C O N T E N T S

WordPerfect Macros Manual

Converting 5.1 Macros to 6.0

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Macros are converted from 5.1 to 6.0 with the conversion utility MCV.EXE. This utility is executed from a DOS prompt by typing MCV. You can either include a complete command line using the syntax below, or allow the utility to prompt you for the source and destination of the macros to convert. If you want to cancel the conversion at any point, press ESC, Cancel, Exit, or Ctrl+Break. The conversion will quit after converting the current file.

Syntax: MCV Options Source Destination◄

Parameters: Options (optional)◄

Option	Description
/b	If a 5.1 macro is designed to execute only when block is on, conversion with this option assumes that the macro will still only be executed when block is on.
/h	Displays the conversion utility help screen giving the syntax and list of start-up options.
/l-logfile	Specifies the name of a file to which all on-screen messages associated with the conversion are saved.
/o	Allows the utility to automatically replace the destination file if it already exists. The utility will not prompt for replacement.
/q	Removes quotation marks from text strings.
/s	Conversion uses 6.0 macro command abbreviations.

Source
The name of a macro, or wildcard characters representing a group of macros, to convert.

Destination
The path and/or name of the converted macro.

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Recording, Editing and Compiling 6.0 Macros

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Creating WordPerfect 6.0 macros is a process of recording, editing and compiling macro commands. Each part of the process will be described in this section.

Recording Macros

There are several ways to record macros. You can let WordPerfect record commands for you, or you can type in the appropriate commands yourself. You can also use these two methods in combination.

> To record a macro,
>
> 1   Choose Macro from the Tools menu, then choose Record.
>
> Alternate Method: Or Press Ctrl+F10
>
> 2   Type a filename for the macro. WordPerfect assigns a .WPM extension to the filename for you.
>
> 3   Choose OK to begin recording the macro.

The message "Recording Macro" displays in the lower left corner of the document window throughout the recording process. WordPerfect records commands from the keyboard (including any text you type) as well as selections made with the mouse. However, while a macro is recording, the mouse cannot be used to position the cursor in the document window. If you want to position the cursor in the document window, you must use the keyboard.

> To stop recording,
>
> 4   Choose Macro from the Tools menu, then choose Stop.
>
> Alternate Method: Or Press Ctrl+F10

You can record programming commands such as ASSIGN and system variables such as ? Name by selecting them from the Macro Control dialog box.

> To record Programming Commands or System Variables,
>
> 1   Press Ctrl+PgUp, then select Macro Commands.
>
> Alternate Method: Or Press Ctrl+PgUp, Ctrl+PgUp
>
> 2   Highlight the command or variable to record, then press Enter and fill in the appropriate parameters.
>
> 3   Choose Insert.

Editing A Macro

Since WordPerfect 6.0 macros do not need a macro editor, they can be opened into, and edited from, any document window.

> To open a macro,
>
> 1 Choose Open from the File menu
>
>   Alternate Method: Or Press Shift+F10
>
> 2 Type the filename of a macro, including the .WPM extension.
>
> 3 Choose OK

The macro is opened into the current document window. You can type in new commands or edit existing ones. You can also record Programming Commands or System Variables with the method described in Recording Macros. If you want to record Product Commands, such as Margin Top, you can switch to a recording mode.

> To record while editing,
>
> 1 Press Ctrl+PgUp, then choose Macro Record Document.
>
> 2 Choose OK.

The message "Edit Macro: Press Shft+F3 to Record" will display in the lower left corner of the document window. If you switch to record, the recorded commands are inserted into your macro at the cursor. You can switch between recording and editing as many times as you want.

> To stop editing,
>
> 4 Choose Exit from the File menu.
>
> 5 Choose Save and Exit.

Compiling a Macro

A macro compiler is used to compile or "translate" macros so that WordPerfect can play them.

> To compile a macro,
>
> 1 Save the macro.
>
> or
>
> 2 Play the macro.

If you receive an error message during the compilation, you can either edit the macro or save the macro. If you choose to save the macro, the errors will still need to be corrected before it will play. If you choose to edit the macro, the macro file opens and your cursor is placed somewhere after the problem.

The compiler is a useful tool for troubleshooting macro problems. However, it can only make a "best guess" as to what the macro is actually designed to accomplish. As a result, errors

given by the compiler sometimes serve as direction to, rather than specific identification of, the reported problem.

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Variables and Arrays

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Variables

A variable represents a place in memory where data is stored. As its name indicates, the data in a variable is changeable. Using variables, you can calculate values and use text that may change during the execution of a macro. WordPerfect uses two types of variables: system variables and user-defined variables.

  System Variables

  System variables are variables that WordPerfect creates and maintains. These variables contain information about the current state of WordPerfect. You cannot change the names or contents or these variables, but you can obtain and use their contents in a macro. Some system variables contain values corresponding to the enumerated types or numeric equivalents of a product command. If you want to evaluate the variable with programming commands such as IF or WHILE, the expression can contain either the enumerated type or its numeric equivalent. If you type the contents of the variable, the Type command will only type the numeric equivalent. For a list and description of all system variables provided by WordPerfect, see the System Variables Index.

  User-defined Variables

  User-defined variables are variables that you create and name, and whose contents you determine. You can perform operations on these variables to change their contents. There are three types of user-defined variables: Local, Global, and Persistent.

Variable Type	Description
Local	Available for use only in the current macro or in FUNCTIONs or PROCEDUREs containing a LOCAL command.
Global	Global variables are available for use anywhere in the current macro as well as in FUNCTIONs or PROCEDUREs in the current macro.
Persistent	Persistent variables are available for use in any macro, any FUNCTION or PROCEDURE, as well as any merges executed in the current session of WordPerfect.

  You can specify the variable type using the programming commands, LOCAL, GLOBAL, and PERSIST. See the Macro Commands Index for information on these commands.

  All user-defined variables can contain text or numbers. There are a number of programming commands that assign variables. See the Macro Commands Index for information on ASSIGN, CHAR, FORNEXT, FOREACH, GETNUMBER, GETSTRING, GETNUMBER, and LOOK.

Arrays

An array is a collection of related information called elements. Arrays are useful for

organizing the information and assigning consecutive variable names. Array elements can be lists, categories, or any type of information you want contained in one location.

For example, to create an array containing the days of the week, you could use the ASSIGN command as follows:

   ASSIGN (Day; {"Monday" ; "Tuesday" ; "Wednesday" ; "Thursday" ; "Friday" ; "Saturday" ; "Sunday"})

When an ASSIGN command is constructed like this, "Day" becomes the array name and each of the days within the braces ({}) are elements of the array. "Monday" is the first element, "Tuesday" is the second element, and so forth. The elements are in quotes only because they are character expressions that may need to be typed out later. Arrays can also contain numeric expressions and
measurement expressions. For more information on ASSIGN, see the Macro Commands Index.

To use the information contained in each element, you must create a variable by combining the array name with the appropriate subscript. A subscript is a number enclosed in brackets ([]). The number in the bracket should correspond to the position of the element you want to use. For example, Since Thursday is the fourth element, its subscript is [4]. Consequently, the variable name used to access the word "Thursday" is Day[4]. This variable could be used to type "Thursday" using the Type command as follows:

   Type(Day[4])

Arrays are also created by simply declaring the array name along with a subscript and assigning the element contents as follows:

   Day[1]="Monday"
   Day[2]="Tuesday"
   Day[3]="Wednesday"

...and so forth

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Loops and Subroutines

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A loop is a series of commands that repeat a number of times. Loops are created with programming commands and are useful in macros if you want to perform a series of tasks but do not need to supervise every step of the process. For example, you could have a macro search for and delete every occurrence of a specific word or create a certain number of labels. Loops are also useful for obtaining information. For example, you could create a macro to display a dialog box that prompts for mailing address information. The dialog box would continue requesting information for new addresses until the user clicks on a "Last Address" button.

The following programming commands can be used to create loops. See the Macro Commands Index for a complete description and example of each command.

Command Combination	Description
#4264#FORNEXT - #4242#ENDFOR:	A set of commands repeats for a specified number of times.
#4266#FOREACH - #4242#ENDFOR:	A set of commands repeats for a specified circumstance.
#4282#IF - #4246#ENDIF:	A set of commands repeats if a specified condition is satisfied.
#4340#REPEAT - #4386#UNTIL:	A set of commands repeats until a condition has been satisfied.
#4396#WHILE - #4250#ENDWHILE:	A set of commands repeats only while a specific condition exists.

Subroutines

A subroutine is a set of commands you may want to execute several times in a macro. Instead of entering the commands at several locations in the macro, you can include them only once and direct the macro to that location each time the commands are needed. A subroutine is created with programming commands such as FUNCTION, LABEL, and PROCEDURE. A macro is directed to a subroutine with programming commands such as CALL, GO, ONERROR, ONCANCEL, and ONNOTFOUND. See the Macro Commands Index for more information on these commands.

Since there may be more than one subroutine in a macro, the name associated with each one must be unique. The label name must be entered in the command that directs execution to the subroutine, for example GO(MyLabel). The label must match the name of the FUNCTION, LABEL, or PROCEDURE to which execution is directed.

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Operators

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WordPerfect supports the evaluation of expressions with several operators. Consequently, some order of evaluation must be followed. The operator precedence used by WordPerfect is similar to the accepted precedence for mathematical operators in formal programming languages.

The following table shows the order in which operators are applied (operators of the same precedence are evaluated left to right in the expression):

Order	Operators
1	(), -(unary minus), +(unary plus), ~(bitwise not), NOT(logical not)
2	*(multiply), /(divide), %(mod), DIV(integer divide)
3	+(add), -(subtract)
4	<<(shift left) >>(shift right)
5	<(less than), <=(less than or equal to), >(greater than), >=(greater than or equal to), <>(not equal) =(equal)
6	&(bitwise and), |(bitwise or), ^(bitwise xor)
7	AND(logical and), XOR(logical xor)
8	OR(logical or)

You can override the operator precedence by placing parentheses around the elements you want evaluated first. Elements inside the parentheses are always evaluated before the elements outside. If parentheses are nested, the innermost parentheses are evaluated first.

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List of Shipping Macros

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The following predefined WordPerfect macros can help you perform several common tasks. All of the following macros except ALLFONTS.WPM and LIBRARY.WPM are on the MACROS keyboard, and all of them except EXITALL.WPM and LIBRARY.WPM are also on the MACROS Button Bar (see Setup: Keyboard Layout and Button Bar for more information). Although these macros are much easier to play from the keyboard or Button Bar, the files listed below are included so that you can modify them for your own needs.

ALLFONTS.WPM
This macro types the names of all fonts for the current printer in their respective typefaces.

BULLET.WPM
This macro inserts a bullet character of your choice at the beginning of the current paragraph or each paragraph in a series of blocked paragraphs.

CALC.WPM
This macro displays a calculator that you can use for mathematical calculations.

EDITCODE.WPM
This macro lets you easily edit codes. For example, in Reveal Codes you can place the cursor on a graphics box code and use this macro to go quickly to the graphics box editor.

EXITALL.WPM
This macro returns you to the main editing screen from any subscreen or dialog, such as the footnote editing screen.

GLOSSARY.WPM
This macro lets you create and expand glossary entries. A glossary entry is an abbreviation such as ASAP (as soon as possible).

INITCAPS.WPM
This macro capitalizes the first letter of the current word.

LIBRARY.WPM
This macro contains a collection of functions and procedures that are used by several of the other predefined macros. Any macro that contains the command USE("LIBRARY.WPM") can use the functions and procedures defined in LIBRARY.WPM.

MEMO.WPM
This macro opens a menu that helps you format a memo, letter, or fax cover sheet.

MOD_ATRB.WPM
This macro helps you modify font attributes.

NOTECVT.WPM
This macro opens a menu that lets you convert footnotes to endnotes or endnotes to footnotes.

PLEADING.WPM
This macro opens a menu that helps you create a style for pleading papers. It then inserts the style into your document so that you can create a pleading paper.

SPACETAB.WPM
This macro opens a menu that helps you convert spaces to tabs.

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Appendix A: Keystroke Numeric Equivalents

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Keystroke	Numeric Equivalent
A	97
B	98
C	99
D	100
E	101
F	102
G	103
H	104
I	105
J	106
K	107
L	108
M	109
N	110
O	111
P	112
Q	113
R	114
S	115
T	116
U	117
V	118
W	119
X	120
Y	121
Z	122
1	49
2	50
3	51
4	52
5	53
6	54
7	55
8	56
9	57
0	48
~	126
`	96
-	45
=	61
!	33
@	64
#	35
$	36
%	37
^	94

&	38
*	42
(	40
)	41
_	95
+	43
[	91
]	93
\	92
{	123
}	125
		124
;	59
'	39
:	58
"	34
,	44
.	46
/	47
<	60
>	62
?	63
F1	-8158
F2	-8159
F3	-7832
F4	-8157
F5	-8156
F6	-8155
F7	-8154
F8	-8153
F9	-8152
F10	-8151
F11	-8134
F12	-8133
ALT+F1	-8136
ALT+F2	-8135
ALT+F3	-8134
ALT+F4	-8133
ALT+F5	-8132
ALT+F6	-8131
ALT+F7	-8130
ALT+F8	-8129
ALT+F9	-8128
ALT+F10	-8127
ALT+F11	-6774
ALT+F12	-7675
CTRL+F1	-8124
CTRL+F2	-8123
CTRL+F3	-8122
CTRL+F4	-8121
CTRL+F5	-8120
CTRL+F6	-8119
CTRL+F7	-8118
CTRL+F8	-8117
CTRL+F9	-8116

CTRL+F10	-8115
CTRL+F11	-7759
CTRL+F12	-7163
SHIFT+F1	-8148
SHIFT+F2	-8147
SHIFT+F3	-8146
SHIFT+F4	-8145
SHIFT+F5	-8144
SHIFT+F6	-8143
SHIFT+F7	-8142
SHIFT+F8	-8141
SHIFT+F9	-8140
SHIFT+F10	-8139
SHIFT+F11	-8046
SHIFT+F12	-7149
Arrow Down	-8166
Arrow Left	-8167
Arrow Right	-8168
Arrow Up	-8169
Backspace	-8112
Delete	-8111
End	-8107
Enter	-8182
Escape	-8160
Home	-8184
Insert	-8099
Page Down	-8102
Page Up	-8103
Tab	-8183

Appendix B: Key Names

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Key	Name
F1	CancelKey
F2	SearchDlg
F3	RepeatDlg
F4	Indent
F5	ListKey
F6	BoldKey
F7	ExitDlg
F8	UnderlineKey
F9	EndField
F10	FileSaveDlg
F11	RevealCodesKey
F12	BlockKey
ALT+F1	WritingToolsDlg
ALT+F2	ReplaceDlg
ALT+F3	RevealCodes
ALT+F4	BlockKey
ALT+F5	MarkTextDlg
ALT+F6	FlushRight
ALT+F7	ColumnsTablesDlg
ALT+F8	StyleDlg
ALT+F9	GraphicsDlg
ALT+F10	MacroPlayDlg
ALT+F11	TableEdit
ALT+F12	EnvelopeDlg
CTRL+F1	ShellDlg
CTRL+F2	SpellerDlg
CTRL+F3	ScreenDlg
CTRL+F4	MoveDlg
CTRL+F5	OutlineDlg
CTRL+F6	TabDecimal
CTRL+F7	NotesDlg
CTRL+F8	FontDlg
CTRL+F9	MergeSortDlg
CTRL+F10	MacroRecordDlg
CTRL+F11	TabDlg
CTRL+F12	Save
SHIFT+F1	SetupDlg
SHIFT+F2	SearchBackwardDlg
SHIFT+F3	SwitchKey
SHIFT+F4	IndentLeftRight
SHIFT+F5	DateDlg
SHIFT+F6	Center
SHIFT+F7	PrintDlg
SHIFT+F8	FormatDlg
SHIFT+F9	MergeCodesDlg
SHIFT+F10	FileRetrieveDlg
SHIFT+F11	WPCharDlg

Glossary

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Active
An application, document window, or dialog box that is currently in use.

Character Expression
A series of one or more WordPerfect characters enclosed in quotation marks so the macro will recognize the characters as text, not a variable.

Check Box
A check box turns an option on or off. If the check box contains an X, the option is turned on. When text is selected in a document, a shaded check box indicates that the option is on in only part of the selected text. You can select more than one check box in a group.

Codes
Formatting commands that make the computer and printer perform various procedures. Codes are symbols that the computer and printer understand. They can be edited in Reveal Codes.

Command Name
The word or string of words that begin a macro command. The command name generally indicates which feature is involved in executing a complete macro command.

Compile
Before a macro can play for the first time, it must be compiled. When a macro is compiled, the program checks all the commands to see if there are any errors and displays an error message if there are. Only a macro with no errors can be played. Some commands are designed to take effect during compilation while others occur during the actual playing of the macro. Each time a macro is edited and saved, it must re-compile before it can be played. The program will automatically compile macros for you.

Conditional Statement
A statement created with macro programming commands such as IF and WHILE. A conditional statement contains expressions such as text, numbers, or variables to be evaluated. The flow or direction of the macro can be affected by the "condition" of these expressions at the time they are evaluated.

Dialog Box
Dialog boxes let you communicate with the WordPerfect program. They display warnings and messages and they let you select options and implement those options by choosing appropriate command buttons. Dialog boxes must be closed before you can work in the document window. When a dialog box option is unavailable and cannot be used, it will appear dim.

Enumerated Type
The parameters for certain product commands can only accept certain words. These words are referred to as "enumerated types." Each enumerated type ends in an exclamation point and has a numeric equivalent. For example, the product command DisplayMode has one parameter and will only accept the words Text!, Graphics!, or FullPage!

as entries in that parameter.

File
A document or other type of information that has been saved to a computer disk under an identifying name.

File Format
The pattern in which a file is organized. Each application creates documents in a unique format which is not accessible by other applications unless those documents are converted to the new application's format.

Filename
The name given to a file of information on disk. The name may be up to eight characters long, with an optional three letter extension, such as MYLETTER.ANN.

Macro Command
An instruction for WordPerfect to carry out. The instruction can be in the form of a programming command or a product command. Many macro commands must be used together with other macro commands to be successful in giving a complete instruction.

Measurement Expression
A number representing a measurement which can, but does not have to be followed by a unit of measurement character (", c, p, u). If a unit of measurement character is not specified, the program's current unit of measurement will be used. A measurement expression should not be enclosed in quotation marks.

Memory
The temporary data storage area for a computer or printer.

Numeric Equivalent
The ASCII value of a character. Also, the number that can be used in place of an enumerated type. For example, if you are using the FootnoteNumberMethod product command and want to set the numbering method parameter to Characters!, you can either use Characters! (the enumerated type) or 5 (its numeric equivalent).

Numeric Expression
A number on which mathematical operations may be performed. A numeric expression should not be enclosed in quotation marks.

Operator
A symbol or word that performs a function on one or more expressions. For instance, operators compare expressions, link words together, and perform mathematical functions on numbers.

Parameter
Represents which aspect of a feature the macro command is manipulating. For instance, if you use the BoxCreate command to create a graphics box, you can use a parameter value to specify which type of graphics box to create.

Path
The location of a certain file or directory in a computer disk drive or on a network. A full path includes the drive, root directory, and any subdirectory names. Each name is separated by a backslash (\). For example, C:\WP60\LETTERS would refer to the LETTERS subdirectory in the WP60 directory on the C drive.

Relational Expression
An expression used to evaluate parameters that have only two possible states: TRUE and FALSE. A relational expression should not be enclosed in quotation marks.

Status Line
The line at the bottom of the WordPerfect window that lists the current font and the position of your cursor.

Text Mode
A type of screen display in which WordPerfect does not show all font attributes and formatting. When Text Mode is on, you cannot see your document as it will print, but you may be able to work more quickly because the computer does not take as much time updating the appearance of the text.

Text Box
In a dialog box, the area in a dialog box where you type text or where WordPerfect types text for you. The selection cursor must be in the text box before you can begin to type. In a graphics box, a type of graphics box that can be used for placing and rotating text.

Text File
A file saved in ASCII (DOS). It contains text, spaces, and returns, but no formatting codes.

Toggle
A feature or option that is turned on or off with the same keystroke or command. If the feature or option is turned on or off with a macro command, the command generally does not require parameters.

Variable
A variable represents a place in memory where information is stored. Variables can store character, numeric, measurement and relational expressions. The value contained in a variable is changeable. Variables are often used to keep track of words, numbers, and measurements that change while the macro plays.

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