

MALT
MORE ALT-KEYS FOR THE PERFECTS

USER REFERENCE GUIDE

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MALT (More Alt-Keys for the Perfects) is a memory resident utility (TSR) that expands the number of keys recognized by WordPerfect for the purpose of running Alt-like macros. MALT uses less than 6,000 bytes of memory. To avoid conflicts with other TSRs, MALT does not rely on the traditional shift keys (Shift/Alt/Ctrl). Instead, MALT uses the Caps Lock key. Veteran WordPerfect users should feel at home with the choice of Caps Lock, since it is located in the same position that the Ctrl key used to occupy. MALT works with WordPerfect 5.0 and 5.1, LetterPerfect, and should work with the other Perfects too. It should be particularly helpful for LetterPerfect users (LP does not have a configurable keyboard), and anyone else with a shortage of keys, including those without an enhanced keyboard. MALT is user supported software. Information regarding registration may be found at the end of this document. (Note to those who never read past the first paragraph: please be sure to run MALTCFG or read the section entitled "Configuring MALT" if you have reassigned either or both of the **Macro Execute** (Alt-F10) or **Macro Define** (Ctrl-F10) keys.)

MALT-keys operate in an analogous manner to Alt-keys. To define a MALT-key macro first press **Macro Define** (Ctrl-F10). WordPerfect will prompt you for the name of the macro. Just hold down Caps Lock and press the key to be defined. WordPerfect will now prompt you for an optional description. Enter a brief description or press **Enter** to define the macro without a description. Type the keystrokes you wish to record then press **Macro Define** (Ctrl-F10) to end defining the macro.

MALT also has a *Quick Define* feature. To use *Quick Define*, hold down the Shift key and the Caps Lock key simultaneously, then press the key you wish to define. WordPerfect will then immediately prompt you for a description of your macro. You still must press **Macro Define** (Ctrl-F10) to end macro definition. To go directly into the macro editing window without recording, press **Home** before pressing *Quick Define*.

Running a MALT-key macro is as easy as running an Alt-key macro: simply hold down Caps Lock and press a key. MALT will then tell WordPerfect to run a macro with the name "MALT" plus the corresponding key name. Thus, holding down Caps Lock and "P" will cause WordPerfect to run the macro MALTP.WPM, just as holding down Alt and P will run ALTP.WPM.

(For the sake of convenience, this document refers to macros as having a "WPM" extension. Macros in LetterPerfect, of course, have an "LPM" extension. Similarly, discussions about WordPerfect apply equally to LetterPerfect and the other Perfects. As a corollary to this, bear in mind that you need load only one copy of MALT if you switch between WordPerfect and one of the other Perfects. While you are in WordPerfect, MALT will work with "WPM" macros in your macro/keyboard directory. Should you switch to

LetterPerfect, MALT will work with "LPM" macros in that program's keyboard/macro directory. The same should hold true for the other Perfects. The only proviso is that each program should be configured with the same **Macro Execute** and **Macro Define** keys.)

Unlike Alt-keys, MALT-keys are not restricted to the letters of the alphabet. A MALT-key can be assigned to almost any key. Accordingly, space (MALTSP.WPM), insert (MALTIN.WPM), left (MALTLE.WPM), and en left (MALTLE.WPM), are all perfectly acceptable MALT-keys. (The only exceptions are the obvious ones, shift keys, Num and Scroll Lock, Print Screen and Pause.) This will add ninety new keys to an enhanced keyboard; seventy-five keys to a PC keyboard. Notice that MALT uses abbreviations for non-alphanumeric keys. A list of these abbreviations is included as an Appendix to this document.

Existing macros may be converted to MALT-key macros by renaming them. For instance, if you have a macro called HEADER.WPM, you may convert it to a MALT-key macro by renaming the macro file to MALTH.WPM. Remember, MALT-key macros must be in your keyboard/macro directory. For a complete list of possible MALT-key file names, please see the Appendix.

You should also be aware that in one small respect MALT-keys are not as capable as Alt-keys. The Caps Lock key must be released before running another MALT-key. In contrast, you may hold down the Alt-key and press a key several times in order to run a series of macros or one macro several times. Most users will not find this a serious inconvenience. As a partial remedy, remember that, like any other macro, a MALT-key macro can be repeated by pressing the ESCape key to input a repeat number, and then pressing the appropriate MALT-key.

MALT does not interfere with the normal operation of Caps Lock, and with each use of a MALT-key, Caps Lock is restored to its prior state. Thus if Caps Lock was off when you pressed the MALT-key, it will stay off; if it was on, it will stay on.

LOADING AND UNLOADING MALT

MALT must be loaded into memory before you run WordPerfect. To load MALT into memory type **MALT** at the command line. If MALT is not on your path or in the default directory, you must include the full path name. MALT then becomes memory resident for use in conjunction with WordPerfect. MALT will refuse to load a second copy of itself, if it finds that it has previously been loaded into memory.

Unloading MALT is equally simple. To unload MALT from memory type **MALT /U**. If you have loaded any TSRs after MALT, be sure to unload them

first.

The most practical way to load and unload MALT is with a batch file that also starts WordPerfect. A simple batch file would look like this:

```
MALT
WP
MALT /U
```

Similarly, if you start WordPerfect from your AUTOEXEC.BAT file, you should edit the lines immediately before and after the line that starts WordPerfect in accordance with the preceding instructions. A simple AUTOEXEC.BAT file might look like this:

```
PROMPT $p$g
PATH C:\DOS;C:\WP;C:\UTILITY
MALT
WP
MALT /U
```

Of course, you will add full path names if MALT is not on your path. Incidentally, MALT releases its copy of the environment, so it does not matter where in your batch file you place commands that go into the environment.

On a 386SX, 386DX or 486 computer with an appropriate memory manager, such as QEMM or DOS 5.0's HIMEM.SYS and EMM386.EXE, MALT may also be loaded high. If you use a utility to load MALT high, you must use the same utility to unload it from memory. The relevant section of a batch file might look like this:

```
LOADHIGH MALT
WP
LOADHIGH MALT /U
```

If you are careless, it would also be possible to load two copies of MALT, one in high memory and the other in conventional memory.

CONFIGURING MALT

In order for MALT to work properly, it must know what keys you are using for the **Macro Execute** or **Macro Define** functions. If you have not remapped these two keys from their respective default assignments of Alt-

F10 and Ctrl-F10 you do not need to read this section, and you do not need to configure MALT.

If you have changed the **Macro Execute** key from Alt-F10, or if you have changed the **Macro Define** key from Ctrl-F10, you must use the MALTCFG program to configure MALT. To run the configuration program, type **MALTCFG** at the command line. To force MALTCFG to run in monochrome, type **MALTCFG /M**. It really is not necessary to read this section to run MALTCFG, since the program contains complete on-line instructions.

MALTCFG first looks in its own directory, then in the default directory (if the two are different), for a copy of MALT.COM. It will then verify that the copy of MALT.COM it has found is the correct version. MALTCFG will not recognize MALT.COM if it has been compressed by PKLite, LZE or a similar utility. MALT.COM may be compressed, however, *after* it has been configured. If the configuration program cannot find MALT.COM, you will be given an opportunity to tell MALTCFG where you have hidden it away. Likewise, MALTCFG will permit you to configure a copy of MALT.COM in a different directory.

MALTCFG will next ask you for the appropriate key assignments for the **Macro Execute** or **Macro Define** functions. Simply press the appropriate keys then press **Enter** to confirm. MALTCFG recognizes the same keys as WordPerfect in the same manner as WordPerfect, so if you press an unrecognized key like Ctrl-3 or Ctrl-/, nothing will happen. Similarly, pressing Ctrl-Space is recognized as Space, the same as it is in WordPerfect. MALTCFG will query you, if it questions the propriety of one of your choices.

After you have confirmed your choices are correct, MALTCFG will configure a new copy of MALT.COM. The old copy of MALT.COM will be renamed MALT.CO!. Since the same copy of MALT.COM may be re-configured any number of times, you may safely delete MALT.CO!. That's all there is to it.

USING MALT WITH MPE4WP

If you are writing macros of any length or complexity, you are, or should be, using my program MPE4WP. MPE4WP is a superior substitute for the primitive built-in macro editor. To use MPE4WP with MALT, you need only rename the file macros that are distributed with the program. For example, {CREATE}.WPM would be renamed MALT.C.WPM. Pressing MALT-C (Caps Lock and C) will now run the *Create* macro.

In MPE4WP, version 1.1, the following macros exist only as key macros and must first be saved as conventional file macros before they can be assigned MALT-keys:

Ctrl-Num *	{KEY MACRO 1}	Clear Prompt
Ctrl-D	{KEY MACRO 3}	Delete
Ctrl-G	{KEY MACRO 4}	Save Generic
Ctrl-H	{KEY MACRO 5}	Help
Ctrl-P	{KEY MACRO 8}	Playback

As an example, to save the *Delete* macro as MALT-D, (1) press **Setup** (Shift-F1), (2) select **5 - Keyboard Layout**, (3) highlight MPE4WP or MPE4WP-I and select **7 - Edit**, (4) highlight Ctrl-D and press **6 Save**, (5) WordPerfect will prompt you **Define macro:**, (6) type MALTD and press **Enter**. Follow this procedure for each of the other four macros.

COMPATIBILITY AND KEYBOARD PECULIARITIES

MALT should be compatible with other TSRs because it uses a different hot key arrangement and because it does not trap interrupt 9. My experience has verified this, although it is impossible for me to have tested it with all TSRs. Please let me know if you encounter any difficulties.

The standard advice when encountering TSR conflicts is to load the programs one at a time, to try and isolate the offender. The other advice is to try changing the order in which the programs are loaded. Since MALT only works with WordPerfect, it makes sense to load it immediately before loading WordPerfect so it can be unloaded immediately after you exit WordPerfect. But MALT really does not care where it is loaded, so long as it is loaded before WordPerfect. And if you spend most of your day in WordPerfect, you probably do not care where you load MALT.

Another type of compatibility problem may arise with certain keyboards. Most programs that manipulate the keyboard warn about the Tandy keyboard. Not having access to a Tandy keyboard, I cannot verify whether there is an incompatibility with MALT.

I am aware of one incompatibility that may arise when using the *Quick Define* feature. My Northgate keyboard does not recognize certain keystrokes when more than one than shift key is held down simultaneously. For example, it recognizes Caps Lock-Shift-T and Caps Lock-Shift-I, but not

Caps Lock-Shift-Y or Caps Lock-Shift-U. (Incidentally, this anomaly is not unique to Caps Lock, but also occurs with other shift key pairs.) If you encounter this problem, use the old fashioned way of defining macros: first press **Macro Define** (Ctrl-F10) then press the MALT-key, e.g. Caps Lock-Y.

MALT always restores Caps Lock to the same state it was before you hit a MALT-key, but in certain circumstances you might believe MALT had erred. If you have a PC keyboard with a Caps Lock light, the light may change even though Caps Lock is set correctly. (This idiosyncrasy does not generally occur with enhanced keyboards.) If you check the "pos" on the status line, however, you can verify the correct state of Caps Lock. If Caps Lock is off, "pos" is lower-case; if Caps Lock is on "POS" will be upper-case. Another peculiarity occurs in WordPerfect 5.0. If you accidentally hit a MALT-key for which a macro has not been defined in WordPerfect 5.0, "pos" will switch from lower to upper, or from upper to lower, as the case may be, and will not switch back until the next time you hit **Enter**. Notwithstanding these oddities and indications to the contrary, it bears repeating that MALT will always reset Caps Lock to the state it was found.

If you use a memory map utility to determine how MALT is loaded into memory, do not be concerned if you find that MALT is listed as unknown. This happens because MALT, like a good citizen, releases its copy of the environment.

PROGRAM NOTES

MALT and MALTCFG are written in Microsoft Professional Development System (PDS) BASIC 7.10, using routines contained in Crescent Software's QuickPak Professional, and linked with Crescent's P.D.Q.

I drew on a number of reference sources detailing the operation of the keyboard and the ROM BIOS in connection with the preparation of MALT and MALTCFG. Of these, by far the most instructive was the article by Michael J. Mefford entitled "An In-depth Exploration of the PC Keyboard and its Interrupt Service Routines", which appeared in the May 1990 issue of *Microsoft Systems Journal* (Volume 5, Number 3). His method for detecting the presence of an enhanced keyboard is incorporated in MALTCFG. Also very useful were the pair of articles by Barry Simon (someone for whom I have a deep admiration because of his work on CTRLALT and STACKEY) entitled "Learning Your Way Around the Keyboard under DOS", which appeared in the December 25, 1990 and January 15, 1991 issues of *PC Magazine* (Volume 9, Number 22 and Volume 10, Number 1). His program BIOSDATA, which was

distributed with the articles, was especially helpful in deciphering the operation of the PC keyboard BIOS.

Two other informative resources were *DOS Programmer's Reference (2nd Edition)*, by Terry Dettmann and Jim Kyle, and *The New Peter Norton Programmer's Guide to the IBM PC & PS/2*, by Peter Norton and Richard Wilton. I also referred frequently to *Advanced MS-DOS Programming (Second Edition)*, by Ray Duncan, but not for keyboard information.

Surprisingly, only the Norton book contained even a partial list of the codes generated by the ROM BIOS for legal keys on the PC and Extended keyboards. In contrast information on keyboard scan codes was readily available. I intend to prepare a program for the programming community to remedy this deficiency.

STANDARD DISCLAIMERS

By now all personal computer users should realize that there are no warranties attached to software, except for disk errors and performance in accordance with specifications. This software is no different from any other in that respect. Accordingly, there are no warranties of merchantability or fitness for a particular purpose, nor will the author be responsible for any damages (incidental, consequential, or otherwise) in excess of the purchase price. MALT and MALTCFG have been thoroughly tested by me, and, I believe, they will work as described. If you encounter problems, please let me know.

REGISTRATION/LICENSE/COPYRIGHT

MALT is a user supported program. It is not public domain. If you are using MALT for personal use, you should pay a \$15 registration fee. MALT has deliberately been priced low to encourage registration. A combined registration for MALT and my other program MPE4WP is \$20. If you have already registered MPE4WP, you may register MALT for an additional \$5. MALT may not be used in business without a license. For information about securing a license to use MALT in business, please see the section entitled "Business Use".

HOW TO REGISTER

To register MALT for personal use, please send your \$15 check or money order (\$20 for a combined registration with MPE4WP) to:

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In exchange, you will receive an acknowledgement and at least \$15 worth of satisfaction. Please note that you will not be sent a disk, only a registration number. If you absolutely must have a copy of MALT on disk, please send an additional \$10. Please (a) specify 5¼ or 3½ disk size, (b) include 5% sales tax if you are a Maryland resident, and (c) be prepared to wait 2 to 3 weeks. For your convenience a registration form is enclosed.

BUSINESS USE

A license is required to use MALT in business, after a reasonable trial period. Business use includes use by governmental entities, non-profit organizations, and any other use that is not strictly personal. You may obtain a license by writing to me at the above address. The license fee will depend on the number of MALT users in your business. Discounts are available for multiple copies. Please feel free to submit a reasonable proposal, including any special requirements for customization you may have. Remember, if you are using MALT to make money, I am too, and in this respect, my expectation of a living is superior to yours.

OTHER RESTRICTIONS

All authorized users are granted a limited license to make copies of MALT without charge, subject to the restrictions contained elsewhere in this document as well these:

(a) MALT must be distributed in absolutely unmodified form, including MALT, MALTCFG, the registration form and this documentation.

(b) For-profit use of MALT without a license is prohibited.

(c) MALT may not be included or bundled with any other product for any reason.

Not-for-profit user's groups, such as the Capital PC User Group, are

permitted to charge a small fee for materials, handling, postage, and general overhead. No other organization is permitted to charge for distribution of copies of MALT.

Electronic bulletin board system operators are encouraged to post MALT on their bulletin board systems for downloading by their users, if the above conditions are met, and if no special fee is necessary to access the MALT files (a general fee to access the BBS is acceptable). Likewise, all authorized users are encouraged to upload to MALT to BBS meeting these requirements.

APPENDIX

NAMING MALT-KEY MACROS

MALT uses a set of abbreviations to identify non-alphanumeric MALT-keys. Most people will not care about the file names of their MALT-key macros so long as each MALT-key is consistently associated with a macro file. It may become important to know file names, however, when weeding unused files from a hard disk. Therefore, this appendix describes the MALT naming strategy. The abbreviations, while logical, are necessarily terse because of DOS naming conventions (only eight letters) and because of the need for MALT to conserve memory (longer names mean increased memory requirements).

Alphanumeric MALT-key macros follow the naming convention set by WordPerfect: "MALT" plus the letter or number. Thus, MALT-P is associated with the file MALTP.WPM, and MALT-4 is associated with the file MALT4.WPM. Punctuation keys cannot be disposed of so easily because most punctuation marks are illegal in file names. For instance, MALT=.WPM would never work because the equal sign cannot be included in a file name. In general, most punctuation keys, cursor positioning keys, and function keys use a two letter abbreviation following the name MALT. For example, MALT-= is associated with the file MATLEQ.WPM and MALT-F1 with MALTF1.WPM. To distinguish between macros associated with the numeric keypad and identically named keys on the enhanced keyboard, MALT adds an "X" between "MALT" and the key name. Accordingly, the file associated with MALT-PgDn on the numeric keypad is MALTPD.WPM and MALT-PgDn on the enhanced keyboard is MALTXPD.WPM.

The following table lists all non-alphanumeric MALT-keys and their associated macro file names. Keys preceded by an asterisk are only available on enhanced keyboards. Extensions are omitted and will vary according the Perfect program you are using; "WPM" for WordPerfect, "LPM" for LetterPerfect, etc.

ESC	MALTES	
-	MALT-	
=	MALTEQ	
Backspace		MALTBS
Tab	MALTTA	
[MALT{	
]	MALT}	

Enter	MALTCR	
*Num Enter		MALTNCR
'	MALT'	
`	MALT~	
\	MALTBA	
,	MALTCO	
.	MALTPE	
/	MALTSL	
*Num /		MALTNSL
Num *		MALTNA
Space		MALTSP
F1	MALTF1	
F2	MALTF2	
F3	MALTF3	
F4	MALTF4	
F5	MALTF5	
F6	MALTF6	
F7	MALTF7	
F8	MALTF8	
F9	MALTF9	
F10	MALTF0	
*F11	MALTF11	
*F12	MALTF12	
Insert	MALTIN	
Delete		MALTDE
Home	MALTHO	
End	MALTED	
PageUp		MALTPU
PageDown		MALTPD
Up	MALTUP	
Down	MALTDO	
Right	MALTRT	

Left MALTLE

Num -

MALTNM

Num +

MALTNP

*Num 5

MALTN5

*en Insert

MALTXIN

*en Delete

MALTXDE

*en Home

MALTXHO

*en End

MALTXED

*en PageUp

MALTXPU

*en PageDown

MALTXPD

*en Up

MALTXUP

*en Down

MALTXDO

*en Right

MALTXRT

*en Left

MALTXLE