INSTALLATION AND INSTRUCTION DOCUMENT

ZWiz (ZIP Wizard)

AT Version 1.2

Copyright 1990 Robert S. King

Published by Wordsetters P. O. Box 709 Winterville, GA 30683

Introduction

ZWiz is a set of WordPerfect 5.1 macros integrated as a full-featured shell for PKWARE's popular ZIP archive program. ZWiz allows for easy ZIPing and unZIPing of files while still in WordPerfect. Special features include multiple command line options and the ability to retrieve a file from inside a ZIP into WordPerfect. The program is menudriven and is thus easy to use, though you should read this document in its entirety before executing ZWiz. You may wish to customize some of ZWiz's routines to fit your specific needs. Alteration of these macros is permitted, though distribution of your customized version is strictly prohibited.

In any event, please keep backups of your original documents. Neither the author nor Wordsetters will be held responsible for any damages resulting from any use of this program whatsoever.

One other note on customization: WordPerfect Corporation is constantly changing its program. This version of ZWiz has been tested on the June 29, 1990 release of WP 5.1. Each new release requires slight modifications to the macros. The latest ZWiz will always be available for download from The Express Line BBS (FidoNet 1:370/20)--node 1: (404) 742-8313 for first-time callers, 2400 baud; node 2: (404) 742-7736, 9600 baud. Or you may receive a copy through the mail by sending a self-addressed, stamped disk mailer with floppy disk to the address shown above.

System Requirements

To run ZWiz you should have the following at minimum:

MS-DOS version 2.0 or greater
640K RAM
Hard Disk Drive C with at least 1 megabyte free
WordPerfect 5.1
PKZ110.EXE (Phil Katz's archive program containing PKZIP, PKUNZIP, etc.)
FV.COM (Vernon Buerg's archive file viewer, included in the ZWiz archive--but see
Acknowledgements/Disclaimers below for important information).

Testing

Zwiz has been tested on several 80286 and 80386 machines, and it has performed, in terms of elapsed time, comparably to other popular shells, such as ArcMaster and Shez. ZWiz has also been tested on a 4.77 MHz PC, and it has performed predictably slower. Users of such machines will have to determine for themselves the program's suitability for their needs.

Automatic Installation

Execute the macro **ZWSETUP.WPM** and follow the prompts. It's the easiest game in town!

Manual Installation

The distribution disk (or the archive file, if you downloaded ZWiz from a bulletin board) contains two internal ZIP files. The complete list of files is as follows:

ZWIZXT.ZIP, in which are found:

FV.COM	Vernon	Buerg's	File	Viewer	(see	Acknowledge-
ments/Disclain	ners below)					
FV.DOC	Document	tation for F	V			
ZWTAG.WPM	Allo	ws tagging	of indiv	idual files v	vithin ZIF)
ZWTAG2.WPM	Allows tag	ging of file	s within	ZIP; shows	file com	ments
ZWUZ.WPM	Main macro for unZIPing files					
ZWZ.BAT	General batch file for ZIPing files					
ZWIZ.WPM	Main ZWiz macro					
ZWSAVE.WPM	File saving routines					
ZWZ2.WPM	Controls n	ew target	directory	/ selection	for ZIPing	g files

ZWIZAT.ZIP, in which are found:

FV.COM	see above	
FV.DOC		Note: The coding of these
ZWTAG.WPM	see ab	ove duplicate files differs
ZWTAG2.WPM	see above	dramatically from the
ZWUZ.WPM	see above	above.
ZWIZ.WPM	see above	
ZWSAVE.WPM	see above	
ZWTASKS.WPM	File handling	routines

Separately in the main archive are:

README.1ST	Setup info and version history for ZWiz
ZWIZXT.DOC	ZWiz XT complete documentation, ASCII version

ZWIZXT.DOK ZWiz XT complete documentation, WordPerfect 5.1 version

ZWIZAT.DOC ZWiz AT complete documentation, ASCII version

ZWIZXT.DOK ZWiz AT complete documentation, WordPerfect 5.1 version

ZWSETUP.WPM ZWiz installation macro

All WPM files should be copied into the directory where you keep your macros (press **Shift-F1**, then **6** [location of files] to determine where these files should go). FV.COM should be copied to a directory specified in your boot-up path statement (see AUTOEXEC.BAT file)--usually the root directory (C:\). (Also, PKZIP & PKUNZIP must be in your path statement.) ZWiz will not operate unless those files are properly placed!

Once all files are copied, I recommend that you rename or copy the main executable macro, ZWIZ.WPM, to a shorthand name, such as ALTZ.WPM. This method will allow quick execution of ZWiz. Alternatively, you may wish to assign ZWIZ.WPM to your favorite keyboard (WPK).

Files Used by ZWiz

As needed, ZWiz creates two temporary files, ZW{ZIP}.SET and ZW{CAT}.SET, in the directories affected by the command line options selected. It also creates a temporary document in Document 2 containing options and file list information. <u>Do not delete or move these files while ZWiz is running</u>.

Memory Caveats

ZWiz macros operate by shelling to DOS and calling PKZIP.EXE, PKUNZIP.EXE or FV.COM, as required. If you have a lot of TSRs (stay-resident programs), there may be insufficient memory to run external programs. To get an idea of how much memory you have available after WordPerfect is loaded, press **Shift-F1**, **C** (for DOS command), then **CHKDSK** (assuming this program is in your path statement). The amount of free memory will be shown in CHKDSK's report. If it is less than 140K, you may have difficulty running ZWiz. If such is the case, the only alternative is either to remove some/all of the TSR programs or to use one of WordPerfect's start-up option commands to limit the amount of work-space allotted to WordPerfect.

If you have expanded memory, your options are more flexible, particularly if you are using an expanded memory manager, such as QEMM, which allows TSRs and device drivers to be loaded into high memory, thus freeing up more conventional memory. Even with expanded memory, you may benefit from limiting WordPerfect's work-space. I recommend the following command line to load WordPerfect:

WP/w=120,*

This limits WordPerfect's conventional memory work-space to 120K but allows it to use all available expanded memory. See the WordPerfect manual for other start-up options.

Finally, if you are using a WPK file (keyboard macros) and its contents are large, there will be less memory available for ZWiz's use. One trick in this case is to edit the individual keyboard definitions so that they execute the needed macros rather than

<u>contain all the macro code itself</u>. Accordingly, to reduce keyboard memory overhead, perform the following steps:

- 1. Press **Shift-F1** (Setup Menu)
- 2. Press **K** (Keyboard Layout)
- 3. Press **7** (Edit--assuming the cursor rests on the keyboard you wish to edit)
- 4. Move the cursor to whatever entry you wish to change and press **A** (Action). If the screen appearing next contains the complete macro (i.e., the entry does not already simply call another macro), this definition is a prime candidate for change.
- 5. Press **F7** to get back to the list of key definitions.
- 6. With the cursor on the desired entry, press **S** (Save). You will be prompted for a macro name. Enter whatever name you wish.
- 7. Press **A** (Action) again to edit the contents.
- 8. Hold down the **Del** key until all the macro code is deleted. (If the macro is very long, you may go back to the definition list, delete the item from the menu and simply create it anew.)
- 9. Press **Alt-F10**, enter the name of the macro you just saved. Finally, press **Ctrl-V ENTER**. As an example, suppose we had just saved the contents to a macro called NEWMAC.WPM. Your screen should now show the following string:

{Macro}newmac{Enter}

This short string requires less memory but the needed macro is still available from the same keystrokes.

ZIP Wizard Error Handling

Every effort has been made to make ZWiz safe to operate. If you will follow the prompts, you will have no problem. Nevertheless, a few pitfalls should be mentioned upfront:

- 1. Do not press any keys that aren't called for in the prompts, especially when in a file list display. Even though a lot of error handling code has been programmed into ZWiz, there are a few situations in which WordPerfect inhibits the ability to handle error situations.
- 2. If, for any reason, ZWiz aborts an operation, leaving text on the screen, simply delete the text and start anew.
- 3. Again, keep backups of your files, especially until you are thoroughly familiar with the way ZWiz operates.
- 4. A maximum of three files at a time can be tagged for extraction while in the contents list of any ZIP file (however, files tagged for deletion may be any

number). This is not the author's limitation. The limit is imposed by WordPerfect, which will allow only 59 characters on the "DOS Commands" command line; it is also a limit of the PKUNZIP program (which, unlike PKZIP, does not allow the creation of an ASCII file containing a list of files to process).

Keystroke Rules

In all ZWiz prompts for ZIP filename entry, whether for ZIP or unZIP, there is never any need to type the ZIP extension. This is understood by the program.

<u>IMPORTANT!</u> Turn your CAPS LOCK off! <u>ZWiz will accept only lower case letters for its menu options</u>.

Zip Wizard Operation

Assuming all installation is complete: To begin ZIPing or unZIPing files, execute ZWIZ.WPM (or whatever name you've given it). ZWiz will first verify that Document 2 is empty. If not, you are shown the following message:

Document 2 must be empty to run ZWiz. Please save or remove file from memory and restart macro. Press ENTER to continue.

When the above condition is satisfied, the file list of the current directory displays with the ZWiz initial menu, a typical sample of which is shown in figure 1:

Go new DIR; **E**nter new target DIR; **L**istmask; **U**nZIP options; **Z**IP options Cursor Movement: **Arrow keys**; **PgUp-PgDn**; Find File. **3.** File Tasks **ENTER** views file; **6** Looks; Exit ZWiz: F1 cancels. **H**elp; <Dir> .. Parent <Dir> Current .DOC FV .COM 7,293 09-03-90 01:33a | FV 6,707 09-03-90 01:33a ZWATALL DOC 138,869 11-07-90 10:16a | ZWIZ DOC 17,488 11-07-90 10:05a ZWIZ10 .ZIP 126,055 11-11-90 11:51a | ZWIZAT10.ZIP 22,662 11-11-90 11:50a ZWIZXT10.ZIP 22,077 11-07-90 02:22p | ZWSAVE .DOC 885 11-07-90 10:01a 5,875 11-07-90 04:10p | ZWTAG .DOC ZWSETUP .WPM 9,857 11-07-90 10:02a ZWTAG2 .DOC 10,265 11-07-90 10:02a ZWTASKS .DOC 10,566 11-07-90 10:02a .DOC 35,250 11-07-90 10:04a | ZWZ .DOC 33,041 11-07-90 10:03a



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Figure 1. Initial ZWiz Menu and Directory Display.

The options shown at the top of the screen are generally available, with some differences, in other ZWiz menu structure, such as UnZIP options. These are discussed in detail in the sections following. The initial menu is intended primarily as a shell to the Options menus.

ZIPing Files

If you press \mathbf{z} at the menu shown in Figure 1, the ZIP menu immediately pops up, as in the following example (figure 2):

Go DIR; New target DIR; 1. Path; 2. UnZIP menu; 3. File Tasks. Begin ZIP. Movement: Arrow keys; PgUp-PgDn; Find File. Help; Exit/F1; Listmask. **ENTER** views ZIP; **6** Looks; * tags; **Alt-F5** tags all; - untags under cursor. .. Parent <Dir> Current <Dir> .DOC FV .COM 7,293 09-03-90 01:33a | FV 6,707 09-03-90 01:33a ZWATALL DOC 138,869 11-07-90 10:16a | ZWIZ DOC 17,488 11-07-90 10:05a ZWIZ10 .ZIP 126,055 11-11-90 11:51a | ZWIZAT10.ZIP 22,662 11-11-90 11:50a ZWIZXT10.ZIP 22,077 11-07-90 02:22p | ZWSAVE .DOC 885 11-07-90 10:01a 5,875 11-07-90 04:10p | ZWTAG DOC ZWSETUP .WPM 9,857 11-07-90 10:02a ZWTAG2 .DOC 10,265 11-07-90 10:02a | ZWTASKS .DOC 10,566 11-07-90 10:02a .DOC 35,250 11-07-90 10:04a | ZWZ .DOC 33,041 11-07-90 10:03a ZWUZ

a. add; c. comment files; d. delete w/comments; s. delete w/o comments; f. freshen; k. keep same date; m. move; o. set to latest; u. update; v. view w/comments; z. ZIP comment; y. Reset options/files; 4. Make SX

Figure 2. ZIP Options Menu and Directory Display.

ZIP Menu Options

Top Menu

Go DIR: Pressing **G** will allow you to change the file directory and will show the following prompt:

Enter drive letter to change to:

Then you are asked to type in the directory name:

Enter directory to change to (omit \), press ENTER

<u>Important!</u> When this prompt appears, do not type the leading \ character before the main directory name. The necessary backslash characters are already in the program. However, if you wish to log onto a subdirectory, you would type that character between directory and subdirectory. The following examples demonstrate the proper syntax:

For changing to a new directory on a hard disk:

Incorrect: \wpfiles

\wpfiles\letters

Correct: wpfiles

wpfiles\letters

Exception to the rule: If the prompt requests <u>full pathname</u>, then the \ character should be included.

<u>For changing to a floppy disk</u>, simply press **ENTER** when the prompt for directory appears.

New Target DIR: This sets the drive and directory into which the ZIP file will go. For example, it is possible to tag files in the current directory and place the resulting ZIP file in another directory. After pressing **e**, you are shown the following prompt:



······Please·choose·a·number:············

·1.·Type·in·full·pathname·(e.g.,·D:\ARCHIVE)·····

·2.·Look·at·directories, then type full pathname ·

If you choose **1**, you are prompted for drive and directory. If you choose **2**, you are given the following:



·Use·arrow·&·return·keys·to·move·around·directories,·**33** press·**F7**·when·ready·to·choose·target·directory·····

<u>A few words of caution</u> are in order regarding change of target directory: Common sense must be used. If, for example, you wanted to "view comments," you would not want the target directory changed, as this option will <u>view</u>, not <u>extract</u> files. Likewise, you would not change the target directory if you wanted to delete files from a ZIP archive.

This document assumes you are already familiar with PKZIP command parameters. If not, you would be wise to review them. Of course, you may routinely need only a few of the ZIP (or unZIP) options. Most users will stick to ZIP options **a, f, s, and m**; and to unZIP options **a, n, and o** (discussed later).

1. Path: temporarily removes the top menu and shows your current drive/directory:

YOU-ARE-HERE:-========>

PRESS-ENTER-TO-CONTINUE

- **2.** UnZIP Menu: takes you to the UnZIP options menu (figure 5 below).
- **3.** File Tasks: When called, this menu will allow basic file handling such as copy/move/delete, etc. (see **File Tasks** section below).

Begin ZIP: This is the key to make it go! Once you have selected all the options

and tagged all the files you need, press this key to begin the ZIP operation.

Movement: **Arrow keys**; **PgUp-PgDn**: These function exactly in the same manner as the normal WordPerfect keys.

Find File: Pressing i will allow you to move the cursor quickly to the needed file in the directory list. The following prompt appears:

Type name to search for, press ENTER

Help: Allows you to search for the topic you need help with (online help not available in the shareware version, though the DOK & DOC files included in the ZWiz archive contain complete information).

Exit/F1: Pressing either the x or F1 keys will exit ZWiz. Please note also that the F1 (cancel) key can be used at any point in ZWiz to cancel the current operation.

Listmask: Sometimes you will not want to wade through a long file list. You may, through the use of wildcards (*), select the file specifications you need to see. Pressing **I** will first give you the following options:

Please choose filename pattern:

1. *.zip 2. *.doc 3. *.txt 4. *.wpm 5. *.* 6. Other (you type)

ENTER views ZIP: To view a ZIP file, simply move the cursor to the file and press ENTER. The directory of the ZIP will promptly display.

6 Looks: To view a non-ZIP file, move the cursor to the file and press **6**.

* tags: To tag a file for ZIPing (do not tag a file with the ZIP extension unless you want it added to the archive), move the cursor to the file and press *. The file will be added to a list for processing (which may be reviewed at any time--see <u>Bottom Menu</u>, item **y** below). Note that only the last file you tagged will appear with the * in the directory list, but all tagged files will be shown in the **y** options display.

Alt-F5 tags all. This assumes that you want every file in the current directory added to a ZIP file. Before selecting this operation, be sure to choose the needed option(s) (see <u>Bottom Menu</u> below).

- untags under cursor. If you wish to untag a file from the processing list, move the cursor to the file and press -.

Bottom Menu

A brief synopsis of the ZIP Options shown at the bottom of the directory display (figure 2) is as follows:

- **a**. add: Will add all tagged files to the designated ZIP file. If the ZIP file already exists in the current directory, all non-ZIP files will be placed in that ZIP archive.
- ${f c}$. comment files: Will prompt you to add new comments, or to change old ones, to each file within the designated ZIP archive. This is different from the ${f z}$ option, which adds a comment to the general ZIP file name, not to its individual files.
- **d**. delete w/comments: Pressing **d** prompts you for a filename and then retrieves the directory of the designated ZIP file, asking you (figure 3) to tag the file(s) you wish to delete from the archive. This is the same as **s** below, except the directory of the ZIP file is displayed with comments, if any, which you have attached to the files within the archive. Please note that if the ZIP archive contains many files, it could take up to 25 seconds (depending on your computer's speed) before you see the directory display. A sample screen is shown below:

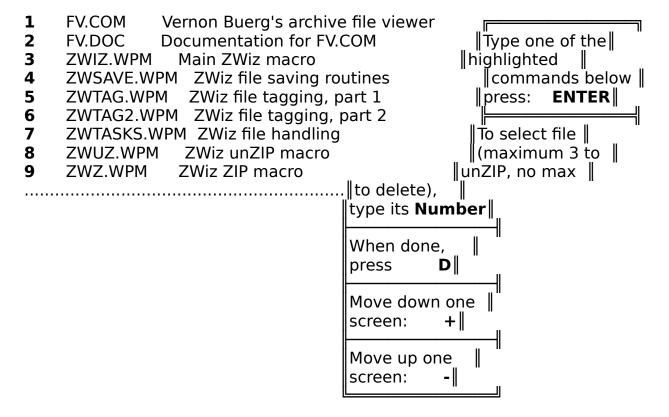


Figure 3. Sample File Tagging Screen.

- **s**. delete w/o comments: Retrieves the directory of the designated ZIP file and prompts you (figure 3) to tag the file(s) you wish to delete from the archive. This is the same as **d**, except that the comments column will not appear (this method is thus a little quicker).
- **f**. freshen: <u>Unlike other ZWiz functions</u>, it is not necessary to tag files before selecting this option. Freshening updates files that already exist in the ZIP file with same-named files with later times and dates. When **f** is pressed, the following prompts displays:

Type name of file to freshen, press ENTER

- **k**. keep same date: The current ZIP file date is kept no matter what the dates of the files added to it are.
- **m**. move: The tagged files are deleted from disk after being compressed and copied into the ZIP archive.
 - o. set to latest: The ZIP file date is set to the date of the newest file within it.
- **u**. update: The existing ZIP file will be updated with files only if they are not currently in the ZIP file, or if they are dated later than those with the same name already

in the ZIP file.

- **v**. view w/comments: Unlike pressing **ENTER** to view a ZIP, this option displays the directory of the chosen archive file(s) and also shows any comments written for those files. It is possible to view more than one file from a single directory by typing an asterisk (*) when prompted for a filename. **Do not include the ZIP extension**.
- **z**. ZIP comment: Adds a comment to the general ZIP file, not to the files contained within.
- **y**. Reset options/files: Pressing **y** will immediately display the current tagged file list, the options chosen, and show you the target directory. You will also see a menu at the bottom which allows you to reset options and files. A sample screen is shown below (figure 4):

Options: -m Files: TEXT1.DOC TEXT2.DOC TEXT3.DOC

Target destination is c:\document

Please choose a number:

1. Reset options; 2. Reset file list; 3. Reset both; 4. Leave as is

Figure 4. Reset Options/Files Menu.

4. Make SX: This option converts an existing ZIP file to an EXE file (self-extracting archive). It is not necessary to tag the ZIP filename; you are prompted for the name immediately after pressing **4**.

Sample ZIP Session

First let's assume we have a file (**TRASH.CAN**) in the current directory (**C:\JUNK**) which we want to add to the ZIP file (**OZONE.ZIP**) located in another drive and directory (**D:****RECYCLE**):

ZWIZ.WPM is executed and the menu in figure 2 displays (with a different file list, of course).

Use the arrow keys to move to the file **TRASH.CAN**.

Press *

The file is tagged and placed in the Files list (as in figure?), after which the directory is redisplayed.

Press a

This places the proper PKZIP option parameter in the Options list (as in figure 4).

<u>NOTE</u>: Sometimes the letter shown in the Options field will differ from the letter you pressed at the Options Menu. This is because of conflicts between PKZIP parameters and the available ZWiz menu options. You need only know that ZWiz will issue the proper command to PKZIP or to PKUNZIP, as the case may be.

Press e

The prompt appears (figure ?)

Press 1

Press **d** (to enter the drive letter)

Type **recycle**

Press **ENTER**

Press **b** (to begin the ZIP operation)

Type **ozone**

Press **ENTER**

The ZIP operation will begin.

unZIPing Files

Pressing **u** from the initial ZWiz menu (figure 1) or **2** from the ZIP options menu (figure 2) will take you to the UnZIP options menu, as in the following example (figure 5):



- a. UnZIP w/ask; d. Create DIRs; n. Extract only newer; o. overwrite;
- q. Retrieve w/o comments; r. Retrieve w/comments; t. Test integrity;
- u. Tag w/comment; w. Tag w/o comment; y. Reset opts/files; 4. Do SX 🗱

Figure 5. Initial UnZIP Options Menu (w/option to change target directory).

Top Menu

Again, the options on the <u>Top Menu</u> are the same as for the ZIP menu. Like the ZIP options menu, pressing **b** begins the archive operation (see <u>Top Menu</u> under **ZIPing Files** above).

Bottom Menu

The unZIP options (bottom menu) are explained as follows (see PKUNZIP documentation for greater detail):

- **a**. UnZIP w/ask: All files are extracted to the target directory; the original ZIP file remains. If a file already exists in the target directory, you are prompted to overwrite.
- **d**. Create DIRS: allows recursive unZIPing; i.e., if the ZIP file stored the complete path information of the original files, the directories will be recreated upon extraction.
- **n**. Extract only newer: Only files newer than the ones of the same name(s) already in the target directory will be extracted.

- **o**. Overwrite: All files in the ZIP are extracted to the target directory without confirmation for overwriting any existing files of the same name.
- **q**. Retrieve w/o comments: Unlike \mathbf{r} below, this is for a quick display of the ZIP files contents. **Only one file at a time may be processed**. When the file list displays, the screen displays as in figure 3 above.
- **r**. Retrieve w/comments: This is the same as **q** above, except that the ZIP file's directory is displayed with file comments in the second column, if any. This method of retrieval is noticeably slower than **q**, but is helpful in identifying potential file deletions.
- **t**. Test integrity: checks the designated ZIP file to ensure it is not corrupt. You may check more than one ZIP file simply by tagging each file you wish to test.
- **u**. Tag w/comment: Same as **s**, but shows file comments, if any. This displays the contents of the chosen ZIP file and prompts you to tag the file(s) you wish to extract (see figure 3).
 - **w**. Tag w/o comment: Same as **u** above, but does not show comments.
 - y. Reset opts/files: Exactly the same as y on the ZIP options menu (see above).
 - **4**. Do SX: Any self-extracting archive may be unZIPed using this option.

That's all there is to it!

File Tasks

Pressing **3** either from the initial ZWiz menu or from the ZIP or unZIP options menus takes you to a file handling menu from which you may do routine copy/ move/delete tasks. This is generally the same as WordPerfect's own menu and is included in ZWiz only for convenience. For example, if you have been in the ZIP options menu and have tagged files for processing, you may go to the File Tasks menu without erasing the work you've done.

Shareware versus Registered Version

The registered version of ZWiz contains the following added features:

- 1. Online help screen
- 2. More ZIP & unZIP options.

Registration

Basic registration of ZWiz is \$15.00 + \$2.50 postage and handling. That amount entitles you to future upgrades of the program for only a nominal handling cost. On receipt of initial payment, you will be mailed the registered version. Thereafter, you may receive any upgrade by sending a self-addressed, stamped disk mailer with floppy disk to the address shown on the order form at the end of this document. You can determine if a new version has been released by calling the Express Line BBS--see third paragraph under **Introduction** above. The Shareware and Registered versions follow the same numbering scheme--e.g., ZWIZ10.ZIP, ZWIZ11.ZIP (version 1.0, 1.1, etc.).

I hope you find ZWiz useful, and I thank you in advance for your support.

Future Plans

ZWiz will be expanded or improved as interest dictates. If enough WordPerfect users want versions compatible with other archive formats, such as PAK, ARC, LZH, ZOO, etc., those revisions will be offered.

User input/suggestions are always encouraged and considered.

Acknowledgements/Disclaimers

PKZIP and PKUNZIP are products of Phil Katz's PKWARE, Inc., which in no way is affiliated with Wordsetters. Users are expected to abide by the terms and conditions of product use and registration stipulated in the PKZIP110 documentation files.

Likewise, FV.COM is a product of Vernon Buerg who has kindly granted permission to Wordsetters to include his fine program in our ZWiz distribution archive.

If you use any of these products, you are required to register them, and we strongly encourage you to support shareware.

Also available from Wordsetters:

<u>PASSKEY</u> is a menu-driven productivity platform that runs under WordPerfect. A few of PASSKEY's features are a time-saving, fully customizable generic style platform that helps novice word processors input type like pros; easy input of all Latin alphabet-based languages and the foundation for working with other commonly needed symbols and languages like Russian and Japanese; tools such as a simple fraction generator, width calculator, error cleanup routines (including access to DocDoc, below); quick setup of variable storage keys; and much more!

Author: Diane Kistner. Registration price per copy: \$15.00

<u>DOCDOC</u> (Document Doctor) is an integrated set of WordPerfect 5.1 macros designed to facilitate cleanup and formatting of documents imported from other systems and/or other "typists." It provides for menu-driven or automatic operation. Special features include stripping and conversion of codes into generally accepted typesetting formats.

Author: Robert S. King. Registration price per copy: \$15.00

<u>WPMKEYS</u> is a macro-making keyboard for WordPerfect 5.1. It provides a quick means of macro coding while running WordPerfect's internal macro editor. It includes coding for all WordPerfect macro commands (as of the 6/29/90 release) and is included free of charge in any Wordsetters distribution disk.

Author: Robert S. King. Registration price: none, Freeware.

We are always working on enhancements to the above products as well as on new ones. Send self-addressed, stamped envelope for current product information to

Product Updates Wordsetters P. O. Box 709 Winterville, GA 30683

Registration Form

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