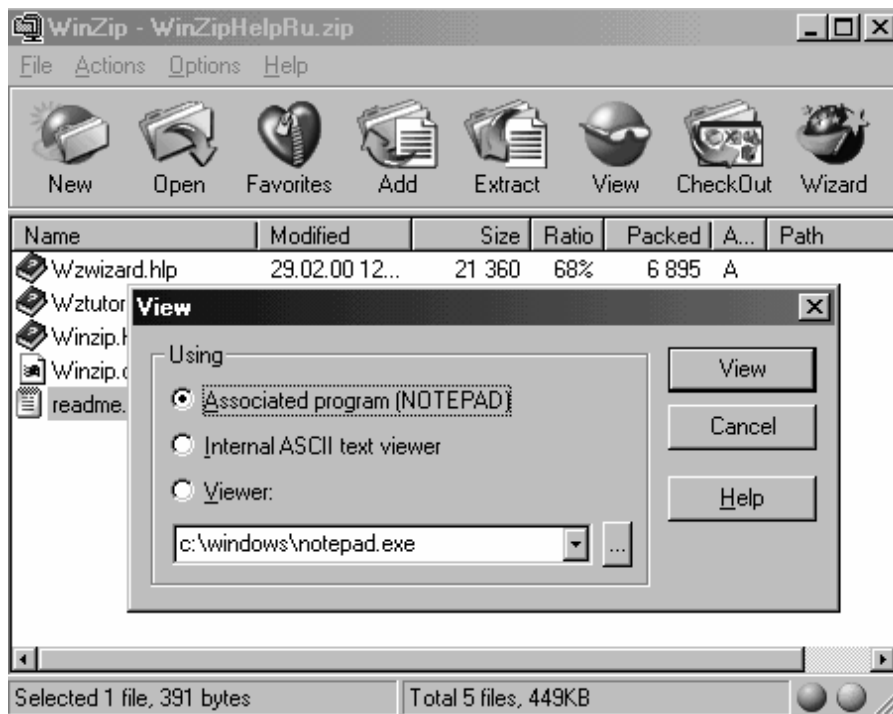
However, you can also avoid using DELETE mode at all. You see, the WinZip interface was developed in strict compliance with the user operation standards adopted for the Microsoft Windows 95 operating system. This means that the user can select any file set, either contiguous or noncontiguous, using the mouse and keyboard, and then press the DEL key. Then the familiar wizard window will appear, but it will be appropriately adjusted and ready for execution.



To extract one or more files from an archive, use the EXTRACT mode or the corresponding tool from the toolbar, whose button bears a similar legend. Activating EXTRACT mode brings the corresponding wizard window to the screen. The first thing that has to be set is the path to the destination folder for the files extracted from the archive. This path must be specified in the “Extract To” window. However, it need not be entered manually. If you point your mouse to the corresponding folder in the “Folders/Drives” alongside, the path to it is automatically generated in “Extract To.” By default, the option “All files” is selected in the “Files” group, which means that all files in the archive will be extracted. However, if you only need to extract one or several files, but they were not properly highlighted before EXTRACT mode was activated, you have to specify them explicitly in the wizard’s “Files” window. If the files extracted from the archive were placed in a separate folder, you should use the NEW FOLDERS screen button in the lower right-hand corner of the wizard window. This will call the standard new folder creation routine that you are surely familiar with in the Microsoft Windows 95 operating system. After the new folder has been created, you can select it to receive data. The actual process of extracting files from the archive begins when you push the EXTRACT screen button.



However, there are many times when manipulating an archive that the user does not intend to extract something from it. The situation arises fairly often that the user only needs to look at the contents of some one file in the archive without necessarily unarchiving it. For such cases, the developers have provided VIEW mode. Activating it calls up a wizard window that can be used to pass the contents of a particular archived file to one of the standard text editors built into the Microsoft Windows 95 operating system. By default, the program assumes the editor will be the “Associated Program (NOTEPAD)” specified in the “Using” section of the wizard window. Several options are also provided. In particular, the user can select a built-in ASCII text editor. It is quite adequate for viewing simple text documents, but it should not be counted on for viewing a document created in Microsoft Word, for example. However, for just such cases, the programmers have provided the capability to force the wizard to use a different program. This is done in the “Viewer” window. And the mechanism for manually specifying the path to any external editor or other similar program is also convenient because it enables the user to view both text documents and any others that are contained in the archive. For example, music, photographs, or even video clips.



To simplify the performance of similar operations over a batch of files within an archive, WinZip provides a method of selecting a batch of files: “Select All” and “Deselect All.” Their meanings are clear from their very names. The first selects all the files in an archive, and the second cancels the action of the first.

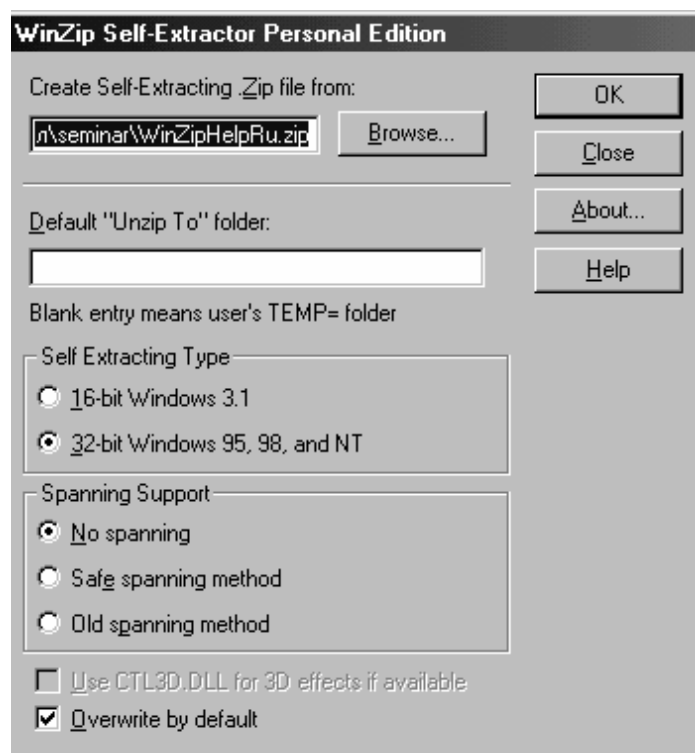
However, the system ACTIONS menu doesn’t just contain modes for direct action, that is, those that move something somewhere, it also contains a separate group of working modes, or utility modes, so to speak.

The enormous experience accumulated throughout the work in the operation of archiving programs has revealed a fairly serious problem that these programs have created for themselves: viruses. The thing is that even the most efficient antivirus packages are practically helpless if an infected file has been compressed into an archive. In that state, it can survive any number of the most thorough checks and inoculations in relative peace. It is unlikely that anyone will be willing, in order to achieve guaranteed results, to accurately unzip all archives on hand and recompress them after a virus check. The developers of the WinZip utility took this fine point into account. After loading an archive, you can activate “Virus Scan” mode.

In this case, the archiving program will perform a miraculous sequence of operations. It will launch the antivirus package installed on the given computer and begin extracting files from the archive and submitting them for checking. After completion, the program generates statistics that permit the user to judge whether the given archive contains a virtual infection or not.

For those cases when you don’t know whether the archive’s recipient will have the corresponding archiving program, WinZip provides a mechanism for generating self-extracting archives. This produces an executable module, which when launched automatically unzips the archive. The creation of such independent modules is especially convenient when creating archive files that may later be passed on to third parties, for example, distributed by email.

To create a self-extracting .exe module, you must load the archive into the program and use the “Make .EXE File” mode. This activates a special wizard that also needs some adjustment. In the field “Create Self Extracting .ZIP Form,” you should specify the folder where the file will be automatically written. If you don’t want the data to wind up any old place when the file is unzipped, but in a specific place on the hard disk, you must specify that in the “Default Unzip to Directory” field. Then, when the first two phases are complete, specify what operating system the archive is being created for. Based on this, use the mouse to select the appropriate option in the “Self Extracting Type” group. When everything is ready, just press the MAKE .EXE screen button and wait a bit, depending on the number of files to be compressed into the archive.

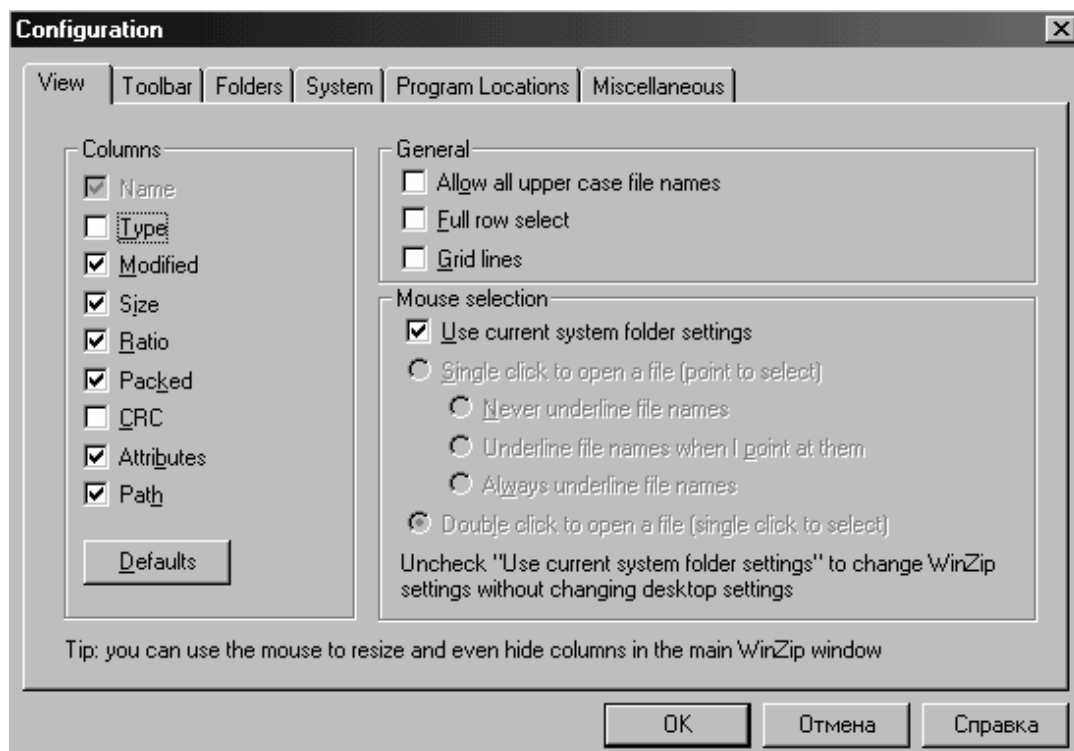


There's an old saying: "no matter how much string you wind, there's always an end." When applied to computer technology, it means that no matter how reliable the system, sooner or later it could fail. And it usually happens at the most inopportune moment. It's no secret to anyone that disks use a magnetic method of storing data, and any magnetic surface has a tendency to demagnetize. This causes unstable reads or even total data loss. And both are extremely dangerous to any archive, because it's enough to not read or misread even the smallest part of a file and the decompression algorithm will be helpless. So in order to be completely sure that the archive is absolutely uncorrupted, WinZip's extensive tool set includes a TEST mode for self-testing of a loaded archive. The result of the check will be a statistical summary that can then be saved as a text file.

All the system menu modes listed above are supported with appropriate hot-key combinations. Familiarity with these considerably speeds up work with WinZip, although they are not mandatory at all, since the program is not one that is used every day. Although people feel differently about the development of professional skills. At any rate, the corresponding hot keys are shown on a drop-down panel in the ACTIONS system menu, which is convenient enough for beginners.

The OPTIONS Menu

The OPTIONS system menu includes modes needed to customize the WinZip interface. Customizing an archiving program is not very complicated, especially for such a user-friendly program as WinZip. However, to avoid misunderstandings, it's a good idea not to experiment if you are doing this for the first time and don't quite understand the implications of your actions, or if you are experimenting while an archive containing extremely important information is loaded. Still, when you have a more or less complete manual at hand, as well as the space and time to experiment, you can try it.



For starters, let's limit ourselves to the appearance of the WinZip interface. The CONFIGURATION mode manages this. It contains two groups of parameters: "Prompt" and "Logging." The "Prompt" group is used to manage whether the program responds to the very convenient "drag and drop" technique widespread in the Microsoft Windows 95 operating system. The "Logging" group specifies to which logical disk the program will write all utility messages and other working data useful to the user, and whether it will do so at all. Actually, if you don't use the archiving program often, the utility data will not be very helpful. What's more, they will become just another kind of garbage cluttering up your hard disk. In those conditions, the user is usually interested only in the main question, whether an archive has been created and whether it is correct. In that case, "Logging" can be disabled entirely. Otherwise it is a good idea to designate a special folder to hold all the program's utility messages.

The other options available through the wizard window are cosmetic. In particular, you can specify whether toolbar buttons will be large or small.

A much more important mode is next: FOLDERS, which manages where and how archives will be unzipped in case of quick unzipping. This includes how default paths will be specified. In general, these are the details that shape the user's impression of a particular program. It's not difficult at all to specify a path for unzipping an archive, or, on the other hand, to create it manually. But the convenient way could create certain difficulties if you are creating several archives in the same or a nearby folder, but have to reenter path each time. So the correct setup of the FOLDERS mode is very important.

The "Start-up Folder" section manages where the path settings will point when the program is first launched: according to system settings; or to the folder where an archive was saved or from which it was read the last time the program was run; or to a specific preset folder, to which the path must be entered in the last line of the section's window.

The "Default Extract Folder" section manages where the output path will point for data extracted from an archive when the corresponding wizard starts. This can be the same folder from which the file archive was loaded. Or it could be the folder where extracted files were saved last time. Or it even could be some specific folder, to which the path must be explicitly specified.

The "Default Add Folder" section manages the setting of the source of data for archiving, the path to which is set by default. As in the two previous cases, three options are available: the folder from

which the archive was read or in which the new archive was created, the folder that was the source last time, or some specific preset path.

The “Working Folder” and “Temp Folder” sections manage the setting of the working catalog and the temporary file storage catalog, which are created by the program during the archiving or unarchiving process, respectively. By default, these sections are set by the operating system, but they can be edited manually to specify any other folder you think necessary.

However, it is important to remember that in this case, we are speaking less about how WinZip will appear to the user when launched from Explorer’s context menu than how it will appear if it is launched without reference to any specific archive file.

The EXPLORER CONFIGURATION section concerns the setting for the appearance of the WinZip shell itself. By default, this window contains only one available option: “Associate WinZip With Archives,” which manages the Microsoft Windows 95 operating system’s setting so that it always treats any archive as a zip file and therefore launches WinZip whenever the program is needed. But if necessary, you can “tell” the archiving program to create its own icons and place them in the StartUp folder or on your computer’s Desktop.

The FILE MANAGER CONFIGURATION section sets the closeness of the relationship of WinZip with Microsoft Windows 95, with its Explorer in particular. If you don’t want to see WinZip every time you see a Microsoft Windows 95 context menu, clear all the flags in this section.

The FONT section manages the language in which the program will interact with the user and what font it will use.

The PASSWORD section gives WinZip a curious property. It can be used to set the program so that each archive it creates will be encrypted. And the user is absolutely not required to enter a “Password” every time; the program will automatically enter the one specified here.

The WINZIP PROGRAM LOCATION section specifies the paths to the executable modules of WinZip itself on every specific personal computer. It also specifies the path to the antivirus program used to check the contents of archives, and it also specifies the path to the program for viewing archived files without unzipping.

However, WinZip has become popular among computer users partly because even though WinZip is the main archiving program, it is still capable of recognizing archives in other formats such as arj and lha, if the full paths to the programs capable of correctly processing those data formats are entered in the appropriate fields. Thus, WinZip becomes a sort of general center of operations with archives in several popular formats.

The HELP Menu

Despite its extreme simplicity, WinZip is a very powerful program, like the ancient masters who didn’t know modern design methods and construction technologies, but successfully erected beautiful palaces that have endured for centuries. Still, the volume of help files installed during the installation process is almost as large as the reference system for Microsoft Windows 95 itself.

The HELP system menu contains seven basic sections that allow users to study the numerous capabilities of the archiving utility in order to apply it to their everyday work. At the same time, extremely advanced information-retrieval system of WinZip is quite capable of helping the user both in resolving difficult situations (which by the way are extremely rare), and in studying this remarkable program independently.

We should also note that for those who have access to the Internet, the WinZip information retrieval system has a built-in WINZIP HOMEPAGE module. Launching it launches an Internet browser and uses it to display the Nico Mak Computing, Inc., site, whose numerous pages contain a wealth of additional reference information, as well as the most varied types of advice gained from the rich experience operating WinZip throughout the world for the most varied tasks. This places the entire consolidated professional experience of the world at the user’s service.

The WinRAR Archiving Program

WinRAR is one of the most powerful means of creating and managing file archives for Windows.



WinRAR's Capabilities:

- full RAR and ZIP archive support;
- original high-performance data compression algorithm;
- special multimedia compression algorithm;
- shell with drag-and-drop support;
- command line interface;
- management of archives in other formats (CAB, ARJ, LZH);
- support for continuous archives in which the compression ratio may be 10-50% more than with conventional compression, especially when compressing a large number of similar files;
- support for multi-volume archives;
- creation of self-extracting (SFX) ordinary and multi-volume archives using the standard or add-on SFX modules;
- recovery of physically damaged archives;
- other additional functions such as encryption, addition of archive comments (with support for ANSI escape sequences), error logging, etc.

A Short Introduction for Beginners

1. File Extraction in WinRAR

To extract files using WinRAR, you must first open an archive in WinRAR. This can be done in several ways:

- double-click or press Enter on the file archive in the Windows Shell (in Explorer or on the Desktop). If WinZip has been associated with the archive file types during installation (which is done by default), the archive will be opened in WinRAR. You can also associate WinRAR with archives after installation using the Integration dialog;
- double-click or press Enter on the file archive in the WinRAR window;
- drag the archive to the WinRAR icon or window. Before doing this, be sure that WinRAR does not already have an archive open, otherwise the archive you drag will be added to the open one;

- launch WinRAR from the command line.

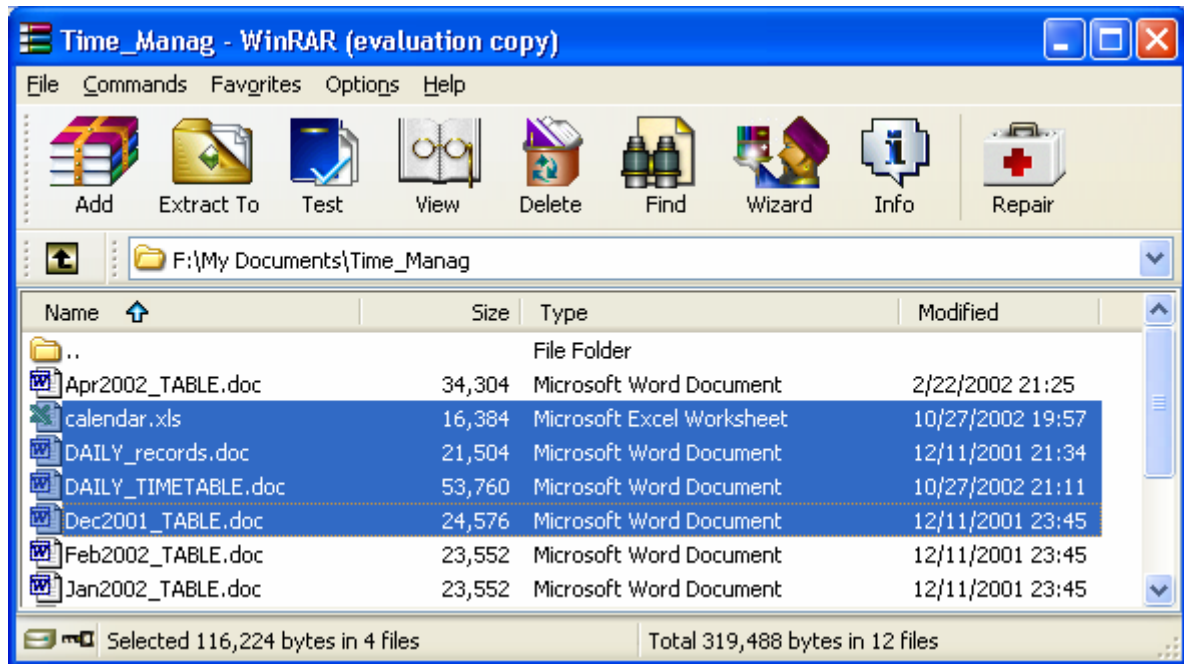
When an archive is opened, its contents are displayed in the WinRAR window. Highlight the files and folders you need to extract. You can do this with cursor control keys or the left mouse button while holding the Shift key down (as in Explorer or in other Windows programs). You can also highlight files in WinRAR with the space bar.



After highlighting one or more files, click the Execute button at the top of the WinRAR window, press Alt-E, or select “Extract Files From Archive” on the Commands menu. If you want to extract files to a folder other than the current one, click the button “Extract to...” or press Alt-A, enter the required path in the dialog that appears, and press OK. The same dialog allows you to change several additional parameters.

2. File Archiving in WinRAR

- First you must launch WinRAR. Double-click or press Enter on the WinRAR icon. You can also launch it from the Start menu: select “Programs,” then “WinRAR,” and click on the “WinRAR” item.
- On launch, WinRAR displays a list of files and folders in the current folder. You need to go to the folder that contains the files you want to archive. To select a different disk, you can use the key combination Ctrl-D, the disk list on the toolbar, or click on the little disk icon in the lower left corner of the window. To switch to the parent folder, use the BackSpace (BS) key, Ctrl-PgUp, or double-click on the “..” folder in the file list. To switch to a different folder, press Enter, Ctrl-PgDn, or double-click on the folder. To switch to the disk’s root folder, press Ctrl-\.
- After you have entered the folder containing the needed files, highlight the files and folders you want to archive. You can do this with the cursor control keys or the left mouse button while holding the Shift key down (as in Explorer and other Windows programs). You can also highlight files in WinRAR using the space bar.



- After highlighting one or more files, click on the Add button at the top of the WinRAR window, press Alt-A, or select the command “Add Files to Archive” from the Commands menu. In the dialog window that appears, enter the name of the archive or simply accept the name offered by default.
- You can also add files to an existing RAR archive using drag and drop. Highlight the archive in the WinRAR window and press Enter (or double-click with the mouse) on its name. WinRAR will read the archive and display its contents. Now you can add files to the archive by simply dragging them from another program into the WinRAR window.

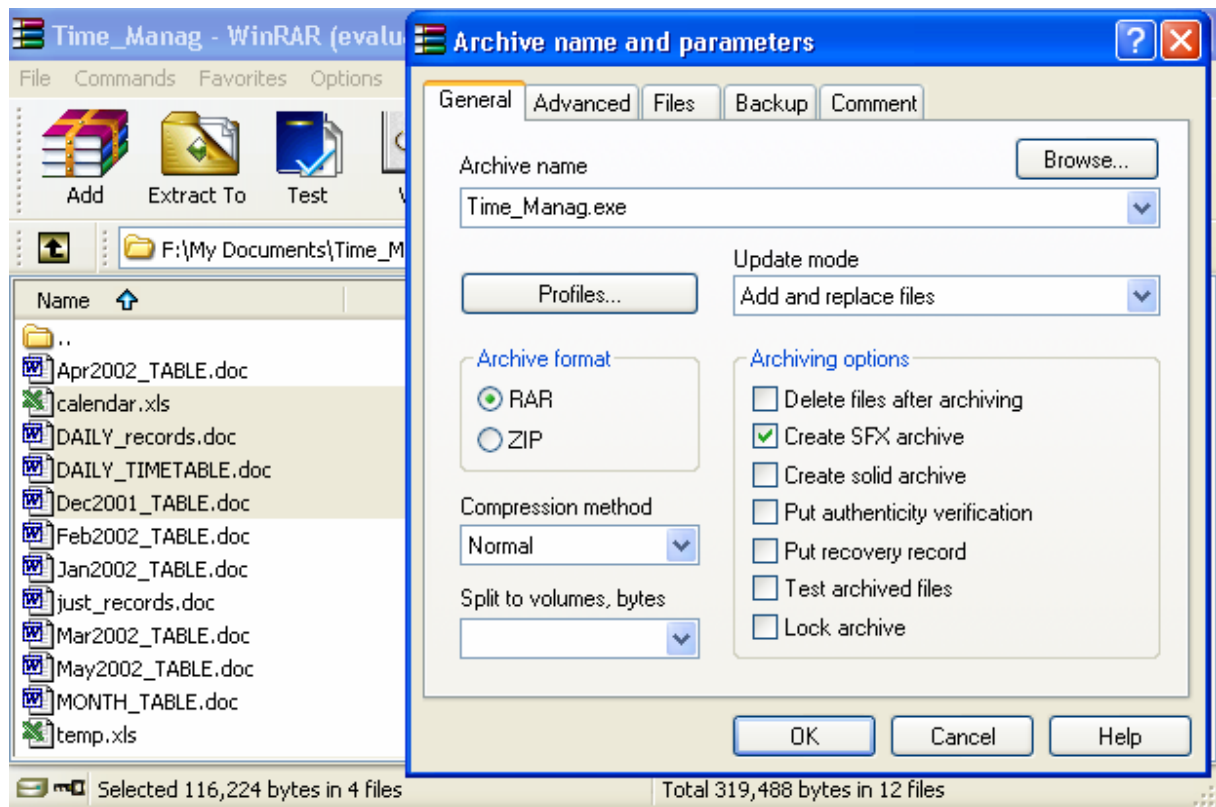
RAR archives can be made self-extracting and/or multi-volume.

Self-Extracting Archives

A self-extracting (SFX, from “Self-eXtracting”) archive is an archive to which an executable module has been attached. This module permits file extraction by simply launching the archive like an ordinary program. Thus, extracting the contents of an SFX archive requires no additional external programs. And WinRAR can handle an SFX archive just like any other, so if you do not want to launch an SFX archive (for example, out of concern over possible viruses), you can use WinRAR to view or extract its contents.

SFX archives, like all other executable files, usually have the extension .EXE. SFX archives are convenient when an archive must be sent to someone but you aren’t sure that the recipient has the appropriate archive program to extract the files. You can also use SFX archives to distribute your own programs.

In the WinRAR shell, select the option “Create SFX Archive” in the Archive Name and Parameters input dialog when creating a new archive, or open an existing archive and click the “SFX” button.

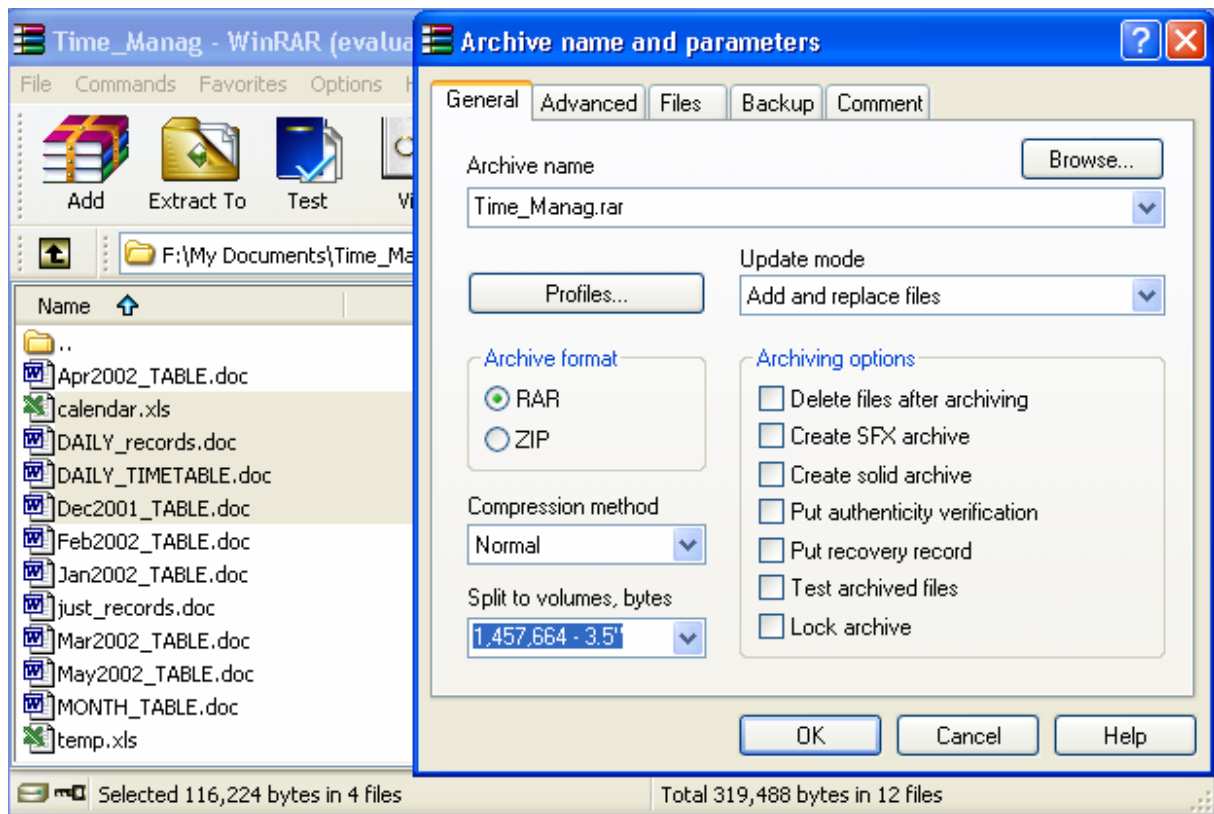


Volumes (Multi-Part Archives)

Volumes are fragments of an archive that consists of several parts. Volumes are supported only in the RAR format; you cannot create a ZIP volume. Usually volumes are used to store a large archive on several diskettes or other removable media.

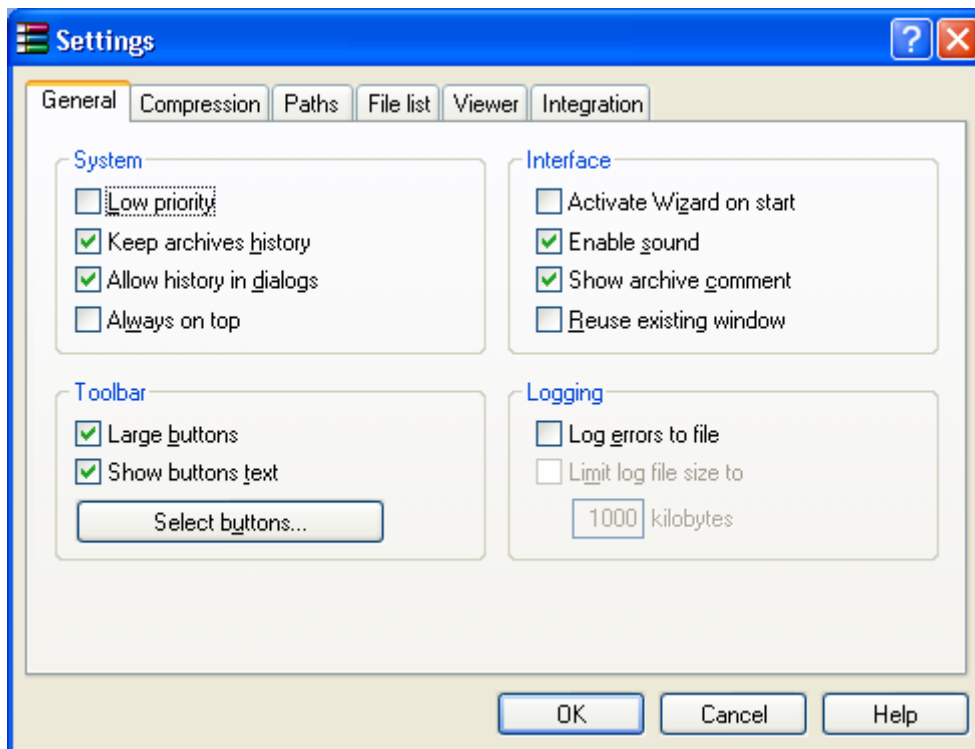
The first volume in the sequence has the ordinary extension `.rar`, but the following volumes have numbered extensions: `.r00`, `.r01`, `.r02`, etc. Volumes may also be continuous and self-extracting. The first self-extracting volume has a different extension (i.e., not `.rar`): `*.exe`.

Files in existing volumes cannot be added, updated, or removed.



General Parameter Setting Dialog

To access this dialog, select the command “Settings...” from the Parameters menu and choose the “General” tab. The contents of the dialog are described below.



Priority (low, normal, high):

WinRAR uses this parameter to control system loading in a multitasking environment. As a rule, the best choice is normal priority, but if you often launch WinRAR in background and work with other programs simultaneously, it makes sense to set low priority.

Toolbar (large buttons, text on buttons):

Use these parameters to change the appearance of the toolbar. Note that the palette for small buttons contains only eight colors, so if you have problems displaying large buttons, try deselecting the “Large Buttons” option.

Interface/Sound On:

Turns on sound support when an error occurs or a long process ends.

Interface/Show Comments:

If the archive being opened contains comments, WinRAR shows them in the right side of the window.

Interface/Open in One Window:

If this option is selected and a WinRAR window is open, then if the user tries to open an archive using the command “WinRAR <archive>” or by clicking on the archive icon, that archive will be opened in the current window. But if that option is deselected, the archive will be opened in a new WinRAR window.

Protocol/Log Errors:

If this option is selected, all error messages and information about archive damage will be written to the file rar.log in the folder that contains WinRAR.exe. This capability is available only after registration. The contents of the log file can be viewed using the command “View log...” from the Parameters menu.

Archiving Parameter Setting Dialog

To access this dialog, select the command “Settings...” from the Parameters menu and choose the “Archiving” tab. The dialog’s contents are described below. Note that all the parameters described below may be modified for one session when creating an archive from the Archive Name and Parameters dialog. More detailed information about the various archiving parameters can be found in the section, “Selection of Optimal Archiving Parameters.”

Archive Format (RAR or ZIP):

Select the format to be used by default when creating new archives. For more detailed information on this, see the section, “RAR or ZIP?”

Compression Method:

None	add files to archive without compression
High Speed	fastest (minimal compression)
Fast	fast method
Normal	normal compression (default)
Good	good compression (better compression)
Best	best compression (best, but slowest compression)

Dictionary Size:

You can choose the dictionary size from the following values: 64, 128, 256, 512 or 1024 KB. Increasing the dictionary size increases the compression ratio, but requires more memory and time during archiving. The dictionary size does not affect the speed or memory requirements during unarchiving.

Default Folder for Archives:

If this field is not empty and the name of the archive to be created does not specify a full path, the archive will be created in the specified folder by default. For example, if you enter the path to the Windows Desktop in this field, archives created by WinRAR will appear on the Desktop.

If this field is empty, archives will be created in the same folder as the one containing the files to be archived.

Archiving Parameters

- **Always Continuous Archives:**
RAR will create continuous archives by default.
- **Author Information:**
This option allows the user to add information about the author, time of last update, and archive name to each new or updated archive. The author information can always be seen using the “Archive Information” command. Author information is supported only in RAR archives. In order to include author information, the program must be registered.
- **Multimedia Compression:**
This option includes a special multimedia compression algorithm. It is designed to improve the compression of data such as digitized sound. This permits 30% greater compression than with ordinary compression. Multimedia compression can be used only with RAR archives.
- **Recovery Information:**
Adds recovery information to all archives created or modified. It can be helpful in recovering an archive even if it is physically damaged.
- **Open Shared Files:**
Includes files opened by other programs for writing in processing. This can be useful when you need to archive a file that is open practically continuously. It is a dangerous option, since it permits you to archive files that may be modified by the other program at that very moment. Use this option carefully and only if it is really necessary.

Volume Parameters

- **Volume Recovery Information:**
As a rule, it is very important to add recovery information to volumes, since they are often stored on unreliable media such as diskettes. If you don’t need to add recovery information to all archives, but only to multi-volume ones (as the option above does), then this option should be selected.
- **Independent Continuous Volumes:**
If this option is selected, WinRAR tries to dump statistics for a continuous archive at the beginning of each new volume. It is ignored if archives are not broken into volumes. The compression ratio is usually slightly degraded, but the risk of data loss is substantially reduced if one volume of the set is damaged.
It is strongly recommended that this option be left selected, since the slight reduction in the volume’s compression ratio substantially increases the chances of recovering some of the data from a damaged archive.

Extraction Parameter Settings Dialog

To access this dialog, select the command “Settings...” from the Parameters menu and choose the “Extraction” tab. The dialog’s contents are described below.

Default Folder for File Extraction:

Here you can enter the name of the default folder to which files will be extracted. Depending on the parameters described above, this folder can be used in executing the commands “Extract Files From Archive” and “Extract Files to Other Folder.” For example, you can enter a path to the Desktop here, and files will be extracted directly to the Desktop.

Use This Folder in “Extract” Command:

Select this option if you want to extract files to the folder specified above by default using the command “Extract Files From Archive” (or using the “Extract” button on the toolbar). If this option is deselected, files will be extracted to the same folder as the one containing the archive.

Extraction Folder for the “Extract to...” Command:

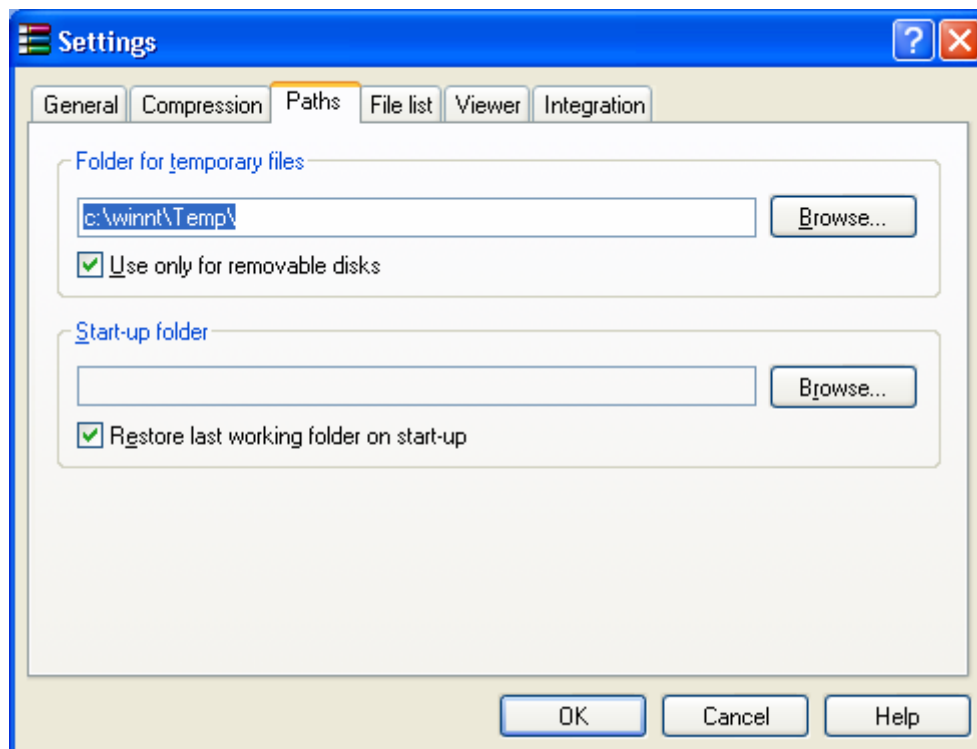
This group of parameters changes the default path for extraction offered in the Extraction Path and Parameters dialog when you execute the command “Extract Files to Other Folder” (or when you push the “Extract to...” button on the toolbar). Regardless of the setting of these parameters when files are extracted to a different folder, you can always specify any path different from the one offered by default.

You can choose one of the following parameters:

- Name of Extracted Archive:
By default, the archive name (without extension) from which the files will be extracted is used as the name of the folder.
- Default Folder Specified Above:
The default folder entered above is used as the default folder.
- Last Used Folder:
The folder last used for extraction is used as the default folder.
- Report Successful Completion of Archive Testing:
If this option is selected, WinRAR displays a report of successful completion of the testing operation. If the option is deselected, no messages will be displayed after successful testing. Regardless of the status of these options, a diagnostic message window with the appropriate information will appear in case of a testing error.

Path Parameters Settings Dialog

To access this dialog, select the command “Settings...” from the Parameters menu and choose the “Paths” tab. The dialog’s contents are described below.



Temporary File Folder:

WinRAR uses the specified folder to create temporary files. If this field is empty, all temporary files and folders are created in the current folder. This parameter is only meaningful when working with archives. Temporary files transmitted by external viewers are always created in the Windows temporary folder.

- **Use Only When Working with Removable Disks:**
When working with hard disks, as a rule, it is faster to create a temporary archive in the current folder. For diskettes, however, it is more efficient to first create an archive on the hard disk, and then later copy it to the diskette. To force WinRAR to archive data on a diskette this way, you must select the option “Use Only When Working with Removable Disks.”
- **Browse:**
Press this button to select a folder for temporary files from the folder tree.

Start-up Folder:

- Here you can enter the name of the folder to which WinRAR will go immediately after launch.

RAR or ZIP?

WinRAR can create archives in two different formats: RAR or ZIP. Below I will describe the advantages of each.

ZIP Archives

The main advantage of the ZIP format is its popularity. Most archives on the Internet are in ZIP format. If you want to send someone an archive, but are unsure whether the recipient has WinRAR to unarchive it, it makes sense to use ZIP. On the other hand, in that case you could send a self-extracting (SFX) archive. Such archives are a little larger than ordinary files, but their extraction requires no additional programs.

The other advantage of ZIP is speed. ZIP archives are usually created faster than RAR archives.

RAR Archives

In most cases, the RAR format permits substantially better compression than ZIP, especially for continuous archives. The other important feature of RAR is its support for multi-volume archives. They are much more convenient and easier to use than the so-called “spanned” ZIP archives. WinRAR does not support such ZIP archives; multi-volume archives can be created only in RAR format.

Also, the RAR format has several important capabilities that ZIP lacks, such as the addition of recovery information, which permits recovery of a physically damaged file, and the locking of important archives to prevent inadvertent modification.

Selection of Optimal Archiving Parameters

When creating a new archive, first of all you have to select the format. If you are not sure that the recipient will have WinRAR, it is better to use ZIP. Otherwise, it is better to choose RAR, which has more functions and better compression. For more detailed information on archive formats, see the section, “RAR or ZIP?”

After the format, you have to select the compression method. Both formats support six archiving methods: “None,” “High Speed,” “Fast,” “Normal,” “Good,” and “Best.” The “Best” method provides the highest compression ratio, but the lowest speed. On the other hand, “High Speed” compresses poorly, but very quickly. “None” simply places the files in an archive without compression. If you are creating an archive for distribution or long-term storage, it might make sense to sacrifice time and select “Best” to obtain maximum compression. But if you are creating a weekly backup copy of your data, then as a rule it is better to choose “Normal.”

If you selected ZIP for your format, setup ends here. The possibilities described below are supported only by RAR archives.

The next parameter is dictionary size. It can take a the value of 64, 128, 256, 512, or 1024 KB. Larger values of this parameter give better but slower compression, i.e., everything here is similar to the choice of compression method. In general, it is better to select a dictionary size of 1024 KB, and control the size/speed ratio by varying the compression method. However, it should be kept in mind that large dictionaries use more memory. The memory required can be calculated approximately by the formula $\langle \text{dictionary size} \rangle \times 5 + 2048$ KB. If the computer has only 16 MB of memory, you should choose a smaller dictionary, say, 256 KB. Also, if you are creating a self-extracting archive using the SFX module for DOS, the dictionary size can only be 64 KB, because the SFX module for DOS does not support larger dictionaries. Other SFX modules do not have this limitation.

Note that the compression method and dictionary size have no effect on the speed or memory requirements for file extraction.

The next parameter is continuous compression. This mode is described in detail in the “Continuous Archives” section; here I will give only the basic principles for selection. If you are interested in the maximum compression ratio, use continuous compression, but if you need the maximum speed for updates or individual file extraction, or if you want to reduce data loss in case of damage to the archive, you should not use continuous archiving.

A separate method is multimedia compression. When archiving in this mode, WinRAR tries to use an additional algorithm to improve the compression of data such as digitized sound, which contains four 8-bit or two 16-bit channels, or full-color (24-bit) graphic images in BMP format. This can achieve a 30% better compression ratio than ordinary compression. As a rule, this method does not affect the compression ratio of ordinary data, although sometimes it can improve it slightly, and sometimes even degrade it. Note that this method cannot improve the compression of already compressed sound or graphic data, so it is useless when archiving JPEG or MPEG files. But it compresses uncompressed WAV and full-color BMP files well.

These are all the basic settings that affect compression ratio and speed. They actually should be set for each archival. It's simple to select your standard settings in the Archiving Parameters dialog once, and then you can change individual values in the Archive Name and Parameters Input dialog or using command line switches, if you run WinRAR from the command line. The only exception is the archive format, which cannot be selected with a command-line switch. Instead, you can force either of the formats by explicitly specifying the extension .rar or .zip in the archive name. In the WinRAR shell mode, you can select the archive format in the Archive Name and Parameters input dialog just as the other parameters can.