

**Wordstar CUSTOMIZATION NOTES**

**07/27/81**

**for**

**WordStar Release 3.0**

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Due to the relatively low prices at which MicroPro International Corporation sells its software products to end users, MicroPro cannot provide free consulting services with regard to using the information contained in these Customization Notes or with regard to any modification or customization of WordStar not described in the WordStar User's Guide.

This publication may reveal features in the WordStar software which are experimental and unsupported; such features are noted as "experimental" or "developmental" or "unsupported" in the program listings and/or in the text. While the user is free to make use of these features if he finds them to work for his purposes as they stand, they are unsupported -- they may be altered or removed from future releases; deficiencies in these features, if any, may not be corrected.

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## 1. Introduction

These Customization Notes contain listings and descriptions of the user-modifiable portions of WordStar other than those described in the WordStar User's Guide. A diskette accompanying the Customization notes contains source files for certain modules, plus a special program (RETEXT.COM) used in incorporating new embedded texts.

Additional software useful for changing some or all of the modifiable areas includes:

DDT (or other debugging program), usually supplied by your operating system vendor.

The Microsoft assembler M80 and loader L80. These are available from

MicroSoft  
10800 N.E. Eighth, Suite 819  
Bellevue, Washington 98004 U.S.A.

M80 and L80 are used in making changes in WordStar's menus and other texts. (Minor changes can also be achieved by patching.)

Use of M80 and L80 release 3.10 or newer is recommended. Older revisions of M80 may produce all-upper-case text. M80 releases prior to 3.00 may not assemble all statements used in the files supplied with the Customization Notes.

The reader is assumed to be familiar with reading assembly listings and "patching" programs. Readers who wish to alter WordStar's menus and texts by reassembling and reloading (as discussed below) are assumed to be familiar with 8080 assembly language programming.

It is recommended that the reader familiarize himself with Sections 14 and 15 of the WordStar User's Guide, and with the listings of the Terminal and Printer Modification Areas, USER1 and USER4 (in Appendix D of the WordStar User's Guide) before reading these notes.

The modifiable program modules presented in the Customization Notes are, briefly:

**USER2:** contains initial (default) values for insert toggle, on-screen formatting parameters, and page format; flag characters; display characters for markers; and many other initialization and miscellaneous items. Part of WS.COM (or whatever name you chose for your installed WordStar; also present in uninstalled WordStar file WSU.COM).

**USER3:** contains the keystroke command dispatch tables, allowing keys for commands to be altered and new "help" commands to be added. Part of WS.COM.

**USER5:** contains additional printer-related patch items, for daisy wheel and similar printers, and print formatting items. Part of WS.COM.

**USER6:** INPUT FILE NAME file control block patch area.

**POEM:** OEM daisy wheel and similar printer driver. Part of WSOVLY1.OVR. Must be patched using offset of -3A00 Hex as detailed below.

**WSMSG5:** the separate message text file, WSMSG5.OVR, containing all menus, all text for the help commands, and many prompts and other messages. By modifying WSMSG5, the menus and many other texts may be altered.

**WSMSG2:** extracted copy of all messages and texts embedded in the various other WordStar files. A special program (RETEXT) is supplied to incorporate modified versions of these messages into WordStar.

The files on the diskette supplied with the Customization Notes are:

**WSMSG5.MAC:** source file for WSMSG5. May be edited, assembled, and loaded to produce a modified WSMSG5.OVR file containing modified menus and/or other texts.

**WSMSG2.MAC:** source file containing texts which are embedded in other WordStar files. May be edited, assembled, loaded, then RETEXTed to change texts.

**WSMSG2.COM:** for convenience, an assembled, loaded copy of WSMSG2. May be patched then RETEXTed to change texts.

**RETEXT.COM:** Special program to incorporate WSMSG2 texts into WordStar release 3.0. Modifies files WSU.COM, WSOVLY1.OVR, and (if present) MERGPRIN.OVR.

**NOTE:** Additional files and modules referred to in these Customization Notes include the following files which are parts of WordStar: WSU.COM, WS.COM, WSOVLY1.COM, WSMSG5.OVR, MAILMRGE.OVR (the latter is part of the optionally supplied MailMerge Option), and the modules USER1 and USER4, which are part of WS.COM. All of the preceding are described in the WordStar User's Guide.

Listings are included in these Customization Notes for all of the modules described. The listings are commented heavily; read them for a detailed description of each item. The descriptions in these notes give a general description of the modules, plus much detail that complements the listing comments; the text does not attempt to duplicate the detailed information contained in the program comments. **Read the Listings.**

Modules USER2, USER3, and USER5 may be modified by the user only by patching.

Modules USER2, USER3, and USER5 are three of several modules which were combined with a linking loader after assembly to form WSU.COM; thus, they contain external references whose values are not shown in the listings. Generally, these external references are in locations that there will be no need to change, but if you do need to move or use one of them, examine the locations with your debugger to determine the value of the contents. These values will probably change with each release of WordStar.

Module POEM is a portion of the overlay file WSOVLY1.OVR. POEM may be modified by the user by patching WSOVLY1.OVR using special offset techniques as described below under the heading "Patching the OEM Daisy Printer Driver".

Modules WSMGS and WSMG2, together containing all of the menus and other texts displayed by WordStar, may be modified by patching or by reassembly and reloading as detailed below. Source files for these modules are supplied on the Customization Notes diskette.

Module WSMGS is assembled and loaded separately, to become the file WSMGS.OVR which must be on-line when WordStar is being used.

Module WSMG2 is assembled and loaded separately, then incorporated into WordStar by running the program RETEXT as detailed below. The special program RETEXT is supplied on the Customization Notes diskette.

For the modules intended to be modified only by patching, absolute assembly listings are included in the Customization Notes. The alphabetic symbol table at the end of each of these listings is a useful aid in finding an item in the listing when the label is mentioned in the text. The listings are assembled for TBASE=100H; if you have a special WordStar which loads at a different address, add the appropriate offset to the addresses shown in the listings.

For WSMGS and WSMG2, source listings only are supplied. If you wish assembly listings, you may make them by assembling the source files supplied.

The next section contains additional discussion of the modules. The modules are discussed in the same order as the listings appear. The section after next, "Effecting Changes", gives information on patching, assembling, and loading. Be sure to read that section carefully before attempting to make changes in POEM, WSMGS, or WSMG2.

## 2. Descriptions of Modifiable Modules

### Initialization and Miscellaneous Parameters (USER2)

File USER2 (see listing) contains user-patchable items relating to defaults, the operation of various features, and the characters used for various purposes other than commands. By patching items in this module, you can effect the following changes. See the listing for additional details about each item, plus additional items not shown here. The following descriptions correspond, in order, to the items in the listing; you may follow along in the listing while reading the following text.

- \* Make WordStar start with any help level 0 to 3, that is, with menus initially fully displayed, partly displayed, or fully suppressed (item ITHELP). If an initial help level of 1 or 2 is selected, you may also enable or suppress display of an additional message explaining how to select help level 3. This additional message, if enabled, is displayed once only, at the start of the first edit initiated after WordStar is invoked (item NITHLF).
- \* Make WordStar start up with the insert toggle off or on as desired (item ITITOG)
- \* Make WordStar start with directory display at the no-file menu off or on as desired (item ITDSDR)
- \* Alter the default paper length, top margin, and other page format values used when not specified by dot commands in the document (INITPF)
- \* Change the initial editing left and right margins (items INITLM and INITRM). These margin values are also used to determine the initial page number column for the print function, and also the initial right margin for Merge-Print's print time line forming (the print time line forming initial right margin is significant only if print time line forming occurs before a soft carriage return is encountered).
- \* Change the initial subscript/superscript roll used when printing on daisy wheel or similar printers (item INITSR)
- \* Change the initial values for document edits (edits initiated with a D command) of the following (INITWF):

word wrap on/off  
justification on/off  
variable tabbing on/off  
soft hyphen entry on/off  
print control display on/off  
page break display on/off  
line spacing 1-9

- \* Change the "decimal point" character (normally period) that terminates the right-aligning action at decimal tab stops (item DECCHR)
- \* Change the lead character of dot commands (normally period) (DOTCHR)
- \* Suppress the interpretation of dot commands by the edit function (item DOTSON)
- \* Increase or decrease the tendency for paragraph reform (with hyphen-help ON) to stop to allow the operator to decide whether a word is to be hyphenated. For more hyphenation stops, put a smaller value in item HZONE. For fewer hyphenation stops (more tendency to move the word that fits partly on a line to the next line), put a larger value in HZONE. A larger value in HZONE increases the number of characters in the word that must fit on the line before WordStar will propose hyphenation and stop to allow the operator to check the hyphen position, rather than place the entire word on the next line and continue reforming without a stop.
- \* Change the tables used in classifying letters as vowels or consonants by hyphen-help. Such classification is used to syllabify words to determine that they are hyphenable (i.e. contain two or more syllables) and to determine the cursor placement (at a probable syllable break) at a hyphenation stop. If WordStar is to be used with a language other than English, particularly if additional character codes are to be used to represent vowels with accent marks, it may be desirable to change these tables. The label VOWTAB is the beginning of a table containing all characters to be treated as vowels. The label NONCON is the beginning of a table containing all LETTERS (A-Z) which are NOT consonants. Note that this table scheme allows a letter to be considered to be both a vowel and a consonant, as Y is in English. Each table consists of an indefinite number of characters, followed by a byte containing zero. The two tables may (and normally do) overlap. If it is necessary to change the beginning location of either table, adjust the corresponding pointer at PVWTB or PNCON.

A commonly desired change to VOWTAB / NONCON (previous paragraph) is to define one or more additional vowel codes. This may conveniently be achieved by entering the codes in the zeroes after the DB 'AEIOU' in NONCON (but be sure to leave at least one zero byte before the next non-zero byte), or by changing one or more of the bytes in the DB '[]{}' in VOWTAB.

- \* Change the "flag" characters displayed in the rightmost screen column
- \* Change the character used to display soft hyphens (item SOFHYC)
- \* Change the characters used to display block and place markers (MARKS)
- \* Change the defaults for all of the yes / no questions in the print initiation dialog (PODBLK)

- \* Change the default values for the following print function parameters (these parameters may also be explicitly set with dot commands in the document):
  - omit page numbers on/off (item ITPOPN)
  - microjustification on/off (item ITM1J)
  - bidirectional print on/off (item ITB1P)
- \* Change the delimiter character (normally comma) and the quote character (normally ") used in data files read under control of the Merge-Print .DF and .RV dot commands. Note, however, that if you change these characters, Merge-Print will no longer be compatible with MicroPro DataStar and may be less compatible with MicroPro SuperSort and with files produced by BASIC and other languages.
- \* Change the characters (normally "&") used before and after the variable's name in a variable reference in a form letter or other document to be Merge-Printed. The character that precedes the variable name (item VARCH1) and the character that follows the variable name (item VARCH2) may be made different from each other if desired.
- \* Change the characters used to specify options in a Merge-Print variable reference, such as the characters (normally "/0") used after the variable name to specify omission of the entire line if the variable is null (item VAROPC).
- \* Alter the name of the WS.COM file (item FNWSCM). This name is automatically set to the name chosen during INSTALLation, and is used by the R (run program) command to reload WordStar after completion of the program. You might wish to patch this item if the file is renamed after INSTALLation, though normally this item can be conveniently changed by rerunning the INSTALL program instead of renaming the file.
- \* Alter the name of the message texts file (normally WSMSSGS.OVR) and the overlay files (normally WSOVLY1.OVR and MERGPRIN.OVR)
- \* Define up to 10 characters after which WordStar will automatically enter a "backspace" print control character (WordStar 2.2 and newer only). This automatic-backspace feature may be used to facilitate entry of text in languages that use accent marks, when the "backspace" print control character is being used to print an accent mark and a letter in the same position. Automatic-backspace characters may be defined by patching the desired codes into the zero bytes starting at AUTOBS. For example, if `` is patched into the AUTOBS table, the operator may then enter "à" by pressing the `` key, then the "a" key. (If ` is not defined as an autobackspace character, the operator must press the following keys to enter à: `, control-P, H, a.)

### Changing Command Keys (USER3)

File USER3 (again, see listing) contains the dispatch tables for the operator-entered commands. There are three tables:

- No-file commands (NOFTAB)
- Editing commands (VTAB)
- Merge-Print commands (FPTAB)

These tables may be patched to change the keys which perform command functions, as to arrange the keyboard to your preferences, or to make function keys on your terminal active. Existing table entries may be altered, or duplicate entries for the same function may be added in the space provided at the end of each table.

Comments in the listing explain the format of table entries. When creating duplicate entries, be sure to copy the address for the function desired carefully from the existing entry. Examine with DDT to determine the address, and remember that these addresses will change from release to release.

The command dispatch tables may be moved, if desired, for example to redistribute the patch space among the tables. If the beginning of one or more of the tables is relocated, update the appropriate pointer or pointers at PNFTAB, PVTAB, and/or PFPTAB.

If you change the interrupt character, normally control-U, note that this character appears two places which must match: in the main dispatch table, VTAB, and in a special item on the last page of the listing, STPCHR.

Also in USER3 are patchable items for several of the control characters interpreted during entry of question answers, such as file names:

backspace (delete character)	(CLCHR)
forward space (undelete character)	(CRCHR)
take the next key as part of the answer	(LITCHR)
directory display/scroll up/scroll down	(DIRCH)

If you change the cursor control keys, the "P prefix, or the directory display or scroll commands, you will probably want to change these to match.

Finally, the error release character (normally ESCAPE) may be changed (ERELCH).

After changing or adding command keys, you may wish to alter the menus to correspond. See "Menus and Other Texts" below.

The user may create new "Help" commands (commands that display text on the screen) by modifying USER3 and WSMGS. See comments in USER3 listing above the label "XTAB" (about page 10), and see WSMGS description below. A help command entry in NOFTAB or VTAB is like other command entries except the index into WSMGS's pointer table replaces the address. This index must be less than 100 Hex; thus, only pointers between 180 Hex and 27F Hex in WSMGS may be used. Of course, a presently unused pointer (DW SPARE in the listing) must be used when creating a new command. Put an 18 Hex byte in the text at points where you want WordStar to wait, with the preceding text on the screen, until the operator presses a key.

**Daisy Printer Items (USER5)**

Module USER5 -- see listing -- contains printer-related and print formatting items that are used for daisy wheel and similar printers only. Recall that modifiable items that relate to Teletype-like printers, and to both Teletype-like and daisy printers, are in USER4, listed in Appendix D of the WordStar User's Guide and discussed in Section 15 thereof. The following descriptions correspond in order to the items in USER5.

**Function Strings For Serial Daisy Printers:** these are the strings and related parameters for functions specific to particular serial daisy wheel and similar printers. These items also apply to 8-bit parallel (e.g. Centronics-like) printers, but they do not apply to OEM interface daisy and similar printers (see module POEM).

The functions include, for example, setting the vertical motion index in 48ths of an inch, setting the horizontal motion index in 120ths of an inch (60ths if DHMIFG is patched non-zero), moving the carriage in four directions, and printing phantoms. See the listing comments for details.

All of these items are set appropriately when a daisy wheel or similar printer is installed using the INSTALL program. The enterprising user might wish to patch them to adapt WordStar to one of the relatively rare daisy wheel printers not supported by the INSTALL program.

All of the following items in USER5 are **EXPERIMENTAL** and **UNSUPPORTED**. These features are subject to change or deletion; bugs in them, if any, may or may not be fixed by MicroPro.

**Flags for Daisy Printers:** These apply to both serial and OEM daisy printers; they may be set non-zero by patching only; they effect minor changes in print formatting:

**DNPROS:** set non-zero to print all characters the same width (normally, M's and W's are printed 1/60th wider than the character pitch in use, and periods, commas and other punctuation characters are printed narrower, when formed text is being printed on a daisy wheel or similar printer and Microjustification has not been disabled).

**DMJWB:** set non-zero to modify the Microjustification algorithm to allow more variation in the amount of space between words; the result will be that the character spacing within a word will be altered less often. DMJWB effects the printout only when printing formed text on a daisy wheel or similar printer with Microjustification on.

**Proportional Spacing Table:** This table is used when printing formed text on a daisy wheel or similar printer (either serial or OEM) and microjustification is on. The table is indexed by character value less 20 hex.

The left nibble of each byte in the proportional spacing table is normally used; it implements the minor variation in widths used by WordStar when printing formed text on a daisy wheel or similar printer with Microjustification on. These minor variations in character width are intended to enhance the appearance of printout when using a "non-proportional" printing element (daisy print wheel or NEC print thimble).

The right nibble of each byte in this table is used when the EXPERIMENTAL, UNSUPPORTED, and otherwise undocumented proportional spacing toggle (print control character ^P; next paragraph) is on. The table is currently set up for use with a Qume Theme P. S. 10 print wheel (and .CW 8) and will require patching for use with other print wheels.

(The EXPERIMENTAL, UNSUPPORTED, and otherwise undocumented proportional spacing feature is toggled on and off with a control-P print control character embedded in the text. When on, WordStar will attempt to proportionally space during printout the lines formed by the editor without regard for varying character widths. The relative widths only of characters are varied; the line length and number of characters on a line are left as formed by the editor. Thus, optimum printout appearance may not occur when a line contains an unusually large proportion of narrow characters such as i's or .'s, or an unusually large proportion of wide characters such as M's and W's. This proportional spacing action will only occur where Microjustification would normally occur: it will not occur in the last line of a paragraph unless the line is explicitly formed with ^B; it will not occur when UJ OFF is in effect. The proportional spacing action may not occur on lines containing one word only. As noted in the preceding paragraph, if you wish to use the experimental, unsupported proportional spacing feature, you will normally need to patch the proportional spacing table to the correct relative character widths for the typewheel you wish to use.)

#### OEM Daisy Wheel Printer Driver (POEM)

The OEM daisy wheel and similar printer driver, listing POEM, is invoked when an OEM printer selection is made in the INSTALL program, or if CSWTC (in USER4) is patched to 3.

As coded, the driver drives a Diablo Hy-type II or compatible printer, specifically:

Diablo Hy-Type II 1300 Series

Qume Sprint 3 with cable adapter to make Diablo-compatible

Nec Spinwriter 5500D

Diablo Hy-Type I (patch DHMIFG non-zero or make appropriate INSTALL selection)

The interface assumed is the MicroPro "I/O Master", or three parallel ports at port numbers F8 through FA (for example, IMSAI PIO-4 board) with appropriate bit assignments. The enterprising user may wish to patch the driver to accomodate other port or bit assignments, or to drive a printer that is not Diablo-compatible but has similar capabilities. Before attempting to locate and patch the POEM code, be sure to read carefully "Patching the OEM Printer Driver" below.

As detailed in the program comments, this driver's entry points and calling sequences are completely different from those of the other printer drivers. Since most OEM daisy printers do not have form feed features, the driver simulates form feeds if "USE FORM FEEDS" is specified when print is initiated.

When the OEM daisy printer driver is in use, the following parameters are pertinent. Most of these parameters are in USER4, listed in Appendix D and discussed in Section 15 of the WordStar User's Guide. The other printer function strings and most flags in USER4 and USER5 are not used; in particular, POSMTH is assumed to be 1 regardless of actual contents.

CSWITCH must be 3 to invoke OEM daisy printer driver  
HAVBSY should be non-zero  
DBLSTR should be 2 or as desired  
BLDSTR should be 2 (no other value)  
DHMIFG (in USER5) should zero if the printer moves in 120ths of an inch (Hy-Type II), or FF hex if the printer moves in 60ths of an inch (Hy-Type I).  
OEMPAG (in POEM) desired form length in 48ths of an inch for simulated form feeds

The POEM listing in these Customization Notes is a partial listing of one of the modules combined by MicroPro to form the overlay file WSOVLY1.OVR. (The listing published normally has no page 1.) The code is read in from this file at initiation of a print to an OEM Daisy printer. The addresses shown in the POEM assembly listing are the addresses at which the code runs. However, when modifying the OEM daisy printer driver by patching WSOVLY1 with DDT, the code will appear in memory at different addresses. Be sure to carefully read the section "Patching the OEM Printer Driver" below before attempting to locate and modify the POEM code.

There are no external references in the OEM daisy wheel and similar printer driver. All entries are via the JMPs on the first page of the code listing ("page 2"); all exits are with "return" instructions. All outputs are direct to the hardware ports. The only locations in the driver that are accessed from outside the driver are those shown on the first page ("page 2") of the code listing: (execution) locations 3C20 through 3C3E, or as shown in the listing. Thus, the rest of the code may be rearranged freely -- locations 3C3F through 3CBC or as shown on the listing.

**Menus and Other Texts (WSMSG.S and WSMSG2)**

All of the menus, prompts, and other texts displayed by WordStar may be altered by altering WSMSG.S and/or WSMSG2. The texts are in two modules of different structures for implementation-related reasons as further described below. Changes may be made either by patching, or by reassembly and reloading, as described in more detail below. Patching is convenient for minor changes, and may be used when the additional software required for reassembly -- M80 and L80 -- is not available. Editing, reassembling, and reloading the source files is convenient for moderate changes and especially recommended for large changes such as translation to a different language.

If you wish to change a specific menu or text, find the desired text by looking through the listings, or by searching (e.g. with the WordStar Find command) the WSMSG.S.MAC and WSMSG2.MAC source files supplied on the Customization Notes diskette.

**WSMSG.S:** WSMSG.S contains the texts which are read in from file WSMSG.S.OVR as required during WordStar execution. WSMSG.S includes all menus, most error and warning messages, and many other longer and less frequently used texts.

The source file WSMSG.S.MAC, supplied on the Customization Notes diskette, may be assembled and loaded (details below) to produce a new WSMSG.S.OVR file; minor changes may alternately be made by patching WSMSG.S.OVR as supplied on your WordStar distribution diskette.

At the beginning of the WSMSG.S.MAC file (as supplied on the diskette, and listed below) there are several assembly parameters (EQUates) that may be of interest to the modifier:

TBASE1 and TBASE2 are set to 100 Hex in the file as supplied; these should be changed appropriately for special versions for systems where programs load at addresses other than 100 Hex.

WIDE and NARROW respectively control inclusion of menus for screens 80 columns wide and wider, and menus for screens 64 to 79 columns wide. Both are ON (-1) in the file as supplied on the Customization Notes diskette. Turning off (0) whichever is not needed in your system will result in a shorter reassembled WSMSG.S.OVR file.

Starting on about page 4 of the WSMSG.S.MAC listing, and assembling into locations 180 Hex through 2FF Hex, is the table of pointers to the message texts. These pointers are read by WordStar at startup and used to locate the individual texts when required for display, to make it possible to freely change the lengths, locations, and order of the texts in WSMSG.S.OVR without otherwise modifying WordStar. If WSMSG.S is modified by reassembly, the assembler will produce the correct pointer values and no special attention is needed beyond insuring that the label at the beginning of each text is not changed and is moved with the text, should the texts be rearranged. If WSMSG.S is modified by patching, whenever the beginning of a text is moved to a new location, the two-byte pointer to that text must be patched to contain the new address.

NOTE: The length of the pointer table (previous paragraph) was increased for WordStar release 2.0. Do NOT attempt to use a WSMGS file from a pre-2.0 release with WordStar 2.0 or newer.

After the pointer table, the next page (approximately page 9 of the source listing) contains comments describing special codes which are used in the texts. A number of codes display commonly-used phrases -- for example, a byte containing 14 Hex displays " NAME OF FILE TO ". The texts displayed by these special codes may be altered by changing WSMG2.

Next, the actual texts begin. The menus are first. There is a wide and a narrow version of most of the menus; assembly of the unneeded width menus may be suppressed by setting WIDE or NARROW to zero as noted above. When changing menus, be sure to keep the narrow texts 63 displayable characters long or shorter, and don't make the wide texts longer than 79 characters. Also, for neat appearance when inverse video highlighting is in use, all lines in the same menu should be the same length.

Before the assembly language statements which produce each menu, the text of the menu is shown in comments. This reiteration is intended to produce an easily-readable copy of the text in the assembly listing.

Following the menus are numerous other texts, all identified by comments. Read the listing to see exactly what is there. Then there are several pages of texts for the help commands, followed by the text displayed if WordStar accesses a pointer in WSMGS.OVR which does not point to some other text.

Additional "help" commands may be added by modifying WSMGS.OVR and USER3 only; it is not necessary to modify other parts of WordStar. See discussion of this subject in the USER3 description above.

Additional information on procedures to modify WSMGS is given in the next section.

**WSMSG2:** WSMG2 contains the texts which are embedded in WS.COM, WSOVLY1.OVR, and MERGPRIN.OVR in order to permit display without the delay of a disk read, and/or to permit display even if WSMGS.OVR is not available. WSMG2 includes a number of short and frequently used texts, and texts used by many of the commands which are executed by code read in from one of the overlay files (WSOVLY1.OVR and MERGPRIN.OVR). In the latter case, the required code and text are read together from the overlay file, resulting in faster response than would occur if the code was read from the overlay file and the text was read from a separate messages file.

A special program, RETEXT.COM, is supplied on the Customization Notes diskette to embed the texts from an altered WSMG2.COM into WSU.COM, WSOVLY1.OVR, and MERGPRIN.OVR (if present) at the proper places. RETEXT operation is detailed below.

Since a fixed amount of space is available at each text insertion point, a total length limit applies to each group of texts in WSMG2.

At the beginning of WSMG2.MAC there is an EQUate. When editing WSMG2.MAC for reassembly, change this statement if necessary to match the system on which WSMG2 is to be reloaded.

The texts in WSMMSG2.MAC are in groups, with a two-byte group length and self-pointers to all texts in the group preceding the texts in the group. The ordering of the groups and the group in which each text is placed are essential to RETEXT and WordStar operation. DO NOT REORDER THE GROUPS NOR MOVE TEXTS FROM GROUP TO GROUP.

Each group begins with a heading in a box of '\*'s, usually at the top of a page. The following is a prototypical group of three texts which we will use for purposes of explanation; each group in the WSMMSG2.MAC source file is similar in structure. WSMMSG2.MAC is listed at the end of the Customization Notes and is included on the diskette.

```
;;
;*****TEXTX - FOR OVERLAY #N (PART OF WSOVLYN.OVR)*****
;*
;*****TEXTS FOR MUMBLEDYFRATZ*****
;
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 99H
;
DW ETEXTX-$      ;LENGTH OF THIS GROUP OF TEXTS
;
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP
DW TEXT1-$
DW TEXT2-$
DW TEXT3-$
;
TEXT1: DB 'This is the message "TEXT1"',0
TEXT2: DB 'This is "TEXT2"',0
TEXT3: DB 'TEXT3',0
;
ETEXTX:          ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

The comment immediately below box of '\*'s may mean little to you -- this comments is intended for the programmers who create WordStar. The next comment, "THE VALUE . . ." is important to you: it indicates the maximum length this group may have.

The first code assembled in the group (the line DW ETEXTX-\$ in the above example) is the length of the group. This length word is essential to the operation of RETEXT, as well as allowing you to check that the length limit has not been exceeded. To check the length of a group after modification, make sure that the length value, which will appear in an assembly listing to the left of the DW ETEXT-\$, is less than or equal to the maximum specified in the comment line above the DW -- less than or equal to 99H in our example.

A group containing no texts is represented by a zero length count -- a DW 0 only. There are several of these in WSMMSG2.MAC; they should not be disturbed.

After the length item, self-relative pointers to each text are assembled. Each consists of a statement of the form

DW XXXX-\$

where XXXX is a label defined at the beginning of the text. These pointers are used by WordStar to locate the texts in the group, allowing free alteration of the lengths of the texts (subject to the group length limit) and free rearrangement of the TEXTS within the group. DO NOT REARRANGE, REMOVE, OR ADD POINTERS.

If WSMMSG2 is modified by reassembly, the assembler will automatically produce the correct pointer values. If WSMMSG2 is modified by patching, the pointer must be adjusted for any text which is moved, and for any following texts within the group. Note that the contents of the pointer is relative to its own location (i.e., the number of bytes from the first byte of the pointer to the first byte of the text), and that the pointer is stored low order byte first.

After the pointers come the texts for the group. Each is of the form

XXXX: DB 'Message Text',0

where XXXX is the label used in the pointer to the message. Each text must end with a null (zero) byte. Within the text, special codes may be used, as in WSMSGS.MAC. Most texts are preceded by comments which explain their function. When looking for a specific text you wish to change, read these comments and/or search for one of the words in the text with WordStar's Find command.

All of the texts in a group must appear between the pointers and the end-of-group label. Do not attempt to make a pointer in one group point to a text in another group -- to do so would result in incorrect display after incorporation of the new WSMMSG2 into WordStar. Provided all of all texts for a group are between the last pointer and the end-of-group label, the texts may be rearranged, intermingled, and point into each other however desired.

After all of the texts in a group is the end-of-group label, ETEXTX: in the above example. This must be the last thing in the group. Do not insert any text (or anything else but comments) between the end-of-group label and the beginning of the next group. The end-of-group label is used in assembling the length item (DW ETEXTX-\$ in our example). If the length item does not assemble to the exact number of bytes from its location to the location of the length item for the next group, RETEXT will not operate correctly.

Information on procedures for modifying WSMMSG2 is given in the next section.

### 3. Effecting Changes

This section gives information on patching and/or reassembling and reloading the various modifiable modules. This section assumes you have already read the preceding module descriptions and determined the exact modifications you wish to make. It is especially important to read the foregoing descriptions of WSMMSG and WSMMSG2 before attempting to understand the procedures here relating to those modules.

#### Patching USER2, USER3, and USER5

USER2, USER3, and USER5 appear in WS.COM (or other file name chosen during INSTALLation). They may be patched using the techniques described in the WordStar User's Guide (Sections 14 and 15) for patching USER1 and USER4. Either INSTALL's patcher or your debugger (DDT) may be used to effect patches. INSTALL's patcher recognizes all of the labels in USER1 through USER5. The code appears at the addresses shown in the assembly listings in normal systems; if you have a special WordStar version for a system with a TBASE other than 100 Hex, make the appropriate adjustment in the addresses.

Be sure to INSTALL WordStar as described in Section 14 of the WordStar User's Guide before patching, then make patches in the INSTALLED copy. WordStar will not run if it has not been INSTALLED. INSTALL stores into many items in USER5 if a daisy or similar printer is selected (thus possibly overwriting your patches) and may delete any code added to the end of WS.COM.

#### Patching the OEM Daisy Printer Driver

To patch the OEM daisy wheel and similar printer driver (POEM listing), it is necessary to patch WSOVLY1.OVR with DDT at locations 3A00 Hex less than the addresses shown in the POEM listing in these Customization Notes. It is NOT possible to patch the OEM daisy printer driver with INSTALL's patcher. The OEM daisy printer driver may be patched before or after WordStar is INSTALLED.

The POEM listing supplied is a partial listing of a portion of one of the modules combined by MicroPro to form WSOVLY1.OVR. The POEM code is read into RAM memory when printing on a daisy printer is initiated. The code does not appear in WSOVLY1.OVR at the same address at which it executes. Specifically, the code appears in WSOVLY1.OVR (when being patched with DDT in a system with TBASE=100 Hex) at addresses 220 hex and up, while it is executed (in a system with TBASE=100 Hex) at addresses 3C20 Hex and up (the addresses shown in the assembly listing). Thus, 3A00 Hex (3C20-220) must be subtracted from an address shown in the listing to obtain the corresponding address in WSOVLY1.OVR when patching with DDT. Similarly, 3A00 Hex must be added to the address at which an instruction or data area appears in DDT if this address is to be used in a JMP, STA, etc. instruction being entered into the POEM code.

For example, the instruction which appears at location 3C3F in the listing will appear at 23F when WSOVLY1.OVR is being patched with DDT. If you wanted to enter a JMP to the instruction which appears at 23F in DDT, you would enter JMP 3C3F.

(In special WordStar versions for TBASE values other than 100 Hex, the execution address for the POEM code is correspondingly changed. In addition, the POEM execution address may be increased an additional 100 Hex bytes in the special WordStars for the TRS-80 Model I and the Heath 89 with TBASE=4300 Hex. The relative location of POEM in WSOVLY1.OVR remains unchanged -- 120 Hex bytes from the beginning. In the unlikely event that you should wish to patch POEM in such a version, examine the addresses of the JMPs at the beginning of POEM in your WSOVLY1.OVR, and compare the values to those shown in the listing to determine the execution address.)

You may find it necessary to rename WSOVLY1.OVR to type .COM in order to permit reading the file into DDT.

Since (in most systems) the SAVE command will only produce a file of type .COM, you may need to rename the file resulting from SAVEing the patched code in order to re-establish the name and type WSOVLY1.OVR.

When making substantial changes to POEM, you may prefer to work with a source file. Create a source file containing the desired code, being sure that the locations of the JMPs and the constants (OEMLIM, OEMWID, and OEMPAG) on the first page of the listing match the listing. ORG the code at 3C20 Hex. Make sure the code does not extend beyond 3CBC or whatever the last address shown in the listing is. Assemble to produce a HEX file (this must be done using your operating system's assembler, not M80). Read the HEX file into DDT over WSOVLY1.OVR using an offset of -3A00, i.e. C600 Hex. Check that your new code appears in locations 220 Hex up.

After changing the OEM daisy printer driver and successfully testing WordStar using the modified WSOVLY1.OVR, be sure to remove all copies of the prior version from all diskettes which might be on-line when you intend to use the modified driver. Otherwise, WordStar may find the wrong copy of WSOVLY1.OVR and use the old driver (WordStar looks for WSOVLY1.OVR on both drive A and the logged drive, and the operator can change the logged drive at will).

#### Patching WSMGS.OVR

Minor changes in the message text file WSMGS.OVR (see preceding description) may be made readily by patching that file with DDT. WSMGS.OVR is supplied with WordStar on the WordStar distribution diskette; no already-loaded copy of this file is supplied on the Customization Notes Diskette. To assist in finding texts and the pointers to them, you may wish to make an assembly listing using the source file (WSMGS.MAC) supplied on the Customization Notes diskette.

To alter a text in WSMGS.OVR without changing its length, as to make a menu reflect a change in command keys, find the desired text in WSMGS, and patch it as desired. To shorten a text, move the following characters down, including the terminating null. To lengthen a text (by patching), move the text to the end of the file (extending the file as necessary, up to 32K), and locate the pointer to it in the area 180 hex - 300 hex and adjust the pointer to the new location of the text. When altering texts, be sure not to create lines longer than the screen width less 1.

After successfully changing WSMGS.OVR and checking your changes, be sure to remove all copies of the prior version from your working diskettes. Otherwise, WordStar may find the wrong copy of WSMGS.OVR and display the old texts (WordStar looks for WSMGS.OVR on both drive A and the logged drive, and the operator can change the logged drive at will).

#### Assembling and Loading WSMGS.OVR

Substantial changes in WSMGS.OVR are most easily made by editing the source file WSMGS.MAC (supplied on the Customization Notes diskette), then reassembling and reloading. Before editing WSMGS.MAC, verify that the release number in a comment at the beginning of the WSMGS.MAC file matches that in your WordStar's signon. When editing WSMGS.MAC with WordStar, be sure to use the N (Non-document edit) command. To assemble and reload, you must have the MicroSoft assembler (M80) and loader (L80).

Using M80 and L80, the commands to assemble then load WSMGS.OVR, with all files on the logged drive, are:

```
M80 =WSMGS  
L80 WSMGS, WSMGS.OVR/N/E
```

(Enterprising users might wish to convert the source file to be assembled with another assembler, rather than obtaining M80 and L80. Necessary changes might include removing or changing the "ASEG" pseudo-operation (which specifies absolute as opposed to relocateable assembly), removal of the "PAGE" pseudo-ops (which effect assembly listing formatting only), removal of form feed (control-L) characters (which effect listing (both source and assembly) format only), and renaming the file if type .MAC is not acceptable to the assembler. Of course, the loader that goes with the assembler must be used. After loading, the resulting file must be renamed to type .OVR if the loader produces a file of type .COM.)

If, when you invoke WordStar using the newly-loaded WSMGS.OVR, the following or a similar message is displayed

\*\*\* WARNING: Wrong version of WSMGS.OVR,  
some messages and menus may be wrong

then the Customization Notes diskette from which WSMGS.MAC was obtained was for a different release of WordStar than the release of WordStar you are running. Check the release number in the WordStar signon, and in the WSMGS.MAC source file, and locate matching versions or obtain an updated WordStar and/or Customization notes from your dealer or from MicroPro. Until the error is corrected, go back to using your prior version of WSMGS.OVR. Do not operate with the wrong version of WSMGS.OVR, as incorrect messages and

prompts might display and recently-added text might not be present.

**WARNING:** if you attempt to use a WSMGS.COM file from a pre-2.0 WordStar release in place of WSMGS.OVR with WordStar 2.0 or newer, WordStar is likely to display garbage on the screen or crash. DO NOT USE PRE-2.0 WSMGS with WordStar 2.0 or newer.

After successfully changing WSMGS.OVR and checking your changes, remove all copies of the prior version from your working diskettes. Otherwise, WordStar may find the wrong copy of WSMGS.OVR and display the old texts.

#### Patching and RETEXTing WSMG2

Minor changes in the texts in WSMG2 may be achieved by patching WSMG2.COM with DDT then incorporating the changed messages in WordStar by running RETEXT.

The file WSMG2.COM is not a file normally used by WordStar, but rather an intermediary that holds the texts between assembling / loading WSMG2 and running RETEXT. However, for convenience in patching, a preassembled, pre-loaded WSMG2.COM is supplied on the Customization Notes diskette.

Before patching WSMG2.COM, we suggest making an assembly listing (using the WSMG2.MAC source file supplied on the Customization Notes diskette) to assist in locating the texts, pointers, and group length items.

When patching WSMG2.COM, any text may be altered in place (without increasing its length) by changing characters as desired. If the text is shortened, be sure to place a zero byte at the end. Texts within a "group" (see WSMG2 description above) may be moved or rearranged if the self-relative pointers for the texts in that group are properly readjusted.

To make space to lengthen a text, the entire WSMG2 file following that text may be copied to higher addresses, subject to the group's length limit. After making such a move, update the group's length item to reflect the length of the insertion, and update any pointers to following texts in the same group -- add the number of bytes inserted to the present contents of the group length and of the appropriate pointers. It is not necessary to make any adjustments regarding following groups (groups moved in their entirety), as all pointers and lengths are relative to their own locations.

**CAUTION:** the "Move" commands in most debuggers do not work correctly if the move destination area overlaps the source area. Thus, to move the contents of a block of memory to addresses, say, two bytes higher, move the entire block to an entirely different area (e.g. beyond the end of WSMG2.COM), then move it again from there to a destination two locations above the original source.

After making the desired patches in WSMMSG2.COM and SAVEing the patched version, run RETEXT: make sure the files WSU.COM, WSOVLY1.OVR, MERGPRIN.OVR (if you have the MailMerge option), and the patched WSMMSG2.COM are on the current drive, then enter the command (for WordStar release 3.0)

#### RETEXT

RETEXT will incorporate the texts from WSMMSG2.COM into WSU.COM, WSOVLY1.COM, and (if present) MERGPRIN.OVR. The file RETEXT.COM need not be on-line when the resulting WordStar is in use. See the heading "RETEXT Operation" below for additional information on RETEXT.

INSTALL must be run before some of the new texts (those embedded in WSU.COM) will appear during WordStar operation -- unless, of course, the "WSU.COM" file present during RETEXT execution was actually a renamed previously INSTALLED WordStar (see below).

#### Assembling, Loading and RETEXTing WSMMSG2

Substantial changes in the texts in WSMMSG2 are most easily made by editing the source file WSMMSG2.MAC (supplied on the Customization Notes diskette), then reassembling, reloading, and RETEXTing.

Before editing WSMMSG2.MAC, check that the release number at the beginning of the WSMMSG2.MAC file matches that in your WordStar's signon. If it does not match, obtain an updated WordStar and/or Customization Notes from your dealer or from MicroPro. Use of mismatched releases may cause RETEXT to give an error and will in any case result in incorrect operation.

When editing WSMMSG2.MAC (or any program source file) with WordStar, be sure to use the N (Non-document edit) command. To assemble and reload, you must have the MicroSoft assembler (M80) and loader (L80), as well as the program RETEXT.COM. (Alternately, the user may wish to attempt to convert WSMMSG2.MAC to be assembled with a different assembler.)

If all files are on the current drive, the commands to assemble, load, and RETEXT WSMMSG2 are:

M80 =WSMSG2

Uses file WSMMSG2.MAC  
Produces file WSMMSG2.REL

L80 WSMMSG2, WSMMSG2/N/E

Uses file WSMMSG2.REL  
Produces file WSMMSG2.COM

RETEXT

Uses WSMMSG2.COM, WSU.COM, WSOVLY1.OVR,  
and (if present) MERGPRIN.OVR. Produces  
updated versions of WSU.COM, WSOVLY1.OVR,  
and (if present) MERGPRIN.OVR

RETEXT will incorporate the texts from WSMMSG2.COM into WSU.COM, WSOVLY1.OVR, and (if present) MERGPRIN.OVR. The file RETEXT.COM need not be on-line when the resulting WordStar is in use. See the heading "RETEXT Operation" below for additional information on RETEXT.

**RETEXT Operation**

The program RETEXT, supplied on the Customization Notes diskette, is used to incorporate changed WSMG2 texts into WordStar. As noted above, RETEXT must be run after patching WSMG2.COM or after reassembling and reloading WSMG2.MAC to produce a new WSMG2.COM. This section gives additional information on RETEXT operation and error conditions.

RETEXT requires that the following files be on the current drive. There is no provision for accessing files on another drive, nor for alternate file names. If you are using a different name for any of the files, rename the file(s) before and after RETEXT execution.

WSMSG2.COM	(containing texts to incorporate)
WSU.COM	
WSOVLY1.OVR	
MERGPRIN.OVR	(optional)

If any of the files except MERGPRIN.OVR are not found, RETEXT will display an error message and abort. If MERGPRIN.OVR (the overlay file for the Merge-Print command, supplied with the MailMerge option) is absent, RETEXT will display an informational message and proceed.

If the WSMG2.COM file is not for the same release of WordStar as the other files, RETEXT may display an error and abort. If RETEXT does not detect the error, incorrect operation or wrong texts may nevertheless result; thus, you should check carefully for matching releases (compare the WordStar signon and the comments at the beginning of the WSMG2.MAC file) before editing WSMG2.MAC and running RETEXT.

RETEXT inserts the groups of texts from WSMG2.COM at the appropriate places in WSU.COM, WSOVLY1.OVR, and, if present, MERGPRIN.OVR. These files are updated in place; thus, you will want to keep backup copies on another diskette or under other file names.

If any of the "groups" of texts (see WSMG2 description above) in WSMG2.COM are longer than the space available for that group, RETEXT will display a message and proceed, leaving the old texts in WordStar for that entire group.

The file WSMG2.COM is used only by RETEXT; there is no reason to have it on-line during WordStar execution.

The file WSU.COM present during RETEXT execution may be an uninstalled WordStar or a previously INSTALLED WordStar. To update 'texts in an already-INSTALLED WordStar, rename WS.COM (or whatever name was chosen at INSTALLation) to WSU.COM, run RETEXT, then rename back.

**CAUTION:** after using RETEXT, you may wish to use a different file name for the modified WordStar. If the WordStar was previously INSTALLED, be sure to run INSTALL again to change the name. If you merely rename the file, the R (Run program) command will not work because item FNWSCM in USER2 (described above) will not match the actual name of the WordStar .COM file.

After using RETEXT on an unINSTALLED WordStar (WSU.COM), you must of course INSTALL before the new versions of those texts which are inserted into WSU.COM will display during WordStar execution.

After successfully running RETEXT and checking all of the new texts (by entering whatever WordStar commands cause the texts to display), update all of the WS.COM, WSOVLY1.OVR, and MERGPRIN.OVR files on your working diskettes. Don't leave the old copies on some of the diskettes in active use, as WordStar might then occasionally find the wrong file and display the old texts (WordStar looks for all of these files on both drive A and the logged drive, and the operator can change the logged drive at will). Keeping backups of the old versions on an archive diskette is of course an excellent idea, in case a problem is later encountered with the new versions.

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USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

TITLE USER2 05/10/81 PARAMETERS USER MAY ALTER

;  
; WordStar RELEASE 3.0 MAY, 1981  
;  
;  
;  
;  
;  
;  
; THIS FILE CONTAINS PARAMETERS USER MAY OPTIONALY  
; ALTER IN ORDER TO CHANGE THE INITIAL VALUES WHEN WordStar  
; STARTS, OR TO DISABLE OR MODIFY CERTAIN FEATURES.  
;  
; SEE ALSO FILE USER1 FOR AREAS TO MODIFY TO  
; ACCOMODATE VARIOUS TERMINAL DEVICES;  
; FILE USER3 FOR AREAS TO MODIFY THE KEY OR KEY  
; SEQUENCES WHICH PERFORM EACH COMMAND FUNCTION;  
; AND FILES USER4 AND USER5 FOR AREAS TO MODIFY  
; TO ACCOMODATE VARIOUS PRINTERS.  
;

0100 TBASE EQU 100H ;WHERE PROGRAM BEGINS FOR NORMAL CP/M

0000' ASEG

ORG TBASE+260H ;BEGINS AT LOCATION 360 HEX

000F CTRLO EQU 15 ;CONTROL-O CHARACTER

PAGE 65 ;SETS PAGE LENGTH

USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

```

ENTRY ITHELP,NITHLF      ; INITIAL HELP LEVEL
ENTRY ITITOG             ; INITIAL INSERT TOGGLE
ENTRY ITDSDR              ; INITIAL DIRECTORY DISPLAY FLAG
ENTRY INITPF,LIPFE,LIPF  ; INITIAL PAGE FORMAT ITEMS
ENTRY INITLM,INITRM       ; INITIAL MARGINS
ENTRY INITSR              ; INITIAL SUBSCRIPT ROLL
ENTRY INITWF              ; INITIAL WRAP FLAG,
                           ; .. JUSTIFY FLAG, ETC (11 ITEMS)
ENTRY NONDOC              ; PATCH 0FFH TO ENTER IN
                           ; NON-DOCUMENT MODE

ENTRY DECCHR              ; DECIMAL POINT FOR DECIMAL TAB
ENTRY DOTCHR              ; FIRST CHAR FOR DOT COMMANDS
ENTRY BLNCHR              ; CHARACTER THAT PRINTS AS BLANK
ENTRY DOTSON              ; PATCH 0 TO DISABLE DOT COMMAND
                           ; .. INTERPRETATION WHILE EDITING
ENTRY HZONE,PVWTB,PNCON   ; RE HYPHENATION-HELP

ENTRY EOFCHR,BOFCHR       ; FLAG CHARACTERS ..
ENTRY CONCHR,OVPCHR       ;..(RIGHTMOST SCREEN COLUMN)
ENTRY LFCHR,PAGCHR,SOFTCR,HARDCR,FDTCHR ;..
ENTRY SOFHYC              ; SOFT HYPHEN DISPLAY CHARACTER
ENTRY PAGFIL               ; PAGE BREAK LINE CHARACTER
ENTRY MARKS                ; MARKER DISPLAY CHARACTERS

ENTRY PODBLK              ; PRINT OPTIONS DEFAULTS
ENTRY NOUFF                ; DON'T ASK "USE FORM FEEDS" FLAG
ENTRY ITPOPN,ITMLJ,ITBIP

ENTRY VARCH1,VARCH2,VARNBC,VAROPC ;RE MERGE-PRINT VARIABLES
ENTRY RVELIM,RVQUOT         ;DATA DELIMITER AND QUOTER

ENTRY FNWSCM               ; FILE NAME FOR WORDSTAR (WS.COM)
ENTRY DSKTNA               ; FILE NAME FOR MESSAGES FILE
ENTRY FNOVLY               ; FILE NAME FOR OVERLAY FILES
ENTRY FNMRGP               ; FILE NAME FOR MERGE-PRINT COMMAND

ENTRY AUTOBS,BSCHR         ; AUTOMATIC BACKSPACE INSERTION

```

USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

```

; ***** INITIALIZATION ITEMS *****

; ALL OF THE FOLLOWING CAN BE SET BY COMMAND;
; CHANGING THEM HERE WILL MAKE THE EDITOR COME
; UP IN YOUR FAVORITE STATE, ELIMINATING THE
; NEED TO ISSUE THE RELEVANT COMMAND EACH
; TIME THE EDITOR IS INVOKED.

;

; INITIAL "HELP" LEVEL

; (CHANGE DURING EXECUTION WITH ^JH COMMAND)

0360 03 ITHELP: DB 3 ;NORMALLY 3 FOR MAXIMUM HELP -- ALL MENUS
;DISPLAYED DURING EDITING. PATCH TO 2 TO
;SUPPRESS MAIN EDITING MENU (MAKING MORE
;OF SCREEN AVAILABLE FOR FILE DISPLAY);
;PATCH TO 1 TO ALSO SUPPRESS PREFIX HELP
;MENUS; PATCH TO 0 TO SUPPRESS ALL HELP.

0361 FF NITHLF: DB 0FFH ; ZERO TO ENABLE DISPLAY OF THE MESSAGE
; "FOR MAXIMUM HELP TYPE ^JH3" AT THE
; START OF FIRST EDIT IF ITHELP IS 1 OR 2.
; 0FFH TO SUPPRESS THAT MESSAGE.

;

; INITIAL INSERT TOGGLE

; (CHANGE DURING EXECUTION WITH ^V)

0362 FF ITITOG: DB 0FFH ;FF HEX TO COME UP WITH INSERT ON,
;CHANGE TO 0 TO COME UP WITH
;INSERT OFF. CONTENTS MUST
;NOT BE OTHER THAN 0 OR 0FFH.

;

; INITIAL NO-FILE DIRECTORY DISPLAY TOGGLE

; (CHANGE DURING EXECUTION WITH F COMMAND)
; (DIRECTORY DISPLAY DURING FILE EDIT DEFAULTS OFF)

0363 FF ITDSDR: DB 0FFH ;ZERO TO INITIALLY NOT DISPLAY
; DIRECTORY, FF HEX TO DISPLAY,
; WHEN NOT EDITING A FILE.

0364 00 00 DB 0,0 ;BYTES RESERVED FOR EXPANSION

```

USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

## ;INITIALIZATION ITEMS...

; ; INITIAL PAGE FORMAT FOR PAGE BREAK DISPLAY WHILE EDITING  
 ; AND FOR PAGINATION DURING PRINTOUT. DOT COMMANDS IN FILE  
 ; OVERRIDE THESE VALUES, BOTH DURING EDIT AND PRINT.  
 ;

0366	08	DB 8 ;LINE HEIGHT, 1/48 INCHES (DAISY PRINTERS)
0367	42	DB 66 ;PAPER LENGTH (.PL) IN LINES
0368	0210	DW 8*66 ; .. IN 48THS
036A	08	DB 8 ;LINE HEIGHT IS REPEATED HERE
036B	03	DB 3 ;MARGIN AT TOP (.MT) IN LINES
036C	0018	DW 8*3 ; .. IN 48THS OF AN INCH
036E	08	DB 8 ;LINE HEIGHT IN 48THS REPEATED HERE
036F	02	DB 2 ;HEADING MARGIN (.HM) IN LINES
0370	0010	DW 8*2 ; .. IN 48THS OF AN INCH
0372	08	DB 8 ;LINE HEIGHT IS REPEATED HERE
0373	08	DB 8 ;BOTTOM MARGIN (.MB)
0374	0040	DW 8*8 ; .. IN 48THS
0376	08	DB 8 ;LINE HEIGHT MUST BE REPEATED HERE
0011		LIPFE EQU \$-INITPF ;LENGTH INITPF INFO FOR EDIT
0377	02	DB 2 ;FOOTING (PAGE NUMBER) MARGIN (.FM)
0378	0010	DW 2*8 ; .. IN 48THS
037A	08	DB 8 ;LINE HEIGHT MUST BE REPEATED HERE
037B	00	DB 0 ;MUST BE A 0 HERE FOR STANDARD CHAR WIDTH
037C	0C	DB 12 ;STD CHAR WIDTH IN 1/120 INCH: 1/10 INCH
037D	0A	DB 10 ;ALTERNATE CHAR WIDTH IN 120THS: 1/12 INCH
037E	08	DB 8 ;PAGE OFFSET IN CHARS (PRINT ONLY)
0019		LIPF EQU \$-INITPF ;LENGTH OF INITPF INFO FOR PRINT

;NOTE: INITIAL PAGE NUMBER COLUMN (.PC) IS SET  
 ; AUTOMATICALLY TO HALF WAY BETWEEN INITIAL  
 ; LEFT AND RIGHT MARGINS (NEXT PAGE)

USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

;INITIALIZATION ITEMS...

; ; INITIAL MARGINS FOR WORD WRAP AND PARAGRAPH REFORM  
; ; INITLM AND INITRM MUST FOLLOW INITPF IN ORDER.

037F 00 INITLM: DB 0 ;INITIAL LEFT MARGIN COLUMN NUMBER LESS 1,  
; VALID VALUES ARE 0 INITRM-3.

0380 40 INITRM: DB 64 ;INITIAL RIGHT MARGIN COLUMN NUMBER LESS 1,  
; ALLOWED VALUES ARE 2 TO SCREEN WIDTH-4.

; ; NOTE: INITRM WILL BE REDUCED TO SCREEN WIDTH-4  
; (EG 60 FOR 64-COL SCREEN) IF GREATER.  
; OPERATOR MAY SUBSEQUENTLY INCREASE  
; (TO MAX OF 240) IF DESIRED.

; ; NOTE: INITRM IS ALSO THE DEFAULT APPLIED BY  
; MERGE-PRINT AT BEGINNING OF FILE, BEFORE  
; FIRST SOFT CARRIAGE RETURN SEEN, IF  
; MERGE-PRINT'S PRINT TIME LINE FORMING IS  
; INVOKED THERE (E.G. BY USING A VARIABLE).

; ; INITIAL SUBSCRIPT/SUPERSCRIPT ROLL IN 1/48THS  
; INCH FOR PRINTOUT ON INCREMENTAL PRINTERS  
;

0381 03 INITSR: DB 3 ;ROLL 3/48THS OF AN INCH.

0382 00 00 00 DB 0,0,0 ;BYTES RESERVED FOR EXPANSION

C USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

## ;INITIALIZATION ITEMS...

; INITIAL WORD PROCESSING FLAGS.

; THESE VALUES ARE USED UNLESS A NON-DOCUMENT IS EDITED  
 ; (N COMMAND) IN WHICH CASE ALL CLEARED.  
 ; FOR EACH, FF HEX MEANS "ON", 0 MEANS OFF,  
 ; NO OTHER VALUES SHOULD BE USED.  
 ; ALL ARE CHANGEABLE BY COMMAND EXCEPT AS NOTED.

;

<b>0385</b>	<b>INITWF:</b>	
0385	FF	DB 0FFH ;WORD WRAP FLAG (^OW COMMAND).
0386	FF	DB 0FFH ;JUSTIFY FLAG (0 FOR RAGGED RIGHT) (^OJ). ; (IS AT INITWF+1 & IS USED IN INIPRN.MAC.)
0387	FF	DB 0FFH ;VARIABLE TABS FLAG: ZERO FOR TAB ; CHARACTERS IN FILE WITH FIXED DISPLAY/ ; PRINT STOPS EVERY 8 COLUMNS (^OV).
0388	00	DB 0 ;SOFT HYPHEN ENTRY FLAG (^OE COMMAND): ; 0FFH TO ENTER SOFT HYPHEN WHEN "-" TYPED.
0389	FF	DB 0FFH ;HYPHEN-HELP FLAG (^OH). 0 FOR ^B TO NOT ; STOP TO ALLOW USER TO HYPHENATE.
038A	FF	DB 0FFH ;PRINT CONTROL AND SOFT HYPHEN DISPLAY ; FLAG (^OD COMMAND): 0 FOR NO DISPLAY.
038B	FF	DB 0FFH ;DISPLAY "RULER" SHOWING MARGINS AND TAB ; STOPS (0 TO NOT DISPLAY RULER) (^OT).
038C	FF	DB 0FFH ;DYNAMIC PAGE BREAK DETERMINATION FLAG: ; ZERO TO NOT KEEP TRACK OF PAGE BREAKS ; DURING EDITING. ZERO ELIMINATES HIGH ; ORDER BITS USED IN FILE RE PAGE BREAKS. ; IF ZERO, PAGE # WON'T SHOW IN STATUS ; LINE, PAGE BREAKS WILL NOT DISPLAY, AND ; NEXT ITEM CANNOT BE SET NON-ZERO. ; NOT CHANGEABLE BY COMMAND — ; CANNOT BE CHANGED IN MID-EDIT.
038D	FF	DB 0FFH ;PAGE BREAK DISPLAY FLAG: 0 PREVENTS LINE ; OF —'S FROM DISPLAYING AT PAGE BREAK ; AND SUPPRESSES PAGE NUMBER IN STATUS ; LINE. (^OP COMMAND)
;		
		; INITIAL LINE SPACING. MUST FOLLOW ABOVE ITEMS.
038E	01	DB 1 ;SINGLE SPACE TEXT AS ENTERED. FOR ; DOUBLE SPACING, CHANGE TO 2, ETC.
;		
038F	00	DB 0H ;SET TO 0 TO ENABLE BLOCK MOVE (^KN COMMAND) ; 0FFH TO ENABLE COLUMN MOVE
0390	00 00	DB 0,0 ;RESERVED FOR EXPANSION

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; THE REST OF THE ITEMS ARE NOT  
; INITIALIZATION ITEMS; THEY MAY BE  
; CHANGED ONLY BY PATCHING HERE.

; NONDOC - FLAG TO DETERMINE MODE TYPE, IF WORDSTAR INVOKED WITH FILENAME  
;

0392 00 NONDOC: DB 0 ;SET TO 0FFH TO ENTER WS IN NON-DOCUMENT MODE

; "DECIMAL POINT" CHARACTER THAT TERMINATES  
; ALIGNMENT ACTION WHEN DECIMAL TAB IS IN USE

0393 2E DECCHR: DB '.' ;NORMALLY POINT, USER MAY CHANGE

0394 00 DB 0 ;RESERVED FOR EXPANSION

; \*\*\*\*\* DOT COMMANDS AND PRINT FORMATTING \*\*\*\*\*

; CHARACTER THAT BEGINS DOT COMMANDS  
;

0395 2E DOTCHR: DB '.' ;NORMALLY PERIOD, USER MAY CHANGE

; NON-BREAK SPACE:  
; CHARACTER THAT PRINTS AS SPACE BUT IS NOT  
; TREATED AS A WORD BREAK BY WORD WRAP OR  
; PARAGRAPH REFORM, NOR AS A PLACE FOR  
; JUSTIFICATION TO ADD SPACES.  
;

0396 0F BLNCHR: DB CTRLO ;NORMALLY ^O, MAY BE CHANGED  
; TO OTHER ASCII CHARACTER.

; FLAG TO ENABLE  
; DYNAMIC INTERPRETATION OF DOT COMMANDS  
;

0397 FF DOTSON: DB 0FFH ;NORMALLY ON, THIS MAY BE SET ZERO TO  
; DISABLE ALL DOT COMMAND INTERPRETATION  
; DURING EDITING, INCLUDING WITH REGARD  
; TO DYNAMIC PAGE BREAK DISPLAY, AND THE  
; DISPLAY OF A "?" FLAG FOR UNRECOGNIZED  
; DOT COMMANDS.

0398 00 00 DB 0,0 ;RESERVED FOR EXPANSION

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## \*\*\*\*\* HYPHENATION-HELP \*\*\*\*\*

; HYPHENATION CRITERION

; THIS NUMBER (ADJUSTED SOMEWHAT DEPENDING ON NUMBER  
; OF WORDS ON LINE) DETERMINES MAXIMUM NUMBER OF COLUMNS  
; SHORT OF RIGHT MARGIN LAST FULL WORD ON LINE MAY END  
; WITHOUT A HYPHENATION STOP OCCURRING DURING PARAGRAPH  
; REFORM WITH HYPHENATION-HELP ON.

; INCREASE FOR FEWER HYPER STOP, DECREASE FOR MORE STOPS.

039A 04

HZONE: DB 4

; VOWELS AND CONSONANTS

; THE TESTS THAT POSITION THE CURSOR AT A HYPHENATION-  
; STOP CLASSIFY CHARACTERS INTO VOWELS AND CONSONANTS  
; USING THE FOLLOWING TABLES.

039B 039F  
039D 03A4

PWWTB: DW VOWTAB ; ADDRESS OF VOWEL TABLE  
 PNCN: DW NONCON ; ADDRESS OF NOT-CONSONANT TABLE

039F  
039F 59  
03A0 5B 5D 7B 7D

VOWTAB: ; TABLE OF ALL VOWELS BEGINS HERE  
 DB 'Y' ; Y CAN BE EITHER VOWEL OR CONSONANT  
 DB '[]{}'; THESE CODES ARE USED FOR ACCENTED  
; VOWELS IN SOME EUROPEAN LANGUAGES  
; VOWEL TABLE CONTINUES!

03A4  
03A4 41 45 49 4F  
03A8 55  
03A9 00

NONCON: ; TABLE OF NON-CONSONANT LETTERS,  
; ALSO CONTINUATION OF VOWEL TABLE.  
 DB 'AEIOU' ; VOWELS, NOT CONSONANTS  
 DB 0 ; 0 TERMINATES TABLE

; NOTE: A CONSONANT IS ANY LETTER A-Z NOT IN NONCON TABLE.

03AA 00 00 00

DB 0,0,0 ; RESERVED FOR EXPANDING ABOVE TABLES

; FOR AUTO-BACKSPACE CHARACTER TABLE SEE END OF LISTING

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; \*\*\*\*\* RE SCREEN DISPLAY DURING EDITING \*\*\*\*\*

;  
; FLAG CHARACTERS -  
; DISPLAY IN RIGHTMOST COLUMN OF SCREEN  
;

03AD 2E EOFCHR: DB '.' ;END FILE. MAY BE PATCHED TO  
; BLANK OR OTHER CHAR AS DESIRED.

03AE 3A BOFCHR: DB ':' ;BEGINNING OF FILE  
03AF 2B CONCHR: DB '+' ;FILE LINE CONTINUES

03B0 2D OVPCHR: DB '-' ;NEXT SCREEN LINE OVERPRINTS  
; THIS ONE (CR WITHOUT LF)

03B1 4A LFCHR: DB 'J' ;LINE ENDS IN LINE FEED W/O CR  
03B2 50 PAGCHR: DB 'P' ;LINE IS LAST LINE OF PAGE  
03B3 20 SOFTCR: DB ' ' ;LINE IS NOT A PARAGRAPH ENDING  
; IN DOCUMENT: THE CARRIAGE RETURN AT  
; THE END OF THIS LINE CAN BE MOVED BY  
; REFORM COMMAND.

03B4 3C HARDCR: DB '<' ;END OF LINE IS PARAGRAPH  
; TERMINATION, CARRIAGE RETURN WILL  
; NOT MOVE UNLESS MOVED BY OPERATOR.  
; NOTE: USERS WHOSE FILES NORMALLY HAVE  
; CARRIAGE RETURNS AT END OF EVERY LINE  
; (EG PROGRAM SOURCE FILES) MAY WISH TO  
; PUT BLANK IN HARDCR AND ANOTHER  
; CHARACTER IN SOFTCR.

03B5 4D FDTCHR: DB 'M' ;LINE CONTAINS MERGE-PRINT DOT COMMAND

03B6 00 00 DB \$,\$ ;RESERVED BYTES

;  
; CHARACTER USED TO DISPLAY SOFT HYPHENS  
;  
; THIS CHARACTER IS USED TO DISPLAY "SOFT" HYPHENS  
; — BOTH THE "INACTIVE" ONES IN MID-LINE, AND THE  
; "ACTIVE" ONES AT LINE END WHICH WILL PRINT AS A "-".  
;  
; THE HIGH ORDER BIT (80H) INVOKES HIGHLIGHTED DISPLAY  
; — INVERSE VIDEO, DIM, ETC DEPENDING ON TERMINAL.

03B8 AD SOFHYC: DB '-'+80H ;HIGHLIGHTED HYPHEN

;  
; CHARACTER USED TO FILL LINE AT PAGE BREAK  
;

03B9 2D PAGFIL: DB '-' ;DISPLAY A LINE OF -'S

## WordStar 3.0 Customization Notes

## USER2 Listing

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;SCREEN DISPLAY DURING EDITING...

;DISPLAY CHARACTERS FOR THE 15 PLACE MARKERS,  
; INTERNALLY NUMBERED 1-15.;TABLE IS INDEXED BY MARKER NUMBER LESS 1.  
; EACH ENTRY IS ASCII CHAR TO DISPLAY BETWEEN  
; <>'S, OR BINARY 0 TO NEVER DISPLAY THIS MARKER.

;MARKS:

03BA 42  
03BA 42  
03BB 4BDB 'B' ;INTERNAL #1: BEGINNING OF BLOCK OF TEXT  
DB 'K' ;INTERNAL #2: END OF MARKED BLOCK OF TEXT;NOTE: WHEN SUPPORTED BY TERMINAL IN USE  
;(AND PATCHES IN USER1 REFLECT THIS SUPPORT),  
;THE MARKED BLOCK IS DISPLAYED DIM OR IN  
;INVERSE VIDEO WITH THE <B> AND <E> AT ITS  
;BEGINNING AND END SUPPRESSED. WHEN SUCH  
;HARDWARE SUPPORT IS AVAILABLE, THESE  
;MARKERS ARE DISPLAYED ONLY IF ONLY ONE IS  
;SET, IF THE END IS BEFORE THE BEGINNING,  
;OR THEY ARE BOTH IN THE SAME PLACE.

03BC 00

DB 0 ;INTERNAL #3: BEGINNING OF COMMAND:  
; DOES NOT DISPLAY; N. B. DO NOT MAKE DISPLAYABLE!  
; ACCESSED BY OPERATOR WITH ^QP;  
; USEFUL FOR RETURNING CURSOR TO  
; POSITION BEFORE ^KS, ^QF, ^B, ETC.

03BD 00

DB 0 ;INTERNAL #4: START OF LAST FIND/REPLACE  
; ITERATION, SOURCE OF TEXT FOR  
; LAST BLOCK MOVE OR COPY. DOES  
; NOT DISPLAY, ACCESSIBLE VIA ^QV.

03BE 00

DB 0 ;INTERNAL #5: CURRENTLY NOT USED

03BF 30 31 32 33  
03C3 34 35 36 37  
03C7 38 39

DB '0123456789' ;INTERNAL #6-#15 ARE USER

;PLACE MARKERS 0 THRU 9.

03C9 00

DB 0 ;BYTE RESERVED FOR EXPANSION

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;  
 ;  
 ; DEFAULTS FOR PRINT OPTIONS  
 ;  
 ; THESE CORRESPOND IN ORDER TO THE OPTIONS QUESTIONS  
 ; ASKED WHEN PRINTING A FILE IS INITIATED.  
 ; EACH IS 0 FOR THE INDICATED OPTION TO DEFAULT  
 ; TO "NO", OR OFFH TO DEFAULT TO "YES".  
 ; THE DEFAULT IS USED WHEN A CHARACTER OTHER THAN  
 ; Y OR N IS INPUT.  
 ;

ADDED RELEASE 0.94.

03CA 00  
 03CA 00  
 03CB 00  
 03CC 00  
 03CD 00  
 PODBLK:  
 DB 0 ;DISK FILE OUTPUT. IF FF, "FILE NAME?" IS ASKED.  
 DB 0 ;USE FORM FEEDS. WHEN OFF, SIMULATE WITH LF'S.  
 DB 0 ;SUPPRESS PAGE FORMATTING.  
 DB 0 ;PAUSE BETWEEN PAGES

03CE 00 00 00 DB 0,0,0 ;RESERVED

03D1 00 NOUFF: DB 0 ;NON-ZERO TO SUPPRESS "USE FORM FEEDS"  
 ;QUESTION IN PRINT INITIATE DIALOG,  
 ;FOR PRINTERS THAT CAN'T FORM FEED.  
 ;SET BY INSTALL PROGRAM FOR DIABLO 1650.

03D2 00 DB 0 ;RESERVED

03D3 00 ITPOPN: DB 0 ;INITIAL " OMIT PAGE NUMBERS" FLAG: OFFH TO  
 ; PRINT NO PAGE NUMBERS. .OP / .PN DOT CMDS.

03D4 FF ITMLJ: DB OFFH ;INITIAL MICROJUSTIFY SWITCH: 0 TO SUPPRESS  
 ; CHANGE DURING PRINTOUT WITH .UJ DOT CMD

03D5 FF ITBIP: DB OFFH ;INITIAL BIDIRECTIONL PRINT SWITCH: 0 TO  
 ; DISABLE. .BP DOT COMMAND.

03D6 00 00 DB 0,0 ;RESERVED

## WordStar 3.0 Customization Notes

## USER2 Listing

USER2 05/10/81 PARAMETERS USER MAY ALTER MACRO-80 3.4 01-Dec-80

; \*\*\*\*\* RE MERGE-PRINT \*\*\*\*\*

; ; DELIMITER AND QUOTE FOR VALUES IN MERGE-PRINT DATA FILE

03D8 2C RVELIM: DB ',' ;COMMA DELIMITS DATA VALUES ON A LINE  
03D9 22 RVQUOT: DB '\"' ;DOUBLE QUOTE ENCLOSES VALUES CONTAINING  
; ; COMMAS, LEADING BLANKS, TRAILING BLANKS.  
03DA 00 DB 0

; ; DELIMITERS FOR MERGE-PRINT &amp; VARIABLES&amp; IN DOCUMENT FILE

03DB 26 VARCH1: DB '&' ;CHARACTER THAT INTRODUCES VARIABLE  
03DC 26 VARCH2: DB '&' ;SAME CHARACTER TERMINATES VARIABLE  
03DD 2A VARNEC: DB '\*' ;CHAR AFTER FIRST & TO SAY OMIT LINE  
; ; IF BLANK AND VBL VALUE IS NULL.  
; ; &\* IS OBSOLETE AND WILL BE REMOVED.  
03DE 2F VAROPC: DB '/' ;CHARACTER AFTER NAME B4 OPTION LETTERS  
03DF 4F DB '0' ;OPTION LETTER FOR "OMIT LINE IF VBL NULL"  
; ; OPTION LETTERS TO BE ADDED HERE

03E0 00 00 DB 0,0 ;RESERVED  
03E2 00 00 00 00 DB 0,0,0,0 ;RESERVED

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; NAMES OF THE VARIOUS FILES CONSTITUTING WordStar  
; NAME OF FILE CONTAINING WORDSTAR BASE  
; NORMALLY WS.COM, BUT IF ANOTHER NAME IS SELECTED  
; IN THE INSTALL PROGRAM, THE ACTUAL NAME IS  
; STORED HERE. MUST ACTUAL NAME ON DISK FOR  
; CORRECT OPERATION OF "R" (RUN PROGRAM) COMMAND.  
;  
03E6 00 57 53 20 FNWSCM: DB 0,'WS COM' ;OCCUPIES 12 BYTES  
03EA 20 20 20 20  
03EE 20 43 4F 4D  
;  
03F2 00 57 53 4D DSKTNA: DB 0,'WSMSGS OVR'  
03F6 53 47 53 20  
03FA 20 4F 56 52  
;  
03FE 00 57 53 4F FNOVLY: DB 0,'WSOVLY1 OVR'  
0402 56 4C 59 31  
0406 20 4F 56 52  
;  
040A 00 4D 41 49 FNMRGP: DB 0,'MAILMRGEovr'  
040E 4C 4D 52 47  
0412 45 4F 56 52  
0416 00 00 00 00 DB 0,0,0,0 ;RESERVED FOR EXPANSION  
041A 00 00 00 00  
041E 00 00 00 00 DB 0,0,0,0  
;  
; AUTOMATIC BACKSPACE CHARACTER TABLE  
; (WordStar 2.2+ ONLY -- NOT IN WordStar 2.0 AND 2.1)  
;  
; UP TO 10 CHARACTERS, TYPICALLY ACCENT MARKS, MAY BE  
; PATCHED INTO THE FOLLOWING TABLE. WHENEVER ONE OF THESE  
; CHARACTERS IS ENTERED, WordStar WILL AUTOMATICALLY ENTER  
; A BACKSPACE (^H) PRINT CONTROL AFTER THE CHARACTER.  
;  
0422 00 00 00 00 AUTOBS: DB 0,0,0,0 ;TABLE IS INITIALLY EMPTY. PATCH  
0426 00 00 00 00 DB 0,0,0,0 ;IN DESIRED CHARACTERS, STARTING  
.042A 00 00 DB 0,0 ;WITH FIRST BYTE. 0 ENDS TABLE.  
042C 00 DB 0 ;ENDS TABLE IF ALL 10 BYTES USED.  
;  
042D 08 BSCHR: DB 8 ;BACKSPACE CODE: CONTROL-H. CHANGE IF  
;DESIRED TO AUTO-ENTER DIFFERENT CHARACTER.  
;  
042E ALABEL EQU \$ ;42E SHOULD PRINT NEXT TO THIS  
END ;NEXT MODULE LOADS AT 430 HEX.

WordStar 3.0 Customization Notes

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Macros:

Symbols:

ALABEL	042E	AUTOBS	0422I	BLNCHR	0396I	BOFCHR	03AEI
BSCHR	042DI	CONCHR	03AFI	CTRL0	000F	DECCHR	0393I
DOTCHR	0395I	DOTSON	0397I	DSKTN	03F2I	EOFCHR	03ADI
FDTCHR	03B5I	FNMRGP	040AI	FNOVLY	03FEI	FNWSCM	03E6I
HARDCR	03B4I	HZONE	039AI	INITLM	037FI	INITPF	0366I
INITRM	0380I	INITSR	0381I	INITWF	0385I	ITBIP	03D5I
ITDSDR	0363I	ITHELP	0360I	ITITOG	0362I	ITMIJ	03D4I
ITPOPN	03D3I	LFCHR	03B1I	LIPF	0019I	LIPFE	0011I
MARKS	03BAI	NITHLF	0361I	NONCON	03A4	NONDOC	0392I
NOUFF	03D1I	OVPCHR	03B0I	PAGCHR	03B2I	PAGFIL	03B9I
PNCON	039DI	PODBLK	03CAI	PVWTB	039BI	RVELIM	03D8I
RVQUOT	03D9I	SOFHYC	03B8I	SOFTCR	03B3I	TBASE	0100
VARCH1	03DBI	VARCH2	03DCI	VARNBC	03DDI	VAROPC	03DEI
VOWTAB	039F						

No Fatal error(s)

USER3 05/10/81 KEYSTROKE DISPATCH TABLES MACRO-80 3.4 01-Dec-80

TITLE USER3 04/10/81 KEYSTROKE DISPATCH TABLES  
; AND OTHER SPECIAL INPUT CHARACTERS  
;  
; WordStar RELEASE 3.0 MAY, 1981  
;

0100 TBASE EQU 100H ;WHERE PROGRAM IS LOADED FOR NORMAL CP/M

00001 ASEG

ORG TBASE+330H ;BEGINS AT 430 HEX OR 4630 HEX

ENTRY PVTAB,VTAB ;EDITING COMMAND DISPATCH TABLE  
ENTRY XTAB ;WHERE TO ADD COMMANDS TO ABOVE  
ENTRY PNFTAB,NOFTAB ;NO-FILE DISPATCH TABLE  
ENTRY PFPTAB,FPTAB ;MERGE-PRINT DISPATCH TABLE  
ENTRY CLCHR,CRCHR,LITCHR ;CHARACTERS USED  
; .. IN LINE INPUT ROUTINE  
ENTRY STPCHR ;"INTERRUPT" COMMAND CHARACTER  
ENTRY ERELCH ;ERROR RELEASE CHARACTER  
ENTRY DIRCH ;DIRECTORY DISPLAY CHARACTERS

PAGE 65 ;SETS PAGE LENGTH

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KEYSTROKE DISPATCH TABLES

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## ;SYMBOLIC DEFINITIONS FOR ASCII CHARACTERS

0009	TAB	EQU X'09'	;TAB, CONTROL-I.
000D	CR	EQU X'0D'	;CARRIAGE RETURN
000A	LF	EQU X'0A'	;LINE FEED
000C	FF	EQU X'0C'	;FORM FEED
			;CONTROL-LETTER KEY FUNCTIONS:
0001	CTRLA	EQU 1	;BACK WORD
0002	CTRLB	EQU 2	;REFORM PARAGRAPH
0003	CTRLC	EQU 3	;SCROLL UP SCREEN
0004	CTRLD	EQU 4	;CURSOR RIGHT CHAR
0005	CTRLE	EQU 5	;CURSOR UP
0006	CTRLF	EQU 6	;RIGHT WORD
0007	CTRLG	EQU 7	;DELETE RIGHT
0008	CTRLH	EQU 8	;CURSOR LEFT CHAR
0009	CTRLI	EQU 9	;TAB
000A	CTRLJ	EQU 10	;HELP PREFIX
000B	CTRLK	EQU 11	;PREFIX
000C	CTRLL	EQU 12	;FIND/REPLACE AGAIN
000D	CTRLM	EQU 13	;CARRIAGE RETURN
000E	CTRLN	EQU 14	;INSERT LINE
000F	CTRLO	EQU 15	;FORMAT OPTIONS PREFIX
0010	CTRLP	EQU 16	;ENTER PRINT CONTROL
0011	CTRLQ	EQU X'11'	;PREFIX - CURSOR MOTION, ETC
0012	CTRLR	EQU X'12'	;SCROLL DOWN SCREEN
0013	CTRLS	EQU X'13'	;LEFT CHAR
0014	CTRLT	EQU X'14'	;DELETE WORD
0015	CTRLU	EQU X'15'	;INTERRUPT / STOP
0016	CTRLV	EQU X'16'	;INSERT TOGGLE
0017	CTRLW	EQU X'17'	;SCROLL DOWN LINE
0018	CTRLX	EQU X'18'	;CURSOR DOWN
0019	CTRLY	EQU X'19'	;DELETE LINE
001A	CTRLZ	EQU X'1A'	;SCROLL UP LINE
001B	ESC	EQU X'1B'	;ESCAPE KEY
001C	CTRLBS	EQU X'1C'	;`
001D	CTRLRB	EQU X'1D'	;`]
001E	CTRLCT	EQU X'1E'	;``
001F	CTRLUL	EQU X'1F'	;`_, CTRL-DELETE: SOME TERMINALS
007F	RUBOUT	EQU X'7F'	;DELETE KEY, ALSO CALLED "RUBOUT"

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KEYSTROKE DISPATCH TABLES

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## ; \*\*\*\*\* NO-FILE MENU DISPATCH TABLE \*\*\*\*\*

; THIS TABLE IS USED TO INTERPRET CHARACTERS ENTERED  
; AT THE MENU WHEN NO FILE IS BEING EDITED; IT MAY  
; BE MODIFIED TO CHANGE THE COMMAND CHARACTERS.  
;  
; EACH TABLE ENTRY CONSISTS OF FOUR BYTES, IN THE SAME  
; FORMAT AS THE FILE-EDITING COMMAND DISPATCH TABLE,  
; AS EXPLAINED ON THE NEXT PAGE.  
; THE LAST ENTRY IS FOLLOWED BY A ZERO.

0430	04 00	NOFTAB: DB CTRLD,0
0432	0000*	DW SFIL## ;EDIT FILE, DOCUMENT MODE
0434	0E 00	DB CTRLN,0
0436	0000*	DW SFILP## ;EDIT FILE, PROGRAM MODE
0438	08 00	DB CTRLH,0
043A	0000*	DW SETHL## ;SET HELP LEVEL
043C	18 00	DB CTRLX,0
043E	0000*	DW EXITIF## ;EXIT TO SYSTEM
0440	10 00	DB CTRLP,0
0442	0000*	DW PFIL## ;PRINT FILE
0444	0D 00	DB CTRLM,0
0446	0000*	DW FPFIL## ;MERGE-PRINT FILE *1.3*
0448	19 00	DB CTRLY,0
044A	0000*	DW DELFIL## ;DELETE FILE
044C	06 00	DB CTRLF,0
044E	0000*	DW DIRTGL## ;DIRECTORY DISPLAY
0450	1A 00	DB CTRLZ,0
0452	0000*	DW DSCRUP## ;SCROLL DIRECTORY UP
0454	17 00	DB CTRLW,0
0456	0000*	DW DSCRDN## ;SCROLL DIRECTORY DOWN
0458	0C 00	DB CTRLL,0
045A	0000*	DW SELDRV## ;SELECT CURRENT DISK DRIVE
045C	12 00	DB CTRLR,0
045E	0000*	DW XPROG## ;EXECUTE PROGRAM *1.2*
0460	0F 00	DB CTRL0,0
0462	0000*	DW COPYF## ;COPY FILE *1.3*
0464	05 00	DB CTRLE,0
0466	0000*	DW RENF## ;RENAME FILE *1.3*
0468	16 00	DB CTRLV,0
046A	0000*	DW VDDT##
046C	13 00	DB CTRLS,0
046E	0000*	DW SPLSTR## ;RUN SPELLSTAR COMMAND
0470	00 00	DB 0,0 ;SPACE FOR ONE ADDITIONAL
0472	0000	DW 0 ;.. (DUPLICATE) ENTRY
0474	00 00	DB 0,0 ;SPACE FOR ANOTHER ENTRY
0476	0000	DW 0 ;..
0478	00 00	DB 0,0 ;SPACE FOR ANOTHER ENTRY
047A	0000	DW 0 ;..
047C	00 00	DB 0,0 ;SPACE FOR ANOTHER ENTRY
047E	0000	DW 0 ;..
0480	00	DB 0 ;0 MARKS END TABLE

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KEYSTROKE DISPATCH TABLES

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; \*\*\*\*\* FILE-EDITING COMMAND DISPATCH TABLE \*\*\*\*\*  
;  
; THIS TABLE IS USED TO INTERPRET COMMANDS INPUT  
; DURING EDITING OF A FILE. THE COMMAND CHARACTER  
; PORTION OF THE ENTRIES MAY BE ALTERED TO CHANGE  
; THE KEYS USED FOR COMMANDS.  
;  
; COMMANDS MAY BE FREELY CHANGED BETWEEN SINGLE AND  
; DOUBLE KEYSTROKES, OR TO A DIFFERENT PREFIX (FIRST KEY)  
; FOR A TWO-KEYSTROKE COMMAND. HOWEVER, THE SAME KEY  
; MAY NOT BE USED BOTH AS A SINGLE-KEY COMMAND AND AS  
; THE FIRST (PREFIX) KEY OF TWO-KEY COMMANDS.  
;  
; DUPLICATE ENTRIES ARE OK: YOU MAY ADD A NEW KEY OR  
; KEY PAIR FOR AN EXISTING FUNCTION, WITHOUT DELETING THE  
; OLD COMMAND, USING THE EXTRA SPACE PROVIDED AT THE END.  
;  
; EACH TABLE ENTRY CONSISTS OF FOUR BYTES:  
; BYTE 0: (FIRST) COMMAND CHARACTER.  
; BYTE 1: ZERO FOR ONE-KEY COMMANDS, OR SECOND  
; CHARACTER OF TWO-KEY COMMANDS.  
; BYTES 3,4: ADDRESS, DO NOT ALTER; OR,  
; IF VALUE LESS THAN 256, IT IS THE INDEX  
; (SEE WSMGS.OVR) TO A TEXT STRING  
; TO DISPLAY, FOR A "HELP" COMMAND.  
; THE LAST ENTRY IS FOLLOWED BY A ZERO.  
;  
; COMMAND CHARACTERS IN THE FIRST BYTE OF EACH  
; TABLE ENTRY SHOULD BE CONTROL CODES  
; (01-3F HEX), AS ONLY CODES NOT IN THE TABLE  
; ARE TAKEN AS TEXT TO BE ENTERED IN THE FILE.  
;  
; THE SECOND CHARACTER CAN BE ANY CHARACTER  
; EXCEPT A LOWER CASE LETTER. THE EDITOR  
; DISREGARDS BIT 1 (40 HEX) WHEN MATCHING THE  
; SECOND KEYSTROKE AGAINST THE TABLE ENTRY,  
; SO THAT CONTROL CHARACTERS AND LETTERS  
; ARE EQUIVALENT. LOWER CASE LETTERS ENTERED  
; AS THE SECOND KEYSTROKE OF A COMMAND ARE  
; CONVERTED TO UPPER BEFORE THE TABLE SEARCH.  
;  
; TABLE BEGINS ON NEXT PAGE

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KEYSTROKE DISPATCH TABLES

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0011  
000B  
000B  
000F  
000A

```
; DEFINITIONS OF SYMBOLS USED FOR PREFIX CHARS
EGPRE EQU CTRLQ ;FOR ADDL CURSOR COMMANDS
QPRE EQU CTRLK ;MARKER, MARKED TEXT COMMANDS
FILPRE EQU CTRLK ;END EDIT / FILE COMMANDS
MARPRE EQU CTRLO ;FORMAT OPTIONS COMMANDS
HELPRE EQU CTRLJ ;ADDITIONAL HELP COMMANDS
```

```
;FILE-EDITING COMMAND DISPATCH TABLE.
;SEE COMMENTS PREVIOUS PAGE.
;SYMBOLS USED ARE DEFINED IN EQU'S
;ON PREVIOUS AND PRECEDING PAGES.
```

0481

## VTAB:

```
;SPECIAL ENTRIES FOR HELP MESSAGES FOR PREFIXES -
;THESE MUST BE FIRST;
;YOU NORMALLY WON'T WANT TO ALTER THESE.
```

0481 11 FF
0483 0000\*
0485 0B FF
0487 0000\*
0489 0F FF
048B 0000\*
048D 0A FF
048F 0000\*

```
DB EGPRE,0FFH ;FF 2ND BYTE: DISPLAY..
DW HELPF## ;HELP FOR ^Q GROUP
DB QPRE,0FFH ;... TEXT, THEN INPUT..
DW HELPB## ;HELP FOR ^K GROUP
DB MARPRE,0FFH ;... SECOND KEYSTROKE.
DW HELPU## ;HELP FOR ^O GROUP
DB HELPRE,0FFH ;HELP FOR ^J GROUP
DW HELPZ## ;^P PREFIX HELP IS DISPLAYED FROM
; ^P ROUTINE - "VESC" IN WMC2.MAC.
```

0491 0A 08
0493 0000\*

```
DB HELPRE,CTRLH
DW SETHL## ;SET HELP PROMPTING LEVEL
```

0495 13 00
0497 0000\*
0499 08 00
049B 0000\*
049D 04 00
049F 0000\*
04A1 01 00
04A3 0000\*
04A5 06 00
04A7 0000\*
04A9 18 00
04AB 0000\*
04AD 05 00
04AF 0000\*

```
DB CTRLS,0 ;SEE ALSO CLCHR BELOW.
DW CRB## ;CURSOR BACK CHARACTER
DB CTRLH,0 ;BACKSPACE ALSO WORKS FOR..
DW CRB## ;CURSOR BACK CHARACTER
DB CTRLD,0 ;SEE ALSO CRCHR BELOW.
DW CRF## ;CURSOR FWD CHAR
DB CTRLA,0 ;CURSOR BACK WORD
DW CBW## ;CURSOR FORWARD WORD
DB CTRLF,0 ;CURSOR DOWN LINE
DW CRD## ;CURSOR UP LINE
DB CTRLE,0 ;CURSOR UP LINE
```

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KEYSTROKE DISPATCH TABLES

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## ;EDITING COMMAND DISPATCH TABLE...

04B1	11 13	DB EGPRE, CTRLS
04B3	0000*	DW CLL## ;CURSOR 'LEFT EDGE SCREEN
04B5	11 04	DB EGPRE, CTRLD
04B7	0000*	DW CRR## ;CURSOR RIGHT EDGE SCREEN
04B9	11 18	DB EGPRE, CTRLX
04BB	0000*	DW CBB## ;CURSOR BOTTOM OF SCREEN
04BD	11 05	DB EGPRE, CTRLE
04BF	0000*	DW CTT## ;CURSOR TOP SCREEN
04C1	11 42	DB EGPRE, 'B' ;CURSOR TO INTERNAL MARKER 1 -
04C3	0000*	DW CMAR1## ; BLOCK BEGINNING
04C5	11 4B	DB EGPRE, 'K' ;CURSOR TO MARKER 2 -
04C7	0000*	DW CMAR2## ; BLOCK END
04C9	11 50	DB EGPRE, 'P' ;CURSOR TO MARKER 3 - WHERE
04CB	0000*	DW CMAR3## ; LAST COMMAND BEGAN
04CD	11 56	DB EGPRE, 'V' ;CURSOR TO MARKER 4 - WHERE
04CF	0000*	DW CMAR4## ; SEARCH OR MOVE BEGAN
04D1	11 30	DB EGPRE, '0' ;CURSOR TO INTERNAL MARKER 6
04D3	0000*	DW CMAR6## ; - USER PLACE MARKER 0
04D5	11 31	DB EGPRE, '1' ;CURSOR TO INTERNAL MARKER 7
04D7	0000*	DW CMAR7## ; - USER PLACE MARKER 1
04D9	11 32	DB EGPRE, '2' ;CURSOR TO INTERNAL MARKER 8
04DB	0000*	DW CMAR8## ; - USER PLACE MARKER 2
04DD	11 33	DB EGPRE, '3' ;CURSOR TO INTERNAL MARKER 9
04DF	0000*	DW CMAR9## ; - USER PLACE MARKER 3
04E1	11 34	DB EGPRE, '4' ;CURSOR TO INTERNAL MARKER 10
04E3	0000*	DW CMAR10## ; - USER PLACE MARKER 4
04E5	11 35	DB EGPRE, '5' ;CURSOR TO INTERNAL MARKER 11
04E7	0000*	DW CMAR11## ; - USER PLACE MARKER 5
04E9	11 36	DB EGPRE, '6' ;CURSOR TO INTERNAL MARKER 12
04EB	0000*	DW CMAR12## ; - USER PLACE MARKER 6
04ED	11 37	DB EGPRE, '7' ;CURSOR TO INTERNAL MARKER 13
04EF	0000*	DW CMAR13## ; - USER PLACE MARKER 7
04F1	11 38	DB EGPRE, '8' ;CURSOR TO INTERNAL MARKER 14
04F3	0000*	DW CMAR14## ; - USER PLACE MARKER 8
04F5	11 39	DB EGPRE, '9' ;CURSOR TO INTERNAL MARKER 15
04F7	0000*	DW CMAR15## ; - USER PLACE MARKER 9
04F9	11 12	DB EGPRE, CTRLR
04FB	0000*	DW BFIL## ;CURSOR TO BEGINNING OF FILE
04FD	11 03	DB EGPRE, CTRLC
04FF	0000*	DW EFIL## ;CURSOR TO END FILE

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## KEYSTROKE DISPATCH TABLES

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;EDITING COMMAND DISPATCH TABLE...

0501	11 06	DB EGPRE,CTRLF
0503	0000*	DW VFIND## ;FIND. ASKS FOR SEARCH TEXT.
0505	11 01	DB EGPRE,CTRLA
0507	0000*	DW VSUBS## ;REPLACE. ASKS FIND?, REPLACE W?
0509	11 0C	DB EGPRE,CTRLL
050B	0000*	DW VSPELL## ;DO SPELLSTAR'S SPECIAL FIND & REPLACE
050D	0C 00	DB CTRLL,Ø ;REPEAT LAST FIND/REPLACE OR LAST SPELL
050F	0000*	DW SAGIN2## ; COMMAND, WITH OLD ARGS.
0511	11 17	DB EGPRE,CTRLW
0513	0000*	DW DNGO## ;START SCROLLING DOWN
0515	11 1A	DB EGPRE,CTRLZ
0517	0000*	DW UPGO## ;START SCROLLING UP
0519	1A 00	DB CTRLZ,Ø
051B	0000*	DW FILU1## ;SCROLL UP LINE
051D	17 00	DB CTRLW,Ø
051F	0000*	DW FILD1## ;SCROLL DOWN LINE
0521	12 00	DB CTRLR,Ø
0523	0000*	DW FILDS## ;SCROLL DOWN SCREEN
0525	03 00	DB CTRLC,Ø
0527	0000*	DW FILUS## ;SCROLL UP SCREEN
0529	7F 00	DB RUBOUT,Ø
052B	0000*	DW DELEF## ;DELETE CHARACTER LEFT
052D	1F 00	DB CTRLUL,Ø ;ALTERNATE FOR CONVENIENCE ON
052F	0000*	DW DELEF## ; SOME TERMINALS: CTRL-DELETE
0531	07 00	DB CTRLG,Ø
0533	0000*	DW DERIT## ;DELETE CHARACTER RIGHT
0535	19 00	DB CTRLY,Ø
0537	0000*	DW DELIN## ;DELETE ENTIRE LINE
0539	11 7F	DB EGPRE,RUBOUT
053B	0000*	DW DBOL## ;DELETE TO BEGINNING OF LINE
053D	11 1F	DB EGPRE,CTRLUL ;ALTERNATE FOR CONVENIENCE ON
053F	0000*	DW DBOL## ; SOME TERMINALS: CTRL-DELETE
0541	11 19	DB EGPRE,CTRLY
0543	0000*	DW DEOL## ;DELETE TO END OF LINE
0545	14 00	DB CTRLT,Ø
0547	0000*	DW DELWD## ;DELETE WORD RIGHT
0549	16 00	DB CTRLV,Ø
054B	0000*	DW TOGL## ;COMPLEMENT INSERT TOGGLE
054D	02 00	DB CTRLB,Ø
054F	0000*	DW MRGNAT## ;CLOSE LINE / MARGINATE PARAGRAPH
0551	11 11	DB EGPRE,CTRLQ
0553	0000*	DW IRPT## ;REPEAT NEXT COMMAND TIL STOPPED

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## ;EDITING COMMAND DISPATCH TABLE...

0555	0E 00	DB CTRLN,0
0557	0000*	DW INLIN## ; INSERT.CRLF AFTER CURSOR
0559	09 00	DB CTRLI,0
055B	0000*	DW TABBER## ; TAB
055D	0D 00	DB CTRLM,0 ; CARRIAGE RETURN...
055F	0000*	DW CARRET## ;...MUST DISPATCH TO THIS ADDRESS
0561	10 00	DB CTRLP,0 ; ***** SEE ALSO LITCHR BELOW
0563	0000*	DW VESC## ; INSERT NEXT CHAR IN FILE EVEN IF CONTROL
0565	0B 08	DB QPRE,CTRLH
0567	0000*	DW REMAR## ; HIDE/DISPLAY MARKING OF TEXT
0569	0B 42	DB QPRE,'B' ; SET INTERNAL MARKER # 1 -
056B	0000*	DW SMAR1## ; MARK BEGINNING OF BLOCK
056D	0B 4B	DB QPRE,'K' ; SET INTERNAL MARKER # 2 -
056F	0000*	DW SMAR2## ; MARK END OF BLOCK
0571	0B 30	DB QPRE,'0' ; SET INTERNAL MARKER # 6 -
0573	0000*	DW SMAR6## ; - USER PLACE MARKER 0
0575	0B 31	DB QPRE,'1' ; SET INTERNAL MARKER # 7 -
0577	0000*	DW SMART## ; - USER PLACE MARKER 1
0579	0B 32	DB QPRE,'2' ; SET INTERNAL MARKER # 8 -
057B	0000*	DW SMAR8## ; - USER PLACE MARKER 2
057D	0B 33	DB QPRE,'3' ; SET INTERNAL MARKER # 9 -
057F	0000*	DW SMAR9## ; - USER PLACE MARKER 3
0581	0B 34	DB QPRE,'4' ; SET INTERNAL MARKER # 10 -
0583	0000*	DW SMAR10## ; - USER PLACE MARKER 4
0585	0B 35	DB QPRE,'5' ; SET INTERNAL MARKER # 11 -
0587	0000*	DW SMAR11## ; - USER PLACE MARKER 5
0589	0B 36	DB QPRE,'6' ; SET INTERNAL MARKER # 12 -
058B	0000*	DW SMAR12## ; - USER PLACE MARKER 6
058D	0B 37	DB QPRE,'7' ; SET INTERNAL MARKER # 13 -
058F	0000*	DW SMAR13## ; - USER PLACE MARKER 7
0591	0B 38	DB QPRE,'8' ; SET INTERNAL MARKER # 14 -
0593	0000*	DW SMAR14## ; - USER PLACE MARKER 8
0595	0B 39	DB QPRE,'9' ; SET INTERNAL MARKER # 15 -
0597	0000*	DW SMAR15## ; - USER PLACE MARKER 9
0599	0B 16	DB QPRE,CTRLV
059B	0000*	DW MOVMAR## ; MOVE MARKED TEXT
059D	0B 03	DB QPRE,CTRLC
059F	0000*	DW DUPMAR## ; COPY MARKED TEXT
05A1	0B 19	DB QPRE,CTRLY
05A3	0000*	DW DELMAR## ; DELETE MARKED TEXT
05A5	0B 0E	DB QPRE,CTRLN
05A7	0000*	DW TGLMOV## ; TOGGLE COLUMN MOVE ON/OFF
05A9	0B 1A	DB QPRE,CTRLZ
05AB	0000*	DW VDDT##
05AD	15 00	DB CTRLU,0 ; STOP CHARACTER must DISPATCH,
05AF	0000*	DW RRET## ; TO WORK IN ALL CASES.
		; ***** IF YOU ALTER THIS ENTRY, ALSO ALTER THE
		; BYTE AT LABEL "STPCHR" BELOW TO MATCH *****

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## ;EDITING COMMAND DISPATCH TABLE...

05B1	0B 18	DB FILPRE,CTRLX
05B3	0000*	DW UPEX## ;END EDIT AND EXIT
05B5	0B 04	DB FILPRE,CTRLD
05B7	0000*	DW UPDAT## ;DONE EDITING THIS FILE
05B9	0B 13	DB FILPRE,CTRLS
05BB	0000*	DW UPRED## ;SAVE FILE AND CONTINUE EDITING
05BD	0B 11	DB FILPRE,CTRLQ
05BF	0000*	DW ABANDN## ;ABANDON EDIT
05C1	0B 12	DB FILPRE,CTRLR
05C3	0000*	DW RFIL## ;READ ANOTHER FILE AT CURSOR
05C5	0B 17	DB FILPRE,CTRLW
05C7	0000*	DW WFIL## ;WRITE MARKED BLOCK ON FILE
05C9	0B 0A	DB FILPRE,CTRLJ
05CB	0000*	DW DELFIL## ;DELETE FILE
05CD	0B 06	DB FILPRE,CTRLF
05CF	0000*	DW DIRTGL## ;FILE DIRECTORY ON/OFF *0.95*
05D1	0B 10	DB FILPRE,CTRLP
05D3	0000*	DW PFIL## ;PRINT FILE
05D5	0B 0C	DB FILPRE,CTRLL
05D7	0000*	DW SELDRV## ;SELECT DISK DRIVE *0.94*
05D9	0B 0F	DB FILPRE,CTRLO
05DB	0000*	DW COPYF## ;COPY FILE *1.3*
05DD	0B 05	DB FILPRE,CTRLE
05DF	0000*	DW RENF## ;RENAME FILE *1.3*
05E1	0F 0C	DB MARPRE,CTRLL
05E3	0000*	DW SETLM## ;SET LEFT MARGIN
05E5	0F 12	DB MARPRE,CTRLR
05E7	0000*	DW SETRM## ;SET RIGHT MARGIN
05E9	0F 09	DB MARPRE,CTRLI
05EB	0000*	DW SETTAB## ;SET TAB STOP
05ED	0F 0E	DB MARPRE,CTRLN
05EF	0000*	DW CLRTAB## ;CLEAR TAB STOP / ALL TAB STOPS
05F1	0F 06	DB MARPRE,CTRLF
05F3	0000*	DW SETRUL## ;SET MARGINS/TABS FROM FILE LINE

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KEYSTROKE DISPATCH TABLES

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## ;EDITING COMMAND DISPATCH TABLE...

05F5	0F 17	DB MARPRE,CTRLW
05F7	0000*	DW SWRAP## ;WORD WRAP TOGGLE
05F9	0F 0A	DB MARPRE,CTRLJ
05FB	0000*	DW SJUST## ;JUSTIFY TOGGLE
05FD	0F 16	DB MARPRE,CTRLV
05FF	0000*	DW SVTAB## ;VARIABLE TABS TOGGLE
0601	0F 04	DB MARPRE,CTRLD
0603	0000*	DW SSHOWD## ;DOT COMMAND DISPLAY TOGGLE
0605	0F 14	DB MARPRE,CTRLT
0607	0000*	DW SSHOWM## ;RULER LINE DISPLAY TOGGLE
0609	0F 10	DB MARPRE,CTRLP
060B	0000*	DW SSHOWP## ;PAGE BREAK DISPLAY TOGGLE
060D	0F 05	DB MARPRE,CTRLE
060F	0000*	DW SOFHY## ;SOFT HYPHEN ENTRY ON/OFF
0611	0F 08	DB MARPRE,CTRLH
0613	0000*	DW HYASK## ;HYPHEN-HELP ON/OFF
0615	0F 07	DB MARPRE,CTRLG
0617	0000*	DW PARAT## ;PARAGRAPH TAB
0619	0F 18	DB MARPRE,CTRLX
061B	0000*	DW RELMAR## ;MARGIN RELEASE
061D	0F 03	DB MARPRE,CTRLC
061F	0000*	DW CENTER## ;CENTER LINE CONTAINING CURSOR
0621	0F 13	DB MARPRE,CTRLS
0623	0000*	DW SLSPAC## ;SET LINE SPACING (DOUBLE, ETC)

## ; EXPLANATION COMMANDS

0625	0A 04	DB HELPRE,CTRLD
0627	0000*	DW DDOTS## ;EXPLAIN DOT COMMANDS
0629	0A 13	DB HELPRE,CTRLS
062B	0000*	DW STATX##
062D	0A 06	DB HELPRE,CTRLF
062F	0000*	DW FLAGIX##
0631	0A 10	DB HELPRE,CTRLP
0633	0000*	DW PLACTX##
0635	0A 02	DB HELPRE,CTRLB
0637	0000*	DW REFORX##
0639	0A 0D	DB HELPRE,CTRLM
063B	0000*	DW MARGX##
063D	0A 09	DB HELPRE,CTRLI
063F	0000*	DW FINCTX## ;COMMAND INDEX / ENTERING TEXT
0641	0A 16	DB HELPRE,CTRLV
0643	0000*	DW MOVTX## ;MOVING TEXT
0645	0A 12	DB HELPRE,CTRLR
0647	0000*	DW RULTX## ;EXPLAIN RULER LINE. ADDED *0.93*.

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## ;EDITING COMMAND DISPATCH TABLE...

;  
 ; \*\*\*\* EXPANSION SPACE \*\*\*\*  
 ;  
 ; REDUNDANT ENTRIES USING YOUR FAVORITE KEYS MAY  
 ; BE ENTERED IN THE FOLLOWING SPACES IF YOU WISH TO KEEP  
 ; THE ORIGINAL ENTRY SO THE ORIGINAL KEYS STILL OPERATE.  
 ; IN CREATING ADDITIONAL ENTRIES, COPY THE ADDRESS  
 ; PORTION CAREFULLY FROM THE ENTRY ABOVE FOR THE DESIRED  
 ; FUNCTION. SEE DESCRIPTION OF ENTRY FORMAT, ABOVE.  
 ; USE THE SPACES FROM THE FIRST ONE FORWARD, AS THE  
 ; FIRST ENTRY WITH A ZERO IN ITS FIRST BYTE ENDS TABLE.  
 ; ADDITIONAL "HELP" COMMANDS MAY BE ADDED BY  
 ; PATCHING IN AN ENTRY HERE AND MODIFYING THE DISK TEXT  
 ; FILE, WSMGS.OVR. THE THIRD BYTE IN THE ENTRY SHOULD  
 ; BE THE INDEX (NUMBER OF BYTES) INTO THE POINTER TABLE  
 ; AT BEGINNING OF WSMGS.OVR (SEE SAME) FOR THE ADDED  
 ; TEXT; FOURTH BYTE SHOULD BE ZERO. MENUS CAN ALSO BE  
 ; CHANGED BY MODIFYING WSMGS.OVR (SEE SAME).  
 ; THE INSTALL PROGRAM MAY USE SOME OF THESE SPACES  
 ; FOR SPECIAL CURSOR CONTROL KEYS FOR SOME TERMINALS,  
 ; SO LOCATE A SPACE THAT IS STILL 0 IN YOUR INSTALLED  
 ; WORDSTAR BEFORE PATCHING.

;  
 XTAB:

0649	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
064B	0000	DW 0	
064D	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
064F	0000	DW 0	
0651	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
0653	0000	DW 0	
0655	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
0657	0000	DW 0	
0659	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
065B	0000	DW 0	
065D	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
065F	0000	DW 0	
0661	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
0663	0000	DW 0	
0665	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
0667	0000	DW 0	
0669	00 00	DB 0,0	;SPACE TO PATCH IN ANOTHER ENTRY
066B	0000	DW 0	
066D	00	DB 0	;0 TO TERMINATE TABLE IF ALL ;ABOVE SPACES ARE USED

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; \*\*\*\*\* MERGE-PRINT COMMAND DISPATCH TABLE \*\*\*\*\*

; USED TO INTERPRET KEYSTROKES ENTERED DURING  
; EXECUTION OF MERGE-PRINT.

; SIMILAR FORMAT TO OTHER COMMAND TABLES,  
; BUT ONLY 1-CHARACTER COMMANDS ARE HANDLED.

;

FPTAB:

DB CTRLP,0

DW FPAWSC## ;STOP PRINT

DB CTRLZ,0

DW DSCRUP## ;SCROLL DIRECTORY UP

DB CTRLW,0

DW DSCRDN## ;SCROLL DIRECTORY DOWN

DB CTRLV,0

DW VDDT##

DB 0 ;0 TERMINATES TABLE

;

; POINTERS TO THE COMMAND TABLES

;

;

THESE MUST BE CHANGED IF YOU NEED MOVE ONE OR  
MORE OF THE COMMAND TABLES, E.G. TO REARRANGE  
THE PATCHING SPACE IN ORDER TO ALLOW ADDITION  
OF MORE ENTRIES TO ONE OF THE TABLES.

;

PNFTAB: DW NOFTAB ;POINTER TO NO-FILE DISPATCH TABLE

PVTAB: DW VTAB ;POINTER TO EDITING COMMAND DISPATCH TBL

PFPTAB: DW FPTAB ;POINTER TO MERGE-PRINT DISPATCH TABLE

067F 0430  
0681 0481  
0683 066E

0685 00

DB 0 ;BYTE RESERVED FOR EXPANSION

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## KEYSTROKE DISPATCH TABLES

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```

; ; SELECTED CONTROL CHARACTERS USED IN THE LINE INPUT
; ; ROUTINE WHICH ACCEPTS RESPONSES TO "FILE NAME?", "
; ; "FIND?", AND OTHER PROMPTS WHICH END IN QUESTION MARK.
;
; ; WHILE MOST ANY CHARACTER WILL WORK HERE, YOU WILL USUALLY
; ; WANT THEM TO BE CONSISTENT WITH THE SIMILAR EDITING
; ; COMMAND.  THUS, IF YOU ALTER THE "CURSOR LEFT" COMMAND
; ; IN THE EDITING COMMAND DISPATCH TABLE ABOVE, YOU WILL
; ; WANT TO CONSIDER CHANGING CLCHR TO THE SAME THING HERE.
;
; ; CLCHR: DB CTRLS ;DELETE CHARACTER (CURSOR LEFT)
; ; CRCHR: DB CTRLD ;CURSOR RIGHT, UNDELETING CHARACTER
; ; LITCHR: DB CTRLP ;TAKE NEXT CHARACTER LITERALLY, DON'T
; ; ; INTERPRET AS SPECIAL: PERMITS SEARCHING
; ; ; FOR CONTROL CHARACTERS, ENTERING
; ; ; CR WITHOUT LF IN SEARCH STRING, ETC.
; ; DIRCH: DB CTRLF ;INVOKE DIRECTORY DISPLAY IF OFF
; ; DB CTRLZ ;SCROLL DIRECTORY UP
; ; DB CTRLW ;SCROLL DIRECTORY DOWN
;
; ; SPECIAL ITEM FOR "INTERRUPT" CHARACTER.
;
; ; THIS MUST MATCH THE ENTRY IN THE EDITING COMMAND
; ; DISPATCH TABLE ABOVE.  IF YOU CHANGE ONE, CHANGE
; ; BOTH, ELSE THE EDITOR WILL NOT WORK CORRECTLY.
;
; ; STPCHR: DB CTRLU ;STOP-CHARACTER.
;
; ; ERROR RELEASE CHARACTER
;
; ; THIS IS THE KEY THAT MUST BE PRESSED
; ; AFTER ERRORS IN ORDER TO CONTINUE EDITING.
; ; MAY BE PATCHED TO ANY CHARACTER DESIRED.
;
; ; ERELCH: DB ESC ;ERROR RELEASE: NORMALLY ESCAPE
;
THEEND EQU $ ;ASSEMBLER SHOULD PRINT "68E"
END      ;NEXT MODULE LOADS AT 690 HEX.

```

## WordStar 3.0 Customization Notes

## USER3 Listing

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## KEYSTROKE DISPATCH TABLES

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Macros:

Symbols:

ABANDN	05BF*	BFIL	04FB*	CARRET	055F*	CBB	04BB*
CBW	04A3*	CENTER	061F*	CFW	04A7*	CLCHR	0686I
CLL	04B3*	CLRTAB	05EF*	CMAR1	04C3*	CMAR10	04E3*
CMAR11	04E7*	CMAR12	04EB*	CMAR13	04EF*	CMAR14	04F3*
CMAR15	04F7*	CMAR2	04C7*	CMAR3	04CB*	CMAR4	04CF*
CMAR6	04D3*	CMAR7	04D7*	CMAR8	04DB*	CMAR9	04DF*
COPYF	05DB*	CR	000D	CRB	049B*	CRCHR	0687I
CRD	04AB*	CRF	049F*	CRR	04B7*	CRU	04AF*
CTRLA	0001	CTRLB	0002	CTRLBS	001C	CTRLC	0003
CTRLCT	001E	CTRLD	0004	CTRLE	0005	CTRLF	0006
CTRLG	0007	CTRLH	0008	CTRLI	0009	CTRLJ	000A
CTRLK	000B	CTRLL	000C	CTRLM	000D	CTRLN	000E
CTRLO	000F	CTRLP	0010	CTRLQ	0011	CTRLR	0012
CTRLRB	001D	CTRLS	0013	CTRLT	0014	CTRLU	0015
CTRLUL	001F	CTRLV	0016	CTRLW	0017	CTRLX	0018
CTRLY	0019	CTRLZ	001A	CTT	04BF*	DBOL	053F*
DDOTS	0627*	DELEF	052F*	DELFL	05CB*	DELIN	0537*
DELMAR	05A3*	DELWD	0547*	DEOL	0543*	DERIT	0533*
DIRCH	0689I	DIRTGL	05CF*	DNGO	0513*	DSCRDN	0678*
DSCRUP	0674*	DUPMAR	059F*	EFL	04FF*	EGPRE	0011
ERELCH	068DI	ESC	001B	EXITIF	043E*	FF	000C
FILD1	051F*	FILDS	0523*	FILPRE	000B	FILU1	051B*
FILUS	0527*	FINCTX	063F*	FLAGTX	062F*	FPAWSC	0670*
FPFIL	0446*	FPTAB	066EI	HELPB	0487*	HELPF	0483*
HELPRE	000A	HELPU	048B*	HELPZ	048F*	HYASK	0613*
INLIN	0557*	IRPT	0553*	LF	000A	LITCHR	0688I
MARGX	063B*	MARPRE	000F	MOVMAR	059B*	MOVTX	0643*
MRGNAT	054F*	NOFTAB	0430I	PARAT	0617*	PFIL	05D3*
PFPTAB	0683I	PLACTX	0633*	PNFTAB	067FI	PVTAB	0681I
QPRE	000B	REFORX	0637*	RELMAR	061B*	REMAR	0567*
RENF	05DF*	RFL	05C3*	RRET	05AF*	RUBOUT	007F
RULTX	0647*	SAGIN2	050F*	SELDRV	05D7*	SETHEL	0493*
SETLM	05E3*	SETRM	05E7*	SETRUL	05F3*	SETTAB	05EB*
SFIL	0432*	SFILP	0436*	SJUST	05FB*	SLSPAC	0623*
SMAR1	056B*	SMAR10	0583*	SMAR11	0587*	SMAR12	058B*
SMAR13	058F*	SMAR14	0593*	SMAR15	0597*	SMAR2	056F*
SMAR6	0573*	SMAR7	0577*	SMAR8	057B*	SMAR9	057F*
SOFHY	060F*	SPLSTR	046E*	SSHOWD	0603*	SSHOWM	0607*
SSHOWP	060B*	STATX	062B*	STPCHR	068CI	SVTAB	05FF*
SWRAP	05F7*	TAB	0009	TABBER	055B*	TBASE	0100
TGLMOV	05A7*	THEEND	068E	TOGL	054B*	UPDAT	05B7*
UPEX	05B3*	UPGO	0517*	UPRED	05BB*	VDDT	067C*
VESC	0563*	VFIND	0503*	VSPELL	050B*	VSUBS	0507*
VTAB	0481I	WFIL	05C7*	XPROG	045E*	XTAB	0649I

No Fatal error(s)

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DAISY PRINTER PATCHES

MACRO-80 3.4

01-Dec-80

TITLE USER5 04/10/81 DAISY PRINTER PATCHES

; FOR WordStar RELEASE 3.0 MAY, 1981

; THE ITEMS IN THIS FILE ARE NORMALLY USED AS ASSEMBLED  
 ; OR SET BY THE INSTALL PROGRAM TO VALUES REQUIRED  
 ; FOR PRINTER SELECTED. LISTING IS PROVIDED FOR UNUSUAL  
 ; USER MODIFICATION REQUIREMENTS ONLY; THERE IS NORMALLY  
 ; NO NEED TO REFER TO IT.

; SEE USER4.MAC FOR BASIC PRINTER ITEMS.

ENTRY DVMILE,DVMMIN,DVMRNG, DHMILE,DHMIIG,DHMIN  
 ENTRY DHRNG, DFWD,DBAK, DSP,DBS,DLF,DRLF, DPHSPC,DPHRUB  
 ENTRY DNPROS,DMJWB, PSTAB

0100

TBASE EQU 100H ;WHERE PROGRAM IS LOADED FOR NORMAL CP/M

0000'

ASEG ;ABSOLUTE CODE, FOR USER LISTING

ORG TBASE+690H ;BEGINS AFTER END OF USER4

## ;ASCII CHARACTERS

0008	BS	EQU	8	;BACKSPACE
0009	TAB	EQU	9	;HORIZ TAB
000A	LF	EQU	10	;LINE FEED
000C	FF	EQU	12	;FORM FEED
000D	CR	EQU	13	;CARRIAGE RETURN
001B	ESC	EQU	27	
001E	RS	EQU	30	
001F	US	EQU	31	
007F	DEL	EQU	7FH	;DELETE OR RUBOUT

PAGE 65 ;SETS PAGE LENGTH

## WordStar 3.0 Customization Notes

## USER5 Listing

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; \*\*\*\*\* FUNCTION STRINGS FOR DAISY PRINTERS \*\*\*\*\*

; ITEMS ON NEXT 2 PAGES APPLY ONLY TO DAISY PRINTERS  
 ; (POSMTH=1) THAT ARE MANIPULATED WITH ESCAPE SEQUENCES.  
 ; THAT IS, THOSE DAISY PRINTERS WITH SERIAL OR 8-BIT  
 ; PARALLEL (CENTRONICS-LIKE) INTERFACES (CSWITCH=00,01,  
 ; 02, OR 04), AS OPPOSED TO OEM INTERFACES (CSWITCH=03).  
 ; FOR OEM DAISY PRINTERS SEE OEM DAISY DRIVER LISTING.

; DAISY INITIALIZE STRING: AREA "PSINIT" IN USER4  
 ; IS USED. FOR EXAMPLE, FOR DIABLO 1610/1620:  
 ;PSINIT: DB 5 ;LENGTH - # BYTES USED  
 ; DB CR ;RET CARAGE/SET FWD PRINT  
 ; DB ESC,'4' ;GRAPHICS OFF  
 ; DB ESC,'B' ;BLACK RIBBON

; DAISY TERMINATE STRING: AREA "PSFINI" IN USER4  
 ; IS USED. FOR EXAMPLE, FOR DIABLO 1610/20:  
 ;DFINI: DB 5 ;LENGTH - # BYTES USED  
 ; DB CR ;RETURN CARRIAGE / SET FWD PRINT  
 ; DB ESC,'4' ;FOR 1640/50 RESTORE  
 ; DB ESC,'B' ;(ESC,CR,'P') BETTER.

; VERTICAL MOTION INDEX LEADIN STRING:  
 ; SEND THIS THEN BYTE TO SPECIFY # 48THS

0790	02
0791	1B 1E
0793	00 00
0795	0001
0797	007E

DVMILE: DB 2  
 DB ESC,RS ;1610/50/SPRINT 5  
 DB 0,0

; LIMITS FOR VMI ARGUMENT BYTES:

DVMMIN: DW 1 ;MIN VALUE (REPRESENTS 0) (1610/50/SPRINT 5)  
 DVMRNG: DW 125+1 ;RANGE+1: MAX VALUE REPRESENTABLE, +1,  
 ; B4 DVMMIN ADDED. DVMMIN+DVMRNG MUST BE < 256.

; HORIZONTAL MOTION INDEX LEADIN STRING:

; SEND THIS THEN BYTE TO SPECIFY # 60/120THS

0799	02
079A	1B 1F
079C	00 00
079E	00

DHMLE: DB 2  
 DB ESC,US ;1610/50/SPRINT 5  
 DB 0,0

DHMIFG: DB 0 ;0 FOR 120THS, 0FFH FOR 60THS  
 ; APPLIES TO OEM DAISIES ALSO

; LIMITS FOR HMI ARGUMENT BYTES:

079F	0001
07A1	007E

DHMIN: DW 1 ;MIN VALUE (REPRESENTS 0) (1610/50/SPRINT 5)  
 DHRNG: DW 125+1 ;RANGE+1: MAX VALUE REPRESENTABLE, +1,  
 ; BEFORE DHMIN ADDED. DHMIN+DHMRNG MUST BE < 256.

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;ESCAPE SEQUENCE DAISY STRINGS...

; SET FORWARD PRINT FOR DAISY

07A3 02  
 07A4 1B 35  
 07A6 00 00      DFWD: DB 2  
                   DB ESC,'5' ;1610/50/SPRINT 5  
                   DB 0,0

; SET BACKWARD PRINT

07A8 02  
 07A9 1B 36  
 07AB 00 00      DBAK: DB 2  
                   DB ESC,'6' ;1610 ETC  
                   DB 0,0

; FORWARD SPACE HMI INCREMENTS

07AD 01  
 07AE 20 00 00 00      DSP: DB 1  
                   DB ' ',0,0,0

; BACKSPACE HMI INCREMENTS

07B2 01  
 07B3 08 00 00 00      DBS: DB 1  
                   DB BS,0,0,0

; LINE FEED VMI INCREMENTS

07B7 01  
 07B8 0A 00 00 00      DLF: DB 1  
                   DB LF,0,0,0

; REVERSE LINE FEED (UP) VMI INCREMENTS

07BC 02  
 07BD 1B 0A 00 00      DRLF: DB 2  
                   DB ESC,LF,0,0 ;1610 ETC

; PRINT "PHANTOM SPACE" (CENTS SIGN) ON DAISY

07C1 02  
 07C2 1B 59 00      DPHSPC: DB 2  
                   DB ESC,'Y',0 ;1610-50.

; PRINT "PHANTOM RUBOUT" ON 96-CHAR WHEELS

07C5 02  
 07C6 1B 5A 00      DPHRUB: DB 2  
                   DB ESC,'Z',0 ;1650.

; RED (ALTERNATE COLOR) RIBBON FOR DAISY:

; "RIBBON" IN USER4 IS USED. FOR EXAMPLE:  
 ;RIBBON: DB 2  
 ;      DB ESC,'A',0 ;1610,50, SPRINT 5

; BLACK (STANDARD COLOR) RIBBON.

; "RIBOFF" IN USER4 IS USED. FOR EXAMPLE:  
 ;RIBBOF: DB 2  
 ;      DB ESC,'B',0 ;1610,50, SPRINT 5

07C9 00 00 00 00      DB 0,0,0,0 ;RESERVED  
 07CD 00 00 00 00  
 07D1 00 00      DB 0,0

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; \*\*\*\*\* FLAGS FOR DAISY PRINTERS \*\*\*\*\*

; THESE APPLY WHEN POSMTH=1, REGARDLESS OF CSWTCB.

07D3 00

DNPROCS: DB 0 ;FF TO SUPPRESS ALL PROPORTIONAL  
;SPACING, INCLUDING THE MINOR  
;ADJUSTMENTS NORMALLY APPLIED TO  
;PERIODS, ETC EVEN FOR "NON-  
;PROPORTIONAL" TYPEWHEELS  
;(EXPERIMENTAL ^P TOGGLE OFF).

07D4 00

DMJWB: DB 0 ;FF TO ALTER MICROJUSTIFY  
;ALGORITHM TO PUT MORE EMPHASIS  
;ON EXPANDING SPACES BETWEEN  
;WORDS AND LESS ON SPREADING  
;OUT CHARACTERS WITHIN LINE.

07D5 00 00 00

DB 0,0,0 ;RESERVED

;  
; PROPORTIONAL SPACING TABLE - DEVELOPMENTAL  
;

;  
; BITS 4-6 ARE MODERATE ADJUSTMENTS TO APPLY  
; TO NON-PROPORTIONAL TYPEWHEELS; VALUE IS  
; RELATIVE WIDTH IN 60THS, SPACE=5.  
;  
; BITS 0-2 ARE FOR TRUE PROPORTIONAL SPACING  
; TYPEWHEEL (THEME P.S. 10, ETC), SPACE=3.  
;  
; BITS 0 AND 4 ARE UNASSIGNED.  
;

;  
; TABLE BEGINS ON NEXT PAGE

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07D8	PSTAB: ; PROPORTIONAL SPACE TABLE: COMMENTS PREVIOUS PAGE
07D8	52 DB 052H ;PHANTOM SPACE (CENT SIGN, ! )
07D9	43 DB 043H ;!
07DA	44 DB 044H ;"
07DB	54 DB 054H ;#
07DC	54 DB 054H ;\$
07DD	56 DB 056H ;%
07DE	56 DB 056H ;&
07DF	32 DB 032H ;'
07E0	43 DB 043H ;(
07E1	43 DB 043H ;)
07E2	54 DB 054H ;*
07E3	54 DB 054H ;+
07E4	42 DB 042H ;,
07E5	54 DB 054H ;-
07E6	32 DB 032H ;.
07E7	53 DB 053H ;/
07E8	54 DB 054H ;0
07E9	54 DB 054H ;1
07EA	54 DB 054H ;2
07EB	54 DB 054H ;3
07EC	54 DB 054H ;4
07ED	54 DB 054H ;5
07EE	54 DB 054H ;6
07EF	54 DB 054H ;7
07F0	54 DB 054H ;8
07F1	54 DB 054H ;9
07F2	43 DB 043H ;:
07F3	42 DB 042H ;;
07F4	54 DB 054H ;<
07F5	54 DB 054H ;=
07F6	54 DB 054H ;>
07F7	54 DB 054H ;?
07F8	56 DB 056H ;@
07F9	55 DB 055H ;A
07FA	55 DB 055H ;B
07FB	55 DB 055H ;C
07FC	56 DB 056H ;D
07FD	55 DB 055H ;E
07FE	55 DB 055H ;F
07FF	56 DB 056H ;G
0800	56 DB 056H ;H
0801	53 DB 053H ;I
0802	53 DB 053H ;J
0803	56 DB 056H ;K
0804	55 DB 055H ;L
0805	66 DB 066H ;M
0806	56 DB 056H ;N
0807	56 DB 056H ;O
0808	54 DB 054H ;P

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0809	56	DB 056H ;Q
080A	56	DB 056H ;R
080B	54	DB 054H ;S
080C	55	DB 055H ;T
080D	56	DB 056H ;U
080E	56	DB 056H ;V
080F	67	DB 067H ;W
0810	56	DB 056H ;X
0811	56	DB 056H ;Y
0812	55	DB 055H ;Z
0813	54	DB 054H ;[
0814	56	DB 056H ;\
0815	54	DB 054H ;]
0816	56	DB 056H ;^
0817	55	DB 055H ;_
0818	54	DB 054H ;`
0819	54	DB 054H ;a
081A	54	DB 054H ;b
081B	54	DB 054H ;c
081C	54	DB 054H ;d
081D	54	DB 054H ;e
081E	53	DB 053H ;f
081F	54	DB 054H ;g
0820	54	DB 054H ;h
0821	52	DB 052H ;i
0822	52	DB 052H ;j
0823	54	DB 054H ;k
0824	52	DB 052H ;l
0825	66	DB 066H ;m
0826	54	DB 054H ;n
0827	54	DB 054H ;o
0828	54	DB 054H ;p
0829	54	DB 054H ;q
082A	53	DB 053H ;r
082B	53	DB 053H ;s
082C	53	DB 053H ;t
082D	54	DB 054H ;u
082E	54	DB 054H ;v
082F	66	DB 066H ;w
0830	54	DB 054H ;x
0831	54	DB 054H ;y
0832	54	DB 054H ;z
0833	54	DB 054H ;{
0834	56	DB 056H ;
0835	54	DB 054H ;}
0836	56	DB 056H ;~
0837	55	DB 055H ;PHANTOM RUBOUT (NOT SIGN, DOUBLE UNDERLINE).
0838		ALABEL EQU \$ ;ASSEMBLER PRINTS ENDING ADDRESS END

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DAISY PRINTER PATCHES

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## Macros:

## Symbols:

ALABEL	0838	BS	0008	CR	000D	DBAK	07A8I
DBS	07B2I	DEL	007F	DFWD	07A3I	DHMIFG	079EI
DHMILE	0799I	DHMIN	079FI	DHRNG	07A1I	DLF	07B7I
DMJWB	07D4I	DNPROS	07D3I	DPHRUB	07C5I	DPHSPC	07C1I
DRLF	07BCI	DSP	07ADI	DVMILE	0790I	DVMMIN	0795I
DVMRNG	0797I	ESC	001B	FF	000C	LF	000A
PSTAB	07D8I	RS	001E	TAB	0009	TBASE	0100
US	001F						

No Fatal error(s)

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POEM 05/10/81 OEM DAISY PRINTER DRIVER MACRO-80 3.4 01-Dec-80

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;
; ** OEM PARALLEL DAISY WHEEL PRINTER DRIVER **
;
; WordStar 3.0, July 23rd, 1981
;
; CALLED ONLY IF CSWITCH=3. IF USED, HAVBSY SHOULD
; BE FF. POSMTH IS ASSUMED 1 IF CSWTCHE IS 3.
; THESE PRINTERS USE 3 PORTS AND AN HAVE AN ENTIRELY
; DIFFERENT INTERFACE THAN ANY OF THE OTHER PRINTERS
; SUPPORTED FOR BY WORDSTAR.
; THUS, THIS DRIVER HAS DIFFERENT ENTRY POINTS THAN THE
; OTHER PRINTER DRIVERS; NONE OF THE USUAL PATCH STRINGS
; ARE USED; EVERYTHING IS DONE VIA ENTRIES ON THIS PAGE.
; ALL OF THESE ENTRIES RETURN CY=1 IF THE PRINTER IS
; BUSY; CALLER RECALLS (EDITING BETWEEN CALLS IF A FILE
; IS BEING EDITED) UNTIL CY=0 IS RETURNED.
;
; OEM DAISY DRIVER IS READ IN FROM OVERLAY FILE 1
; WHEN NEEDED. LOCATIONS AT WHICH CODE APPEARS IN OVERLAY
; FILE ARE NOT THE LOCATIONS IT RUNS AT. LOCATIONS SHOWN
; IN LISTING ARE EXECUTION LOCATIONS; LOCATIONS IN OVERLAY
; FILE ARE DIFFERENT.
;
OEMINI: ; ENTRY TO INIT OEM PRINTER
        JMP OINI
OEMFIN: ; ENTRY TO CLOSE OEM PRINTER
        JMP OFIN
OEMVER: ; ENTRY TO SPACE VERTICALLY (DE) 48THS.
        ; B=FF TO MOVE UP, 0 TO MOVE DOWN.
        JMP OVER
OEMHOR: ; ENTRY TO MOVE HORIZONTALLY (DE) 60THS.
        ; FOR 120THS (DHMIFG=0) LO BIT IN C.
        ; B=FF TO MOVE LEFT, 0 TO MOVE RIGHT.
        JMP OHOR
OEMSND: ; ENTRY POINT TO PRINT CHAR (A)
        JMP OSND
OEMRIB: ; ENTRY TO SET RIBBON COLOR
        ; A=0 FOR BLANK, FF FOR RED.
        JMP ORIB
        DB 0,0,0      ;RESERVED
;
;DHMIFG (USER5.MAC) SHOULD BE FF FOR HORIZ MOTION
; IN 60THS, 0 FOR 120THS.
OEMLIM: DW 1023 ;MAXIMUM NUMBER OF 48THS OR 60THS PRINTER
; CAN MOVE IN ONE OPERATION (LIMIT ON DE
; ARGUMENT TO OEMHOR, OEMVER)
OEMWD: DW 132*12 ;CARRIAGE WIDTH IN 120THS
OEMPAG: DW 66*8 ;PAGE LENGTH (48THS) FOR FORM FEEDS,
; APPLIES IF "USE FORM FEEDS" SPECIFIED.
        DW 0,0      ;RESERVED

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POEM 05/10/81 OEM DAISY PRINTER DRIVER MACRO-80 3.4 01-Dec-80

## ;OEM DAISY DRIVER...

;THE OEM DRIVER AS CODED HERE DRIVES A DIABLO OR  
;DIABLO-COMPATIBLE "OEM" DAISY PRINTER:  
;      NEC SPINWRITER 5500  
;      QUME SPRINT 3  
;      DIABLO HY-TYPE II 1345, 1355, 1355WP  
;THRU THE MICROPRO "I/O MASTER" INTERFACE ADDRESSED AT  
;      PORTS F8-FA AND MICROPRO PRINTER CABLE  
;      (OR IMSAI PIO-4 BOARD AND THE IMSAI CABLE, WITH  
;      A CONDUCTOR ADDED FOR THE "DATA 1/2" BIT).  
;  
;TO DRIVE DIABLO 1200 HY-TYPE I, WITH THE SAME INTERFACE  
;      BOARD AND CABLING, PATCH "DHMIFG" IN USER5.MAC TO FF.  
;IF NO CONDUCTOR IS PRESENT IN THE CABLE FOR THE  
;      "DATA 1/2" BIT, PATCH "DHMIFG" IN USER5 TO FF.  
;  
;USER MAY RECODE THIS DRIVER FOR A DIFFERENT INTERFACE,  
;CABLE, OR (OEM-TYPE DAISY) PRINTER, AS DESIRED.

## ;EQUATES FOR OEM DAISY DRIVER

00F8	;	POTS
00F9	DATAL EQU	0F8H ;LO ORDER DATA LINES PORT
00FA	DATAH EQU	0F9H ;HI ORDER DATA LINES PORT
00F8	CMAND EQU	0FAH ;COMMAND PORT
	STATS EQU	0F8H ;STATUS PORT
0001	;	COMMAND BITS
0002	RESTR EQU	1 ;RESTORE CARRIAGE
0004	CHSTB EQU	2 ;CHARACTER STROBE
0008	XSTB EQU	4 ;CARRIAGE STROBE
0010	YSTB EQU	8 ;PAPER FEED STROBE
0020	SELPR EQU	16 ;SELECT PRINTER
0040	SELRY EQU	32 ;SELECT READY
00AF	RBLFT EQU	64 ;RIBBON LIFT
	CMASK EQU	0FFH-SELPR-RBLFT ;COMMAND MASK
0002	;	STATUS BITS
0008	CHECK EQU	2 ;CHECK
0010	CHRDY EQU	8 ;CHARACTER READY
0020	XRDY EQU	16 ;CARRIAGE READY
	YRDY EQU	32 ;PAPER FEED READY
0004	;	DATA BITS
0008	SIGN EQU	4 ;NEGATIVE MOTION BIT ; IN HIGH DATA BYTE HALF EQU 8 ;"DATA 1/2" BIT USED ; FOR 120THS

POEM 05/10/81 OEM DAISY PRINTER DRIVER MACRO-80 3.4 01-Dec-80

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;OEM DAISY DRIVER...
;ROUTINES FOR THE VARIOUS ENTRIES
;
; FINISH (CLOSE): CALLED AFTER PRINT COMPLETE
;
;OFIN:
; WAIT FOR READY BEFORE FINAL RESTORE
MVI B,YRDY+XRDY+CRDY
CALL STATUS
RC ;IF BUSY RET CY TO CALLER
; REST IS SAME AS INIT, FALL THRU.
;
; INITIALIZE OEM DAISY
;
;OINI: CALL RESTOR ;DO A "RESTORE" OPERATION
XRA A ;AND FALL THRU TO ORIB TO
;SET NORMAL RIBBON COLOR.
;
; RIBBON COLOR ROUTINE
;
;ORIB: ;A=0 FOR NORMAL RIBBON COLOR, FF
;FOR ALTERNATE (RED, STENCIL, ETC
;DEPENDING ON RIBBON FITTED).
ANI RBLFT ;MASK BIT OF INTEREST
STA RIBCOL ;SAVE FOR USE IN
RET ;..LATER COMMANDS
;
; VERTICAL MOTION ROUTINE
;
;OVER: ;AT ENTRY # 48THS TO MOVE IS IN DE,
;B IS 0FFH TO MOVE UP, 0 TO MOVE DOWN.
MVI C,0 ;NO "DATA 1/2" BIT
CALL MOARG ;FORMAT DATA, PUT
;ON DATA LINES
LXI B,YRDY*256+CMASK-YSTB
JMP COMAN ;OUTPUT COMMAND,
;OR RETURN CY=1 IF
;NOT READY
;
; HORIZONTAL MOTION ROUTINE
;
;OHOR: ;AT ENTRY # 60THS TO MOVE IS IN DE,
;C IS LO ORDER FOR 120THS MOTION,
;0 FOR 60THS MOTION,
;B IS 0FFH TO MOVE LEFT, 0 RIGHT.
CALL MOARG ;FORMAT DATA (BCDE),
;PUT ON DATA LINES
LXI B,XRDY*256+CMASK-XSTB
JMP COMAN ;OUTPUT COMMAND,
;OR RETURN CY=1 IF
;NOT READY

```

POEM 05/10/81 OEM DAISY PRINTER DRIVER MACRO-80 3.4 01-Dec-80

3C63' 2F  
3C63' D3 F8  
3C64' 01 08AD

;OEM DAISY DRIVER...  
;ROUTINES FOR ITS VARIOUS ENTRIES...  
;  
; PRINT CHARACTER ROUTINE. DOES NOT MOVE CARRIAGE.  
;  
OSND: ;SEND CHARACTER (A)  
CMA ;COMPLEMENT FOR TRUE-LOW  
OUT DATAL ;PUT ON DATA LINES  
LXI B,CHRDY#256+CMASK-CHSTB  
; FALL INTO COMAN TO PRINT CHAR, OR  
; RETURN CY=1 TO CALLER IF NOT READY

POEM 05/10/81 OEM DAISY PRINTER DRIVER MACRO-80 3.4 01-Dec-80

; SUBROUTINES FOR OEM DAISY DRIVER

;NB FALL THRU

; TEST WHETHER PRINTER IS READY FOR  
 ; CHARACTER, CARRIAGE, OR PAPER MOTION  
 ; PER STATUS BIT (B), RETURN CY=1 IF NOT,  
 ; ISSUE COMMAND (C) IF SO.

3C69'

COMAN:

; CHECK STATUS

CALL STATUS ;DO STATUS TEST (B),  
RC ;RETURN CY IF BUSY.;ISSUE COMMAND. RIBBON LIFT BIT FALSE (HIGH)  
; IF ALTERNATE RIBBON COLOR IN USE.3C69' CD 3C79'  
3C6C' D8

LDA RIBCOL ;0 NORMAL, RBLFT ALTERNATE

ORA C ;COMBINE WITH CALLER'S CMD  
OUT CMAND ;OUTPUT IT

;RESET LINES HIGH, EXCEPT RIBBON LIFT PRESERVED.

3C70' B1  
3C71' D3 FA

XRA C ;REMOVE CALLER'S CMD:

;GET RIBBON LIFT BIT AGAIN

3C73' A9  
3C74' F6 AF  
3C76' D3 FA  
3C78' C9

ORI CMASK ;BASIC COMMAND MASK; CLEAR CY

OUT CMAND

RET ;CY=0

; TEST WHETHER PRINTER IS READY FOR CHARACTER,  
 ; CARRIAGE, OR PAPER MOTION PER STATUS BITS  
 ; (ACTIVE LOW) IN B. RETURN CY=1 IF NOT.

3C79'

STATUS:

; GET STATUS

LDA RIBCOL ;RIBBON LIFT BIT

ORI CMASK-SELRY

OUT CMAND ;REQUEST STATUS

IN STATS ;GET STATUS

;RESTORE IF "CHECK" STATUS BIT ON (LOW)

PUSH PSW

ANI CHECK

CZ RESTOR

POP PSW ;STATUS

;RETURN CY=1 IF READY BIT SPEC'D BY CALLER

; IN B IS OFF (HIGH)

ANA B

RZ ;IF BIT LOW, RETURN CY=0

STC ;ELSE MUST BE HIGH,

RET ;SO RETURN CY=1.

3C89' A0  
3C8A' C8  
3C8B' 37  
3C8C' C9

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;OEM DAISY DRIVER...  
;SUBROUTINES...

; ISSUE A "RESTORE" COMMAND: INITIATES PRINTER,  
; ALSO USED FOR ERROR RECOVERY ("CHECK"  
; CONDITION RETURNED BY PRINTER).

3C8D' 3E AE  
3C8F' D3 FA  
3C91' 3E AF  
3C93' D3 FA  
3C95' C9

RESTOR: MVI A,CMASK-RESTR  
OUT CMAND  
MVI A,CMASK  
OUT CMAND  
RET

; FORMAT MOTION ARGUMENT TO DE:  
; INSERT "DATA 1/2" BIT FROM C,  
; DIRECTION BIT FROM B,  
; COMPLEMENT DE FOR TRUE-LOW.  
; AND PUT ON DATA LINES.

3C96' 78  
3C97' E6 04  
3C99' B2  
3C9A' 0C  
3C9B' 0D  
3C9C' CA 3CA1'  
3C9F' F6 08

MOARG:  
; COMBINE SIGN AND LO ORDER  
MOV A,B ;FF FOR "NEGATIVE".  
ANI SIGN ;ISOLATE DESIRED BIT  
ORA D ;COMBINE WITH DATA  
INR C ;TEST C FOR NON-ZERO  
DCR C ;..WITHOUT CHANGING A  
JZ \$+5 ;JIF NO "1/2" BIT  
ORI HALF ;"HALF" BIT  
;HI ORDER DATA LINES BYTE IS IN A  
; PUT ON DATA LINES  
CMA ;LINES ARE TRUE-LOW  
OUT DATAH  
MOV A,E  
CMA  
OUT DATAL  
RET

3CA1' 2F  
3CA2' D3 F9  
3CA4' 7B  
3CA5' 2F  
3CA6' D3 F8  
3CA8' C9

;VARIABLE FOR OEM DAISY DRIVER  
RIBCOL: DB 0 ;RIBBON COLOR: 0 NORMAL,  
;BIT "RBLFT" ON FOR ALT COLOR

3CAA' 00 00 00  
3CAD' 00 00 00 00  
3CB1' 00 00 00 00  
3CB5' 00 00 00 00  
3CB9' 00 00 00 00

;SPACE RESERVED FOR EXPANSION OR PATCHES:  
DB 0,0,0  
DB 0,0,0,0, 0,0,0,0  
DB 0,0,0,0, 0,0,0,0

3CBD'

ENDCUS: ;END CUST NOTES LISTING ABOVE THIS LINE.

TITLE WSMSGS 05/10/81 \*3.0\* WORDSTAR DISK TEXTS (WSMSGS.OVR)  
; ASSEMBLED AND LOADED SEPARATELY.  
; FOR WordStar RELEASE 3.0 , MAY, 1981  
;  
; ASSEMBLY PARAMETERS RELATING TO CUSTOMIZATION - FOR USER AND MICROPRO USE  
;  
;TBASE - WHERE PROGRAMS LOAD UNDER CP/M - 100H EXCEPT IN SPECIAL VERSIONS  
; FOR COMPUTERS WITH MEMORY AT LOW ADDRESSES DEDICATED TO OTHER PURPOSES,  
; SUCH AS THE TRS-80 MOD 1 OR THE HEATH H-9 (CP/M IS A TRADEMARK OF DIGITAL RESEARCH).  
;TWO TBASE'S ARE DEFINED:  
; TBASE1 MUST MATCH SYSTEM IN WHICH WORDSTAR WILL RUN.  
; TBASE2 MUST MATCH SYSTEM IN WHICH WSMSGS IS LOADED, IF DIFFERENT.

TBASE1 EQU 100H ;TBASE FOR TARGET SYSTEM. DETERMINES BOOT (LOCATION  
;TO JMP TO TO EXIT A PROGRAM) AND ADDRESS AT WHICH  
;MESSAGE CODE (THIS FILE) EXPECTS WORDSTAR'S ABSOLUTE-  
;LOCATION FLAGS TO BE.

TBASE2 EQU 100H ;TBASE FOR DEVELOPMENT SYSTEM - SAME AS TBASE1 UNLESS  
;WSMSGS IS TO BE LOADED ON A DIFFERENT SYSTEM THAN IT  
;IS TO BE RUN ON. DETERMINES ORIGIN AT WHICH LOADER  
;LOADS THIS FILE, ONLY.

BOOT EQU TBASE1-100H ;JMP ADDRESS TO REBOOT OPERATING SYSTEM.

; WIDE AND NARROW SCREEN SUPPORT.  
; WSMSGS USUALLY CONTAINS TWO COPIES OF MANY MENUS: ONE FOR NARROW SCREENS,  
; ONE FOR WIDE SCREENS. BY CHANGING THE FOLLOWING PARAMATERS, THE USER MAY  
; GENERATE A SHORTER WSMSGS.OVR FILE CONTAINING ONLY THE MESSAGES NEEDED  
; FOR HIS SCREEN WIDTH.  
; VERSIONS OF WORDSTAR RELEASED FOR SPECIFIC SYSTEMS MAY ALREADY HAVE THE  
; MESSAGES FOR THE UNNEEDED SCREEN WIDTH REMOVED.

WIDE EQU 0 ;-1 TO INCLUDE TEXTS FOR SCREENS 80 OR MORE COLUMNS  
; WIDE, 0 TO OMIT.

NARROW EQU -1 ;-1 TO INCLUDE TEXTS FOR SCREENS 64 TO 79 COLUMNS WIDE,  
; 0 TO OMIT.

PAGE 48 ;NEW PAGE, SET ASSEMBLY LISTING PAGE LENGTH

;  
; ASSEMBLY PARAMETERS RELATING TO FEATURES TO INCLUDE - FOR MICROPRO USE  
;  
BOOBHEY EQU 0 ;INCLUDE INTERNAL ERROR MSG TEXTS ETPHOL ETC  
ZEBOOB EQU 0 ;INCLUDE INTERNAL ERROR MSG TEXT ETZCLB  
;  
; ABSOLUTELY ADDRESSED VARIABLES IN WS.COM  
;  
ABSBAS EQU TBASE1+120H ;MUST MATCH "WSMSGS COMMUNICATION AREA" IN FIRST.MAC.  
; CHANGED FROM 210 TO 220 \*.945B\*  
; OPTIONS SETTABLE BY COMMAND, SETTING DISPLAYS IN CONTROL-O MENU:  
WRAPF EQU ABSBAS ;NON-ZERO FOR WORD WRAP  
JUSTIF EQU WRAPF+1 ;NON-ZERO FOR RIGHT-JUSTIFICATION  
VTABF EQU JUSTF+1 ;NON-ZERO FOR VARIABLE TABS  
SHYPF EQU VTABF+1 ;NON-ZERO FOR SOFT HYPHEN ENTRY \*\*\* INSERTED \*1.18\*  
HYPF EQU SHYPF+1 ;NON-ZERO FOR HYPHENATE-HELP  
SHOWDF EQU HYPF+1 ;NON-ZERO TO DISPLAY PRINT CONTROLS & SOFT -'S \*1.18\*  
SHOWMF EQU SHOWDF+1 ;NON-ZERO TO DISPLAY TABS/MARGINS RULER  
;ONE VARIABLE HERE NOT ACCESSED (PAGON).  
PAGDIS EQU SHOWMF+2 ;NON-ZERO FOR PAGE BREAK DISPLAY  
;VARIABLE HERE NOT ACCESSED (LSPACE).  
;BYTE RESERVED FOR EXPANSION HERE.  
;  
; DIRECTORY DISPLAY FLAG:  
DISDIR EQU PAGDIS+3 ;NON-ZERO IF FILE DIRECTORY DISPLAYED  
MOVEF EQU ABSBAS+10 ;NON-ZERO FOR COLUMN MOVE ENABLE \*2.35\*  
ITOG EQU ABSBAS+11 ;NON-ZERO IF INSERT IS ON \*2.35\*  
OLD EQU 0 ;USED TO IF OUT OBSOLETE CODE

;ASCII CHARACTERS

TAB EQU X'09'  
CR EQU X'0D'  
LF EQU X'0A'  
FF EQU X'0C'

ASEG ;SAY ABSOLUTE CODE  
ORG TBASE2 ;SAY BEGIN AT BASE OF PROGRAM AREA

JMP BOOT ;IF INVOKED AS A PROGRAM, REBOOT SYSTEM TO EXIT:  
; THIS FILE SHOULD NOT BE INVOKED AS A PROGRAM.

;  
; COPYRIGHT. DO NOT ALTER, OR THE BOOGEY MAN WILL GET YOU.  
; DISPLAYS IF FILE IS TYPED OR DUMPED. LENGTH MUST BE CORRECT.

;103H  
DB ' COPYRIGHT(C) 1980 MICROPRO INTERNATIONAL.'  
DB ' SAN RAFAEL, CALIFORNIA, USA.'  
DB ' ALL RIGHTS RESERVED. ' ;KEEP LEN CONSTANT W/BLANKS  
;LOCATION 160H  
PAGE ;GO TO NEW ASSEMBLY LISTING PAGE  
;LOCATION 160H

;  
; VERSION AS TEXT  
;160H KEEP LENGTH CONSTANT WITH BLANKS AT END  
VERTXT: DB ' WordStar 3.00 Message Texts '

;17DH  
DB CR,LF,1AH ;CTRL-Z AT END SO CAN "TYPE" COM FILE TO SEE VERSION  
;180H

;LOCATION IS NOW 180H, BEGINNING OF SECOND SECTOR.

; ; POINTER TABLE TO MESSAGE TEXTS.  
;  
; WS.COM READS THIS TABLE FROM SECTORS 1 - 3 OF WSMGS.0VR  
; AND USES POINTERS TO ACCESS MSG TEXTS.  
; TABLE MUST BE AT LOCATION 180H AND HAVE LENGTH 384.  
; TABLE ENTRIES MUST BE IN CORRECT ORDER.  
; TABLE BEGINS WITH VERSION NUMBER; POINTERS START ON NEXT PAGE.

DW 15 ;VERSION IN BINARY: WS VERIFIES THAT THIS MATCHES MSGVER  
; (LOCATION 10E) IN WS.COM.  
;CHANGE WHEN A CONSEQUENTIAL AND INCOMPATIBLE CHANGE IS MADE.  
; VERSION HISTORY INCLUDES:  
;15 \*2.0\* 1-5/1980 TXITHL ADDED; "HIT" -> "PRESS"; MANY  
; CHANGES & ADDITIONS RE RAM TEXT FORMAT CHANGE;  
; COPY, RENAME, AND MERGE-PRINT MESSAGES;  
; POINTER TABLE AT BEGINNING EXTENDED TO 3 SCTR'S;  
; RENAMED TO WSMGS.0VR DUE TO INCOMPATIBILITY;  
; SOFT HYPHENATION; DON'T DISPLAY CONTROLS; ^QZ, ^QW;  
; SHYPF FLAG INSERTED; NO-FILE MENU LETTERS CHANGED;  
; RUN PROGRAM MESSAGES; OVERLAY-RELATED MESSAGES.  
;7 \*1.0\* 10-12/79 ABSVAR MOVED; DISDIR ADDED;  
; ADDED: STPRM1, TXWEPS, TSWPES, TSFIPS, TXFIPB,  
; TXNAFO, TXEBAK, SEDTX1,2,3,ETZCLB,  
; ETIMMER, ETADD2, PPDFTX;  
; REVISIONS FOR OPERATION ON 16-LINE SCREENS;  
; MENUS REVISED RE DIRECTORY.  
;2 \*.93\* 9/1979 RULTX, WRAPTX, ENTTX REMOVED  
;1 ORIGINAL VERSION

; COMPUTE FUDGE FACTOR SO FOLLOWING POINTERS WILL ASSEMBLE AS THOUGH  
; TBASE=100H EVEN IF TBASE2 IS CHANGED. NEEDED BECAUSE WS.COM ASSUMES  
; WSMGS.0VR LOADED AT 100H.

F EQU TBASE2-100H ;NORMALLY ZERO, TAKES ON APPROPRIATE VALUE  
; IF USER ALTERS TBASE2 (SEE PAGE 1).

## WordStar 3.0 Customization Notes

## WSMSGS Listing

; MESSAGE POINTER TABLE

DW BADVTX-F ;BAD VERSION TEXT \*\*\* DO NOT MOVE \*\*\* IMPLEMENTED 0.996;  
;IF AN OLDER WSMSGS IS USED, SPARE-BUG MSG WILL DISPLAY  
DW SPARE-F ;SPARE ENTRY, FOR POSSIBLE FUTURE INSERTION  
; MENU TEXTS, ACCESSED FROM COMMAND TABLE (USER2)  
DW HENNOF-F ;NO-FILE MENU, NARROW  
DW HEWNOF-F ; .. WIDE  
DW HEN1-F ;MAIN MENU (1-CTRL-CHAR EDIT CMDS), NARROW  
DW HEW1-F ; .. WIDE  
DW HENF-F ;^Q PREFIX COMMANDS MENU, NARROW  
DW HEWF-F ; .. WIDE  
DW HENB-F ;^K PREFIX MENU, NARROW  
DW HEWB-F ; .. WIDE  
DW HENQ-F ;^P PREFIX MENU, NARROW (WMC2)  
DW HEWQ-F ; .. WIDE  
DW HENU-F ;^O PREFIX MENU, NARROW  
DW HEWU-F ; .. WIDE  
DW HENZ-F ;^J PREFIX MENU, NARROW  
DW HEWZ-F ; .. WIDE  
DW TXQM-F ;MENU OF SPECIAL CHARS DISPLAYED DURING ?-QUESTIONS  
; MISCELLANEOUS TEXTS  
DW TXHYH-F ;HYPHENATION-HELP MESSAGE  
DW PPAUSM-F ;PRINTER PAUSE TEXT (STALIN.MAC)  
DW AFSAVM-F ;AFTER-SAVE TEXT (WMV1.MAC)  
DW TXDFW-F ;DISK FULL WARNING (DIO.MAC)  
DW OPMENU-F ;SEARCH/SUBS OPTIONS MENU (WMC5.MAC)  
DW PPDFTX-F ;"PRINT PAUSED BECAUSE DISK IS FULL" (PRINT2.MAC)  
; TEXTS USED IN VARIOUS COMMANDS  
DW SEDTX1-F ;SELECT DISK, PART 1  
DW SEDTX2-F ;SELECT DISK, PART 2  
DW SEDTX3-F ;SELECT DISK, PART 3  
DW HELTX1-F ;HELP COMMAND (^JH) SCREEN DISPLAY, PART 1  
DW HELTX2-F ; .. PART 2 (WMC6.MAC)  
DW HELTX3-F ; .. PART 3  
DW NDOCTX-F ;NON-DOCUMENT EDIT COMMAND (N) TEXT  
DW DOCTX-F ;DOCUMENT EDIT COMMAND (D) TEXT  
DW FILTX-F ;FILE NAME EXPLANATION FOR N, D COMMANDS  
DW FINPTX-F ;"FINISHING PRINT BEFORE EXIT"  
DW ABUNTX-F ;" ABANDONING UNCHANGED " FILE TEXT  
DW ABCHTX-F ;" ABANDON CHANGED " FILE TEXT  
; SEE ALSO TXEBAK, TXWEPS, TXFIPS, TXFIPB, ADDED AT END

; TEXTS USED IN ASKPRN.MAC: PRINT DIALOG.

DW TXNAFP-F ;"NAME OF FILE TO PRINT?" (FORMERLY CEFPTX)  
DW STPRM1-F ;STOP PRINT QUESTION PART 1 (EDITING ONLY)  
DW STPPRM-F ;STOP PRINT QUESTION TEXT PART 2  
DW POPHED-F ;PRINT OPTIONS HEADING  
DW SPQXT-F ; PRINT OPTIONS QUESTIONS TEXTS.  
DW DFOQTX-F ; ..  
DW UFFQTX-F ; ..  
DW SPFQTX-F ; ..  
DW PBPQTX-F ; ..  
DW RPTXT-F ;..  
DW TOOLPE-F ;TOO LITTLE MEMORY TO PRINT AND EDIT (PFIL.MAC)  
DW TOOLEP-F ;TOO LITTLE MEMORY TO EDIT AND PRINT  
DW STPQTX-F ;"STOP AFTER PAGE NUMBER?" (CPFETX WAS ONCE HERE)  
DW TXNAFO-F ;"NAME OF DISK OUTPUT FILE?"  
DW NCOPTX-F ;"NUMBER OF COPIES (RETURN for 1)?" (WAS SETRTX)  
; SEE ALSO TXWPES, ADDED AT END.

; MISCELLANEOUS

DW SPARE-F ;SPARE, WAS NIYETX "NOT IMPLEMENTED YET".  
DW SPARE-F ;SPARE, WAS SHDXTX — DISPLAY DOT COMMANDS MSG  
DW SHOWPT-F ; PAGE BREAK DISPLAY COMMAND (UNDER N)  
DW SPARE-F ;SPARE ENTRY, FOR POSSIBLE FUTURE INSERTION  
DW TXRPTP-F ; "TYPE 1-9 FOR SPEED, SPACE TO STOP" — WMV1.MAC

; TEXT USED IN WMC9.MAC

DW WLLWMS-F ;WMC9: WORD TOO LONG WARNING  
DW MSPELL-F ;MESSAGE FOR SPELL FIND & REPLACE \*2.35\*  
DW MSPEL2-F ;MESSAGE FOR SPELSTAR OPTIONS QUESTION \*2.35\*

; ERROR MESSAGE TEXTS, DISK PORTION. SEE ALSO "MORE ERROR MESSAGES" BELOW.

DW ETPMNS-F  
DW ETBBNM-F  
DW ETBENM-F  
DW ETEB4B-F  
DW ETBTOO-F  
DW ETNOCR-F ;CURSOR OUT OF RANGE FOR COLUMN MOVE \*2.35\*  
DW ETFXIS-F  
DW ETDFUL-F  
DW ETCOPY-F  
DW ETADDR-F  
DW ETMFUL-F  
DW ETMSHT-F  
DW ETPTFR-F

IF BOOBAY  
DW ETPHOL-F

ELSE  
DW SPARE-F

ENDIF

DW ETRWBL-F ;TRYING TO COLUMN READ/WRITE \*2.35\*  
DW ETNEM-F ;NOT ENUF MEMORY TO START WORDSTAR ,  
DW ETDIRF-F  
DW ETCLS-F  
DW ETREN-F  
DW ETBSS-F ;INVALID SCREEN SIZE  
DW ERERR-F ;UNASSIGNED ERROR NUMBER  
DW SPARE-F ;SPARE ENTRY, FOR POSSIBLE FUTURE INSERTION

```

; SOME WARNING MESSAGES, OTHERS ABOVE.
DW TXPABF-F ;"PUT AT BEGINNING FILE FOR CORRECT PAGE DISPLAY"
DW SSNTX-F ;SCREEN SIZE WARNING
; MESSAGE DISPLAYED ONCE ONLY AT START OF EDIT AT HELP LEVEL 1 OR 2,
; TO SAY HOW TO GET THE MAIN MENU.
DW TXITHL-F ;"TYPE ^JH3 FOR FULL MENU DISPLAY", ETC.
; TEXTS FOR ADDITIONAL HELP COMMANDS
DW DOTTX-F ;DOT COMMAND EXPLANATIONS (4 FRAMES)
DW STATX-F ;STATUS LINE
DW FLAGTX-F ;FLAG CHARACTERS
DW PLACTX-F ;PLACE MARKERS
DW RULTX-F ;RULER LINE
DW REFORX-F ;PARAGRAPH REFORM / WORD WRAP
DW MARGX-F ;SETTING MARGINS
DW MOVTX-F ;MOVING TEXT
DW SPARE-F ;SPARE ENTRY
DW FINCTX-F ;COMMAND INDEX / ENTERING TEXT / WORD WRAP
DW SPARE-F ;SPARE ENTRY, FOR POSSIBLE FUTURE INSERTION
DW SPARE-F ;SPARE ENTRY, FOR POSSIBLE FUTURE INSERTION
DW SPARE-F ;SPARE ENTRY, FOR POSSIBLE FUTURE INSERTION

; MORE ERROR MESSAGES
IF ZEOOB
  DW ETZCLB-F
ELSE
  DW SPARE-F
ENDIF
IF BOOBAY
  DW ETIMMER-F
  DW ETADD2-F
ELSE
  DW SPARE-F,SPARE-F
ENDIF
; SEE ALSO "OVERLAY ERROR MESSAGES" BELOW
; MORE TEXTS USED IN INITIATE EDIT COMMANDS
DW TXFFPF-F ;"FINISH MERGE PRINT FIRST, THEN EDIT"
DW TXEBAK-F ;"CAN'T EDIT .$$$ AND .BAK FILES" (INIT.MAC)
DW TXFIPS-F ;"FINISHING PRINT OF SAME FILE BEFORE SAVE"
DW TXFIPB-F ;"FINISHING PRINT OF .BAK FILE BEFORE SAVE"
DW TXWEPS-F ;"WARNING: EDITING FILE THAT IS BEING PRINTED"
; MORE TEXTS USED IN ASKPRN.MAC
DW TXWPES-F ;"WARNING: PRINTING FILE THAT IS BEING EDITED"
DW SPARE-F
; FILE NAME ENTRY ERRORS
DW TXBFN-F ;"INVALID FILE NAME: " (PROGRAM THEN DISPLAYS INPUT)
DW TXBFN2-F ;SPACE, CR, LF: REST OF INVALID FILE NAME MESSAGE
DW TXNF-F ;FILE XXXX NOT FOUND (OPNSUB SETS NFFCB)

```

## ;OVERLAY-RELATED ERROR MESSAGES

#1.12\*

DW ETB0VN-F ;BAD OVERLAY NUMBER  
 DW SPARE-F ;FORMERLY ETBOVB: BAD OVLY BUF # (FLAGGED IN OBUFZS)  
 DW ETBOVF-F ;EOF WHILE READING OVERLAY FILE  
 DW ETBOV1-F ;BAD OVERLAY (MAGIC # AT BEGINNING)  
 DW ETBOV2-F ;BADLY TERMINATED OVERLAY (MAGIC # AT END)  
 DW ETOV2L-F ;OVERLAY TOO LONG FOR BUFFER  
 DW ETBOVV-F ;BAD VERSION # IN OVERLAY  
 DW ETBCVL-F ;OVERLAY LINKED FOR WRONG VERSION OF WS  
 DW ETBONO-F ;BAD OVERLAY (OVERLAY # IN OVERLAY DOES NOT MATCH)  
 DW SPARE-F  
 DW ETONF1-F ;OVERLAY FILE #1 NOT FOUND  
 DW ETONF2-F ;OVERLAY FILE #2 NOT FOUND  
 DW SPARE-F

## ; EXTERNAL-PROGRAM-EXECUTION-RELATED ERRORS AND MESSAGES

DW ETPNF-F  
 DW ETPNUL-F  
 DW ETPTBG-F  
 DW TXPBXD-F  
 DW TXNEMX-F  
 DW TXWSNF-F  
 DW TXRNSP-F ;RUN SPELSTAR EXPLANATION MESSAGE

#2.35\*

## ; TEXTS FOR COPY AND RENAME COMMANDS - NOFILE OVERLAY

DW TXREN3-F ;TO FILE ALREADY EXISTS  
 DW TXREN4-F ;FILES HAVE TO BE ON SAME DRIVE CANNOT RENAME  
 DW TXCOP2-F ;"FILE EXISTS -- DELETE OLD COPY (Y/N):"  
 DW SPARE-F  
 DW TOOLCO-F ;TOO LITTLE MEMORY TO COPY WHILE EDITTING OR PRINTING  
 DW IUSEIX-F ;FILE IN USE BY WORDSTAR  
 DW SPARE-F ;SPARE

## ; TEXTS USED IN MERGE-PRINT

DW TXFPMU-F ;"MENU" -- "P=STOP PRINT" (FPRUN.MAC)  
 DW FXTXT-F ;"READ SCREEN, HIT RETURN" -- USED B4 RET TO NOFILE MU  
 DW BADOTX-F ;"INVALID DOT COMMAND IGNORED" (FPDOT.MAC)  
 DW FNFTX1-F ;"FILE ...  
 DW FNFTX2-F ;... NOT FOUND" (S1SUB.MAC)  
 DW FFTX1-F ;"BUT FILE ...  
 DW FFTX2-F ;... FOUND AND WILL BE USED" (S1SUB.MAC)  
 DW CNCTX1-F ;"CANNOT CHANGE DISK IN DRIVE ...  
 DW CNCTX2-F ;... REQUEST IGNORED" (S1SUB.MAC)  
 DW DCHTX1-F ;"INSERT DISKETTE WITH FILE ...  
 DW DCHTX2-F ;... THEN PRESS RETURN" (S1SUB.MAC)  
 DW TOOLFP-F ;"TOO LITTLE MEMORY FOR MERGE-PRINT"  
 DW SPARE-F  
 DW TXNODF-F ;" \*\*\* No .DF before .RV: "  
 DW TXWLDF-F ;" \*\*\* WARNING: Overlong data value truncated "  
 DW SPARE-F ;SPARE / LATER ADD DATA FILE NAME AND 2ND MSG AFTER?  
 DW TXWBVN-F ;" \*\*\* Invalid variable name in .RV command ignored "  
 DW SPARE-F ;SPARE / LATER ADD VBL NAME & 2ND MSG?  
 DW TXWDEX-F ;" \*\*\* WARNING: Data exhausted, null value(s) used "  
 DW SPARE-F,SPARE-F,SPARE-F,SPARE-F

```

; EXPANSION SPACE - FILL TABLE TO 192 ENTRIES (384 BYTES = 180 HEX)
; ;2C0 HEX
DW SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F ;2D0 HEX
DW SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F ;2E0 HEX
DW SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F ;2F0 HEX
DW SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F,SPARE-F ;300 HEX

LABEL EQU $           ; LOCATION SHOULD NOW BE 300 HEX

;
; ***** SPECIAL CHARACTER CODES *****
;

; THE FOLLOWING CODES ARE INTERPRETED FROM WITHIN THE "TEXT" IN THIS FILE.

;
; 0      TERMINATES TEXT
; 05H    DISPLAYS " on (OFF)" FOR Z, OR " off (ON)" FOR NZ, PER FLAG IN
;          NEXT 2 BYTES (DW ADDRESS) USED TO PRINT ^O MENU ITEMS.
; 09      TAB - TABS TO NEXT MULTIPLE OF 8 COLUMNS, AS USUAL.
;          MUCH USED IN TEXT - ENTERED AS TAB WITHIN QUOTED AREA.
; 0A      LINE FEED (LF) AS USUAL
; 0D      CARRIAGE RETURN (CR) AS USUAL
; 0EH    ERASE TO EOL, CR, LF
; 0FH    CR, LF
; 10H    DISPLAYS "ERROR"
; 11H    DISPLAYS " INTERNAL ERROR"
; 12H    DISPLAYS "FATAL"
; 13H    DISPLAYS INDENT FOR PROMPTS: 3 INVERSE (INVERSE) VIDEO SPACES
; 14H    DISPLAYS " NAME OF FILE TO "
; 15H    DISPLAYS "FILE"
; 16H    DISPLAYS "MERGE-"
; 17H    DISPLAYS "Print a file ", "STOP PRINT ", OR "CONTINUE PRINT"
;          FOR P= ITEMS ON NO-FILE MENU, ^K MENU.
; 18H    ERASES TO END LINE, AWAITS KEYSTROKE (UPDATING FILE DISPLAY
;          AREA WHILE WAITING), THEN CONTINUES OUTPUT AT TOP SCRN.
;          USED BETWEEN FRAMES AND AT END OF HELP EXPLANATIONS.
; 19H    DISPLAYS NAME OF LAST NOT-FOUND FILE, W/O DRIVE
; 1AH    DISPLAYS NAME OF LAST NOT-FOUND FILE, OR OTHER CALLER-SET FCB
;
```

; \*\*\*\*\* NO-FILE MENU \*\*\*\*\*

; NARROW TEXT ASSEMBLED WILL DISPLAY AS FOLLOWS:

; <<< N O - F I L E M E N U >>>

D Open Document File	Y DELETE a file	H Set HELP LEVEL
N Open Non-document File	E RENAME a file	L Change Drive
X EXIT to System	O COPY a file	R Run a program
F Directory ON (OFF)	P Print a file	

; -----  
M Run MailMerge

S Run SpellStar

; WIDE TEXT ASSEMBLED WILL DISPLAY AS FOLLOWS:

; <<< N O - F I L E M E N U >>>

—Preliminary Commands—		—File Commands—	-System Commands-
L Changed logged disk drive			R Run a program
F File directory ON (OFF)		P Print a file	X EXIT to system
H Set help level			
—Commands to open a file—		E RENAME a file	-WordStar Options-
D Open a document file		O COPY a file	M Run MailMerge
N Open a non-document file		Y DELETE a file	S Run SpellStar

; HENNOF:

DB 0EH,' <<< N O - F I L E M E N U >>>

DB 0EH,' D Open Document File | Y DELETE a file | H Set HELP LEVEL

DB 0EH,' N Open Non-document File | E RENAME a file | L Change Drive

DB 0EH,' X EXIT to System | O COPY a file | R Run a program

DB 0EH,' F Directory ',5

DW DISDIR

DB ' | P ',17H,

DB 0EH,' -----

DB 0EH,' M Run MailMerge S Run SpellStar ',,' '+80H,0

; HEWNOF:

DB ' <<< N O - F I L E M E N U >>>

',0EH

—Preliminary Commands—	—File Commands—	-System Commands-
—Preliminary Commands—		',0EH

DB '

DB ' '+80H,'-'+80H,'-'+80H,'-'+80H,'P'+80H,'r'+80H,'e'+80H,'l'+80H,'i'+80H

DB 'm'+80H,'i'+80H,'n'+80H,'a'+80H,'r'+80H,'y'+80H,', '+80H

DB ' '+80H,'C'+80H,'o'+80H,'m'+80H,'m'+80H,'a'+80H,'n'+80H,'d'+80H,'s'+80H

DB '-'+80H,'-'+80H,'-'+80H,', '+80H

DB ' |'

; ' —File Commands— |

DB '

DB '-'+80H,'-'+80H,'F'+80H,'i'+80H,'l'+80H,'e'+80H,', '+80H

DB ' '+80H,'C'+80H,'o'+80H,'m'+80H,'m'+80H,'a'+80H,'n'+80H,'d'+80H,'s'+80H

DB '-'+80H,'-'+80H

DB ' |'

; ' -System Commands- ',0EH

DB ' '
 DB '-'+80H,'S'+80H,'y'+80H,'s'+80H,'t'+80H,'e'+80H,'m'+80H,' '+80H
 DB ' '+80H,'C'+80H,'o'+80H,'m'+80H,'m'+80H,'a'+80H,'n'+80H,'d'+80H,'s'+80H,'-'+80H
 DB ' ',0EH
 DB ' L Changed logged disk drive | R Run a program ',0EH
 DB ' F File directory ',05
 DW DISDIR
 DB ' . | P ',17H, . | X EXIT to system ',0EH
 DB ' H Set help level | ',0EH
 ;
 ;DB ' ---Commands to open a file--- | E RENAME a file | -WordStar Options- ',0EH
 ;
 ; ' ---Commands to open a file--- |
 DB ' '
 DB ' '+80H,'-'+80H,'-'+80H,'-'+80H
 DB 'C'+80H,'o'+80H,'m'+80H,'m'+80H,'a'+80H,'n'+80H,'d'+80H,'s'+80H
 DB ' '+80H,'t'+80H,'o'+80H,' '+80H,'o'+80H,'p'+80H,'e'+80H,'n'+80H
 DB ' '+80H,'a'+80H,' '+80H,'f'+80H,'i'+80H,'l'+80H,'e'+80H,'-'+80H
 DB '-'+80H,'-'+80H,' '+80H
 DB ' |'
 ;
 ; ' E RENAME a file |
 DB ' E RENAME a file |'
 ;
 ; -WordStar Options- ',0EH
 DB ' '
 DB '-'+80H,'W'+80H,'o'+80H,'r'+80H,'d'+80H,'S'+80H,'t'+80H,'a'+80H,'r'+80H
 DB ' '+80H,'O'+80H,'p'+80H,'t'+80H,'i'+80H,'o'+80H,'n'+80H,'s'+80H,'-'+80H
 DB ' ',0EH
 DB ' D Open a document file | O COPY a file | M Run MailMerge ',0EH
 DB ' N Open a non-document file | Y DELETE a file | S Run SpellStar ',,' '+80H,0

## PAGE

;HELP LEVEL 1 AND 2 INITIAL HELP MESSAGE TO EXPLAIN HOW TO GET MAIN MENU.  
 ; DISPLAYED AT START 1ST EDIT IF HELP IS 1 OR 2 AND "NITHLF" IN USER2 IS 0.

TXITHL: DB 0EH

DB TAB+80H,' For maximum help (full menu display), ',0EH  
 DB TAB+80H,' select Help Level 3 by typing ^JH3. ',0EH  
 DB TAB+80H,' This message will clear when a key is pressed. ',0EH,0EH,0

## PAGE

; HYPHEN-HELP MESSAGE

TXHYH: DB 0EH

DB ' TO HYPHENATE. PRESS -. Before pressing -, you may ',0EH  
 DB ' move cursor: ^S=cursor left, ^D=cursor right. ',0EH  
 DB ' If hyphenation not desired, type ^B. ',0EH,0EH,07,0

## ; \*\*\*\*\* EDITING COMMAND MENUS \*\*\*\*\*

;MAIN EDITING MENU - NON-PREFIX EDITING COMMANDS

; WIDE VERSION TEXT IS AS FOLLOWS:

<<< MAIN MENU >>>			
—Cursor Movement—		-Delete-	-Miscellaneous-   -Other Menus-
^S char left	^D char right	^G char	^I Tab ^B Reform (from Main only)
^A word left	^F word right	DEL chr lf	^V INSERT ON/OFF   ^J Help ^K Block
^E line up	^X line down	^T word rt	^L Find/Replace again   ^Q Quick ^P Print
—Scrolling—		^Y line	RETURN End paragraph   ^O Onscreen
^Z line up	^W line down		^N Insert a RETURN
^C screen up	^R screen down		^U Stop a command

## ; NARROW VERSION TEXT:

:CURSOR: ^A=left word	^S=left char	^D=right char	
;	^F=right word	^E=up line	^X=down line
:SCROLL: ^Z=up line	^W=down	^C=up screen	^R=down
:DELETE: DEL=char left	^G=right	^T=word	^Y=line
:OTHER: ^V=insert off/on	^I=tab	RETURN=end para	^U=stop
;	^N=insert a RETURN	^B=reform	^L=find/replace again
;PREFIX KEYS ^Q ^J ^K ^O ^P display additional menus			

## IF NOT NARROW

HEN1: ; THEN DEFINE NARROW LABEL OVER WIDE TEXT  
ENDIF

HEW1:

IF WIDE ;ELSE NARROW VERSION DISPLAYS EVEN ON WIDE SCREENS  
;WIDE VERSION

<<< MAIN MENU >>>			' ,0EH
;	DB ' —Cursor Movement—	-Delete-	-Miscellaneous-   -Other Menus- ',0EH
;	DB ' —Cursor Movement—		
DB ' '			
DB ' '+80H, '-'+80H, '^'+80H, 'C'+80H, 'u'+80H, 'r'+80H, 's'+80H, 'o'+80H, 'r'+80H			
DB ' '+80H, 'M'+80H, 'o'+80H, 'v'+80H, 'e'+80H, 'm'+80H, 'e'+80H, 'n'+80H, 't'+80H			
DB '-'+80H, '-'+80H, ' '+80H			
DB '  '			
;		-Delete-	
DB '  '			
DB '-'+80H, 'D'+80H, 'e'+80H, 'l'+80H, 'e'+80H, 't'+80H, 'e'+80H, '-'+80H			
DB '  '			
;		-Miscellaneous-	
DB '  '			
DB ' '+80H, '-'+80H, 'M'+80H, 'i'+80H, 's'+80H, 'c'+80H, 'e'+80H, 'l'+80H, 'l'+80H			
DB 'a'+80H, 'n'+80H, 'e'+80H, 'o'+80H, 'u'+80H, 's'+80H, '-'+80H, ' '+80H			
DB '  '			
;			

```

; -Other Menus- ',0EH
DB ''
DB ' '+80H,'-'+80H,'0'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H
DB ' '+80H,'-'+80H,'m'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,' '+80H
DB ' ',0EH
DB ' ^S char left ^D char right | ^G char | ^I Tab ^B Reform | (from Main only) ',0EH
DB ' ^A word left ^F word right |DEL chr lf| ^V INSERT ON/OFF |^J Help ^K Block ',0EH
DB ' ^E line up ^X line down |^T word rt| ^L Find/Replace again| ^Q Quick ^P Print ',0EH
;
; DB ' --Scrolling-- | ^Y line |RETURN End paragraph|^O Onscreen ',0EH
;
; DB ' --Scrolling-- |
;
DB ''
DB ' '+80H,'-'+80H,'-'+80H
DB 'S'+80H,'c'+80H,'r'+80H,'o'+80H,'l'+80H,'l'+80H,'i'+80H,'n'+80H,'g'+80H
DB ' '-'+80H,'-'+80H,' '+80H
DB ' '
;
; ^Y line |RETURN End paragraph|^O Onscreen ',0EH
;
DB ' ^Y line |RETURN End paragraph|^O Onscreen ',0EH
DB ' ^Z line up ^W line down | ^N Insert a RETURN | ',0EH
DB ' ^C screen up ^R screen down | ^U Stop a command | ',0
ENDIF

```

## IF NARROW

HEN1: ;NARROW VERSION OF MAIN MENU

```

DB ' CURSOR: ^A=left word ^S=left char ^D=right char ',0EH
DB ' ^F=right word ^E=up line ^X=down line ',0EH
DB ' SCROLL: ^Z=up line ^W=down ^C=up screen ^R=down ',0EH
DB ' DELETE: DEL=char left ^G=right ^T=word ^Y=line ',0EH
DB ' OTHER: ^V=insert off/on ^I=tab RETURN=end para ^U=stop ',0EH
DB ' ^N=insert a RETURN ^B=reform ^L=find/replace again ',0EH
DB ' PREFIX KEYS ^Q ^J ^K ^O ^P display additional menus ',0
ENDIF

```

; ^Q P R E F I X

; WIDE VERSION TEXT IS AS FOLLOWS:

```
; <<< Q U I C K M E N U >>>
; —Cursor Movement— | -Delete- | —Miscellaneous— | —Other Menus—
; S left side D right side Y line rt|F Find text in file (from Main only)
; E top scrn X bottom scrn DEL lin lf|A Find & Replace ^J Help ^K Block
; R top file C end file L Find Misspelling ^Q Quick ^P Print
; B top block K end block |Q Repeat command or ^O Onscreen
; Ø-9 marker Z up W down key until space Space Bar returns
; P previous V last Find or Block bar or other key you to Main Menu.
```

```
; IF NOT WIDE
HEWF: ; THEN DEFINE WIDE LABEL OVER NARROW TEXT
ENDIF
HENF: ;NARROW VERSION
IF NARROW ;ELSE WIDE VERSION DISPLAYS EVEN ON NARROW SCREENS
```

```
DB 13H,0A0H,0A0H
DB ' ^Q PREFIX (to cancel prefix, press SPACE bar) ',0EH
DB ' CURSOR: S=left Side E=top X=bottom D=right enD line ',0EH
DB ' R=beginning file C=end file Ø-9,B,K,V,P=to marker ',0EH
DB ' SCROLL: Z=continuous up W=continuous down ',0EH
DB ' DELETE TO END LINE: DEL = left Y = right ',0EH
DB ' FIND, REPLACE: F=Find a string A=find And substitute ',0EH
DB ' REPEAT NEXT COMMAND: Q=repeat until key pressed ',0

ENDIF
PAGE
IF WIDE
HEWF: ;WIDE VERSION OF ^Q PREFIX MENU
DB ' <<< Q U I C K M E N U >>> ',0EH
;
; DB ' —Cursor Movement— | -Delete- | —Miscellaneous— | —Other Menus— ',0EH
; DB ' —Cursor Movement— | |
; DB ' '
DB ' '+80H,'-'+80H,'-'+80H,'-'+80H
DB 'C'+80H,'u'+80H,'r'+80H,'s'+80H,'o'+80H,'r'+80H
DB ' '+80H,'M'+80H,'o'+80H,'v'+80H,'e'+80H,'m'+80H,'e'+80H,'n'+80H,'t'+80H
DB '-'+80H,'-'+80H,'-'+80H,' '+80H
DB ' | '
;
; -Delete- |
;
DB ' '
DB '-'+80H,'D'+80H,'e'+80H,'l'+80H,'e'+80H,'t'+80H,'e'+80H,'-'+80H
DB ' | '
;
; —Miscellaneous— |
```

;  
DB ' '  
DB '-'+80H,'-'+80H  
DB 'M'+80H,'i'+80H,'s'+80H,'c'+80H,'e'+80H,'l'+80H,'l'+80H,'a'+80H,'n'+80H  
DB 'e'+80H,'o'+80H,'u'+80H,'s'+80H,'-'+80H,'-'+80H  
DB ' '|'  
;  
;  
DB ' '|'  
DB '-'+80H,'-'+80H,'O'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H,' '+'80H  
DB ' '+80H,'M'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,'-'+80H  
DB ' ',0EH  
;  
DB ' S left side D right side |Y line rt|F Find text in file | (from Main only) ',0EH  
DB ' E top scrn X bottom scrn |DEL lin lf|A Find & Replace |^J Help ^K Block ',0EH  
DB ' R top file C end file |L Find Misspelling |^Q Quick ^P Print ',0EH  
DB ' B top block K end block |Q Repeat command or |^O Onscreen ',0EH  
DB ' 0-9 marker Z up W down | key until space |Space Bar returns ',0EH  
DB ' P previous V last Find or Block | bar or other key |you to Main Menu. ',0  
ENDIF

—Other Menus— ',0EH

; ^K PREFIX

; WIDE VERSION TEXT DISPLAYS AS FOLLOWS:

<<< BLOCK MENU >>>			
-Saving Files	-Block Operations	-File Operations	-Other Menus -
S Save & resume	B Begin K End.	R Read P Print	(from Main only)
D Save—done	H Hide / Display	O Copy E Rename	^J Help ^K Block
X Save & exit	C Copy Y Delete	J Delete	^Q Quick ^P Print
Q Abandon file	V Move W Write	-Disk Operations-	^O Onscreen
-Place Markers-	N Column on (OFF)	L Change logged disk	Space Bar returns
0-9 set/hide 0-9	F Directory ON (OFF)	F Directory ON (OFF)	you to Main Menu.

; NARROW VERSION (old rev)

; ^K PREFIX (to cancel prefix, press SPACE bar)  
; end edit/save: D=DONE X=DONE,EXIT S=SAVE,REEDIT Q=ABANDON  
; mark block: B=MARK START K=MARK END H=HIDE/DISPLAY  
; block operations: V=MOVE block C=COPY block Y=DELETE BLOCK  
; additional files R=READ file W=WRITE block J=DELETE file  
; & printing: O=cOpy file E=rEname P=continue print  
; DISK & DIRECTORY: L=Log disk F=File directory off (ON)  
; misc: 0-9 = SET/HIDE place markers N=columN Move off (ON)

IF NOT WIDE

HEWB: ; THEN DEFINE WIDE LABEL OVER NARROW TEXT  
ENDIF

HENB: ;NARROW VERSION

IF NARROW ;ELSE WIDE VERSION DISPLAYS EVEN ON NARROW SCREENS

DB 13H,0A0H,0A0H

DB ' ^K PREFIX (to cancel prefix, press SPACE bar) ',0EH  
DB ' END EDIT/SAVE: D=Done X=done,eXit S=Save,reedit Q=abandon ',0EH  
DB ' MARK BLOCK: B=Block start K=block end H=Hide/display ',0EH  
DB ' BLOCK OPERATIONS: V=moVe block C=Copy block Y=delete block ',0EH  
DB ' ADDITIONAL FILES R=Read file W=Write block J=delete file ',0EH  
DB ' & PRINTING: O=cOpy file E=rEname P='17H,' ',0EH  
;CONTINUE PRINT <- 17H  
DB ' DISK & DIRECTORY: L=Log disk F=File directory '  
DB 5

DW DISDIR

DB 0EH

DB ' MISC: 0-9 = set/hide place markers N=columN move ',05

DW MOVEF

DB 0

ENDIF

IF WIDE

```

HEWB: ;WIDE ^K PREFIX MENU
DB ' <<< B L O C K M E N U >>> ',0EH
;
; DB ' -Saving Files- | -Block Operations- | -File Operations- | -Other Menus- ',0EH
;
; DB ' -Saving Files- |
;
DB ' '
DB '-'+80H,'S'+80H,'a'+80H,'v'+80H,'i'+80H,'n'+80H,'g'+80H,' '+80H
DB ' '+80H,'F'+80H,'i'+80H,'l'+80H,'e'+80H,'s'+80H,'-'+80H
DB ' |'
;
;
; -Block Operations- |
;
DB ' '
DB '-'+80H,'B'+80H,'l'+80H,'o'+80H,'c'+80H,'k'+80H,' '+80H
DB 'O'+80H,'p'+80H,'e'+80H,'r'+80H,'a'+80H,'t'+80H,'i'+80H,'o'+80H,'n'+80H
DB 's'+80H,'-'+80H
DB ' |'
;
;
; -File Operations- |
;
DB ' '
DB '-'+80H,'F'+80H,'i'+80H,'l'+80H,'e'+80H,' '+80H
DB ' '+80H,'O'+80H,'p'+80H,'e'+80H,'r'+80H,'a'+80H,'t'+80H,'i'+80H,'o'+80H
DB 'n'+80H,'s'+80H,'-'+80H
DB ' |'
;
;
; -Other Menus- ',0EH
;
DB ' '
DB '-'+80H,'-'+80H,'O'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H,' '+80H
DB ' '+80H,'M'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,' '+80H
DB ' ',0EH
;
DB ' S Save & resume | B Begin K End | R Read P Print | (from Main only) ',0EH
DB ' D Save—done | H Hide / Display | O Copy E Rename | ^J Help ^K Block ',0EH
DB ' X Save & exit | C Copy Y Delete | J Delete | ^Q Quick ^P Print ',0EH
;
DB ' Q Abandon file | V Move W Write | -Disk Operations- | ^O Onscreen ',0EH
;
DB ' Q Abandon file | V Move W Write |'
;
;
; -Disk Operations- |
DB ' '
DB '-'+80H,'D'+80H,'i'+80H,'s'+80H,'k'+80H,' '+80H
DB ' '+80H,'O'+80H,'p'+80H,'e'+80H,'r'+80H,'a'+80H,'t'+80H,'i'+80H,'o'+80H
DB 'n'+80H,'s'+80H,'-'+80H
DB ' |'
;
;
; ^O Onscreen ',0EH

```

```
; DB ' ^O Onscreen      ',0EH
;
; DB ' -Place Markers- | N Column ',05
;
; DB ' -Place Markers- |
;
DB ''
DB '-'+80H,'P'+80H,'l'+80H,'a'+80H,'c'+80H,'e'+80H,' '+80H
DB 'M'+80H,'a'+80H,'r'+80H,'k'+80H,'e'+80H,'r'+80H,'s'+80H,'-'+80H
DB '|'
;
;
N Column ',05
;
DB ' N Column ',05
;
DW MOVEE
      DB '|L Change logged disk| Space Bar returns ',0EH
      DB'|F Directory',05
      DW DISDIR
      DB '| you to Main Menu. ',0
;
;CONTINUE PRINT <- FOR 17H ALIGNMENT
ENDIF
```

; ^P PREFIX

; WIDE VERSION TEXT DISPLAYS LIKE THIS:

```
; <<< PRINT MENU >>>
; _____ Special Effects _____ | -Printing Changes- | -Other Menus-
; (begin and end) | (one time each) | A Alternate pitch | (from Main only)
; B Bold D Double | H Overprint char . | N Standard pitch | ^J Help ^K Block
; S Underscore | O Non-break space | C Printing pause | ^Q Quick ^P Print
; X Strikeout | F Phantom space | Y Other ribbon color | ^O Onscreen
; V Subscript | G Phantom rubout | —User Patches— | Space Bar returns
; T Superscript | RET Overprint line | Q(1) W(2) E(3) R(4) | you to Main Menu.
```

; NARROW VERSION:

```
; ^P PREFIX: Put Control Character in File
; V=subscript T=superscript Y=ribbon color change
; S=underscore B=boldface D=double strike
; A=alternate pitch N=standard pitch X=strikeout begin/end
; O=non-break space F=phantom space G=phantom rubout
; C=pause H=overprint char RETURN=overprint line
; Q,W,E,R=user printer controls SPACE=cancel prefix
```

IF NOT WIDE

HEWQ: ; THEN DEFINE WIDE LABEL OVER NARROW TEXT  
ENDIF

HENQ: ;NARROW VERSION

IF NARROW ;ELSE WIDE VERSION DISPLAYS EVEN ON NARROW SCREENS

DB TAB+80H,0A0H

```
DB ' ^P PREFIX: Put Control Character in File ',0EH
DB ' V=subscript T=superscript Y=ribbon color change ',0EH
DB ' S=underScore B=Boldface D=Double strike ',0EH
DB ' A=alternate pitch N=standard pitch X=strikeout begin/end ',0EH
DB ' O=non-break space F=phantom space G=phantom rubout ',0EH
DB ' C=pause H=overprint char RETURN=overprint line ',0EH
DB ' Q,W,E,R=user printer controls SPACE=cancel prefix ',0
```

ENDIF

IF WIDE

HEWQ: ;WIDE VERSION OF ^P PREFIX MENU

```
DB ' <<< PRINT MENU >>> ',0EH
; DB ' _____ Special Effects _____ | -Printing Changes- | -Other Menus- ',0EH
```

; DB ' \_\_\_\_\_ Special Effects \_\_\_\_\_ |

DB ' '

DB ' '+80H,'-'+80H,'-'+80H,'-'+80H,'-'+80H,'-'+80H,' '+80H

DB ' S'+80H,'p'+80H,'e'+80H,'c'+80H,'i'+80H,'a'+80H,'l'+80H,' '+80H

DB ' '+80H,'E'+80H,'f'+80H,'f'+80H,'e'+80H,'c'+80H,'t'+80H,'s'+80H

DB ' '+80H,'-'+80H,'-'+80H,'-'+80H,'-'+80H,'-'+80H,'-'+80H,' '+80H

DB ' |'

-Printing Changes- |

```

;
DB ' '
DB '-'+80H,'P'+80H,'r'+80H,'i'+80H,'n'+80H,'t'+80H,'i'+80H,'n'+80H,'g'+80H
DB ' '+80H,' '+80H,'C'+80H,'h'+80H,'a'+80H,'n'+80H,'g'+80H,'e'+80H,'s'+80H
DB '-'+80H
DB ' |'
;

; -Other Menus- ',0EH
;

DB ' '
DB ' '+80H,'-'+80H,'O'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H,' '+80H
DB ' '+80H,'M'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,' '+80H
DB ' ',0EH
;

DB ' (begin and end) | (one time each) | A Alternate pitch | (from Main only) ',0EH
DB ' B Bold D Double | H Overprint char | N Standard pitch | ^J Help ^K Block ',0EH
DB ' S Underscore | O Non-break space | C Printing pause | ^Q Quick ^P Print ',0EH
DB ' X Strikeout | F Phantom space | Y Other ribbon color | ^O Onscreen ',0EH
; DB ' V Subscript | G Phantom rubout | —User Patches— | Space Bar returns ',0EH
;

DB ' V Subscript | G Phantom rubout |
;

DB ' V Subscript | G Phantom rubout | '
;

; —User Patches— |
;

DB ' '
DB ' '+80H,'-'+80H,'-'+80H,'U'+80H,'s'+80H,'e'+80H,'r'+80H,' '+80H
DB ' '+80H,'P'+80H,'a'+80H,'t'+80H,'c'+80H,'h'+80H,'e'+80H,'s'+80H
DB '-'+80H,'-'+80H,' '+80H
DB ' |'
;

; Space Bar returns ',0EH
;

DB 'Space Bar returns ',0EH
;

DB ' T Superscript | RET Overprint line | Q(1) W(2) E(3) R(4) |you to Main Menu. ',0
ENDIF

```

; ^O P R E F I X

; WIDE VERSION TEXT DISPLAYS AS FOLLOWS:

; ; ^O PREFIX: on-screen formatting commands  
; ; <<< O N S C R E E N M E N U >>>  
; ; -Margins & Tabs- | -Line Functions- | --More Toggles-- | -Other Menus-  
; ; L Set left margin |C Center text |J Justify (OFF) | (from Main only)  
; ; R Set right margin |S Set line spacing |V Vari-Tabs (OFF) |^J Help ^K Block  
; ; X Release margins | |H Hyph-help (OFF) |^Q Quick ^P Print  
; ; I Set N Clear tab | ---Toggles--- |E Soft hyph (OFF) |^O Onscreen  
; ; G Paragraph tab |W Wrld wrap ON (OFF)|D Prnt disp (OFF) |Space Bar returns  
; ; F Ruler from line |T Rlr line ON (OFF)|P Pge break (OFF) |you to Main Menu.  
;

; ; NARROW VERSION

; ; ^O PREFIX: on-screen formatting commands  
; ; S=line Spacing C=Center cursor line F=margins/tabs from line  
; ; L=Left margin X=margin release E=soft - Entry off (ON)  
; ; R=Right margin W=Word wrap off (ON) D= -, ctrl dspy off (ON)  
; ; I=set tab stop J=Justify off (ON) P=Page display off (ON)  
; ; N=clear tab V=Var tabs off (ON) T=ruler display off (ON)  
; ; G=para tab H=HyphenHelp off (ON) SPACE=cancel prefix

;NARROW ^O PREFIX MENU

```
IF NOT WIDE
HEWU: ; THEN DEFINE WIDE LABEL OVER NARROW TEXT
ENDIF
MENU: ;NARROW VERSION LABEL
IF NARROW ;ELSE WIDE VERSION DISPLAYS EVEN ON NARROW SCREENS
```

```
; IN TEXT, TAB+80H-TAB TO NEXT 8TH COLUMN, INVERTED VIDEO (HIGHLIGHTING),
; A0H=INVERSE VIDEO (HIGHLIGHTED) SPACE, 13H=3 SUCH SPACES,
; 05=PRINT " ON (OFF)" OR " OFF (ON)" PER FLAG NXT 2 BYTES POINT TO.
; TEXT IS ALIGNED ON TAB STOP AND CONTAINS TAB CHARACTERS.
```

DB TAB+80H,0A0H

DB ' ^O PREFIX: on-screen formatting commands ',0EH

DB ' S-line Spacing C=Center cursor line F=margins/tabs from line ',0EH

DB ' L=Left margin X=margin release E=soft ',-'+80H

DB ' Entry ',05

DW SHYPF

DB ' ',0EH

DB ' R=Right margin W=Word wrap ',05

DW WRAPP

DB ' D=',-'+80H

DB ', ctrl dspy',05

DW SHOWDF

DB ' ',0EH

DB ' I=set tab stop J=Justify ',05

DW JUSTF

DB ' P=Page display ',05

DW PAGDIS

DB ' ',0EH

DB ' N=clear tab V=Var tabs ',05

DW VTABF

DB ' T=ruler display',05

DW SHOWMF

DB ' ',0EH

DB ' G=para tab H=Hyphn-Help',05

DW HYPF

DB ' ' SPACE=cancel prefix ',0

ENDIF

```

; WIDE ^O PREFIX MENU
IF WIDE

HEWU: ;WIDE VERSION OF ^O MENU
DB ' <<< O N S C R E E N M E N U >>> ',0EH
; DB ' -Margins & Tabs- | -Line Functions- | --More Toggles-- | -Other Menus- ',0EH
; DB ' -Margins & Tabs- |
;
DB ' '
DB '-'+80H,'M'+80H,'a'+80H,'r'+80H,'g'+80H,'i'+80H,'n'+80H,'s'+80H,' '+80H
DB '&'+80H,' '+80H,'T'+80H,'a'+80H,'b'+80H,'s'+80H,'-'+80H
DB ' |'
;
; -Line Functions- |
;
DB ' '
DB '-'+80H,'L'+80H,'i'+80H,'n'+80H,'e'+80H,' '+80H
DB ' '+80H,'F'+80H,'u'+80H,'n'+80H,'c'+80H,'t'+80H,'i'+80H,'o'+80H
DB 'n'+80H,'s'+80H,'-'+80H
DB ' |'
;
; --More Toggles-- |
;
DB ' '
DB ' '+80H,'-'+80H,'-'+80H,'M'+80H,'o'+80H,'r'+80H,'e'+80H,' '+80H
DB 'T'+80H,'o'+80H,'g'+80H,'g'+80H,'l'+80H,'e'+80H,'s'+80H,'-'+80H,'-'+80H
DB ' '+80H
DB ' |'
;
; -Other Menus- ',0EH
;
DB ' '
DB ' '+80H,'-'+80H,'O'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H,' '+80H
DB ' '+80H,'M'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,' '+80H
DB ' ',0EH
;
DB ' L Set left margin |C Center text |J Justify ',05
DW JUSTF
DB ' | (from Main only) ',0EH
DB ' R Set right margin |S Set line spacing |V Vari-Tabs',05
DW VTABF
DB ' |^J Help ^K Block ',0EH
DB ' |H Hyph-help',05
DW HYPF
DB ' |^Q Quick ^P Print ',0EH
;
DB ' I Set N Clear tab| —Toggles— |E Soft hyph',05
;
DB ' I Set N Clear tab|
;
DB ' I Set N Clear tab|'

```

**—Toggles—**

DB ' '|  
DB ' '+80H,'-' +80H,'-' +80H,'-' +80H  
DB 'T'+80H,'o'+80H,'g'+80H,'g'+80H,'l'+80H,'e'+80H,'s'+80H  
DB ' '-' +80H,'-' +80H,'-' +80H  
DB ' '|'

E Soft hyph',05

DB 'E Soft hyph',05

DW SHYPF

DB '|^O Onscreen ',0EH

DB 'G Paragraph tab |W Wrd wrap',05

DW WRAPP

DB '|D Prnt disp',05

DW SHOWDF

DB '|Space Bar returns ',0EH

DB 'F Ruler from line |T Rlr line',05

DW SHOWMF

DB '|P Pge break',05

DW PAGDIS

DB '|you to Main Menu. ',0

ENDIF

; ^J PREFIX: PREFIX FOR HELP COMMANDS  
HENZ:

```
DB ' <<< H E L P M E N U >>> ',0EH
; '
;
DB ' '
;
;
DB ' '
;
;
DB ' '
DB '-'+80H,'-'+80H,'0'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H,' '+80H
DB ' '+80H,'M'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,'-'+80H
DB ' ',0EH
;
DB ' H Display & set help level | S Status line | (from Main only) ',0EH
DB ' B Paragraph reform (CTRL B) | R Ruler line | ^J Help ^K Block ',0EH
DB ' F Flags in rightmost column | M Margin & Tab | ^Q Quick ^P Print ',0EH
DB ' D Dot commands, print ctrls | P Place markers | ^O Onscreen ',0EH
DB ' V Moving text | Space Bar returns ',0EH
DB ' | you to Main Menu. ',0
```

HEWZ:

```
DB ' <<< H E L P M E N U >>> ',0EH
;DB ' '
;
DB ' '
;
;
DB ' '
DB '-'+80H,'-'+80H,'0'+80H,'t'+80H,'h'+80H,'e'+80H,'r'+80H,' '+80H
DB ' '+80H,'M'+80H,'e'+80H,'n'+80H,'u'+80H,'s'+80H,'-'+80H,'-'+80H
DB ' ',0EH
;
DB ' H Display & set the help level | S Status line | (from Main only) ',0EH
DB ' B Paragraph reform (CONTROL-B) | R Ruler line | ^J Help ^K Block ',0EH
DB ' F Flags in right-most column | M Margins & Tabs | ^Q Quick ^P Print ',0EH
DB ' D Dot commands, print controls | P Place markers | ^O Onscreen ',0EH
DB ' V Moving text | Space Bar returns ',0EH
DB ' | you to Main Menu. ',,' '+80H,0
```

; MENU OF SPECIAL CHARACTERS DISPLAYED ABOVE "NAME OF FILE?" AND SUCH QUESTIONS

TXQM: ORG (\$+7FH) AND 0FF80H ;ORG BEGINNING OF NEXT SECTOR FOR FAST READ  
 DB 0EH  
 DB ' ^S=delete character ^Y=delete entry ^F=File directory ',0EH  
 DB ' ^D=restore character ^R=Restore entry ^U=cancel command ',0EH,0  
 PAGE  
 ;MISCELLANEOUS PROMPTS

;TEXT DISPLAYED ABOVE 1-CHAR W/FILE HELP MESSAGE WHENEVER PRINT IS PAUSED  
 ; INDENT MATCHES "PRINT PAUSE" IN STATUS LINE. ENDS IN CR.  
 PPAUSM:  
 DB TAB+80H,0A0H,' TYPE ^KP TO CONTINUE PRINT ',0EH,0

;TEXT DISPLAYED ABOVE 1-CHAR W/FILE HELP MESSAGE AFTER "SAVE & CONTINUE"  
;COMMAND, UNTIL NEXT KEYSTROKE ONLY  
AFSAVM:

DB 13H,' TO RETURN CURSOR TO POSITION BEFORE SAVE, ',0EH  
DB 13H,' TYPE "QP BEFORE TYPING ANYTHING ELSE. ',0EH,0

;TEST DISPLAYED AFTER ENTRY OF "REPEAT" COMMAND AND CMD. TO BE REPEATED:  
TXRPTP:

DB 13H,13H,' TYPE 1-9 TO VARY SPEED, SPACE TO STOP ',0EH,0

## ; MISCELLANEOUS MESSAGES AND WARNINGS

; WRONG VERSION OF WSMSGs.OVR FOR THE VERSION OF WS.COM MESSAGE

BADVTX: DB 0EH

DB '\*\*\* WARNING: ',0EH

DB ' WRONG VERSION OF WSMSGs.OVR -- ',0EH

DB ' SOME MESSAGES MAY BE INCORRECT. \*\*\* ',0EH,0EH,07,0

; UNTESTED LARGE SCREEN WARNING

SSWTX:

DB '\*\*\* WARNING ',0EH

DB ' SCREENS OVER 48 LINES HIGH OR 120 COLUMNS WIDE ',0EH

DB ' HAVE NOT BEEN TESTED AND DEBUGGED. PROCEED WITH ',0EH

DB ' CAUTION; REDUCE WIDTH IF BUGS ENCOUNTERED. ',0EH,07,0

; DISK FULL WARNING - DIO.MAC

TXDFW: DB 0EH

DB '\*\*\* WARNING: DISK FULL, ',0EH

DB ' DELETING OLD .BAK FILE TO MAKE SPACE ',0EH

DB ' (NORMALLY, THE PREVIOUS BACKUP FILE IS DELETED ',0EH

DB ' ONLY AFTER EDIT IS SUCCESSFULLY COMPLETED). ',0EH,0EH,0EH,07,07,0

;2 BLANK LINES AFTER TEXT

; TEXT USED IN WMC8.MAC

SHOWPT: DB 0EH, ' CAN'T DISPLAY PAGE BREAKS IN A NON-DOCUMENT FILE ',0EH,07,0

; FOR WMC9.MAC:

WLLWMS: DB '\*\*\* WARNING: WORD TOO LONG TO FIT MARGINS ',0EH,07,0

; DISPLAYED ON SCREEN LINE WITH DOT CMD THAT DYNAPAGING CAN'T HANDLE

; (WMV2D.MAC)

TXPABF: DB ' PUT AT FILE BEGINNING FOR CORRECT PAGE BREAK DISPLAY ',0

; TEXT FOR FIND AND REPLACE

OPMENU: DB 0EH,0EH

DB ' Normally press RETURN only, or enter one or more of: ',0EH  
 DB ' number=repeat count, B=search Backwards, W=whole Words only,',0EH  
 DB ' U=ignore case, N=replace w/o asking, G=replace in entire file.',0EH,0EH,0

MSPELL:

DB 0EH,' To search for misspelled words, enter one of the following - ',0EH  
 DB 'RETURN=search forward, B=search backward, G=from start of file: ',0

MSPEL2: DB 0EH

DB 09H,' F - Fix word	D - Add to dictionary	',0EH
DB 09H,' B - Bypass word	S - Add to supplemental dictionary',0EH	',0EH,0
DB 09H,' I - Ignore word		',0EH,0

; SET HELP LEVEL COMMAND

HELTX1: ;HELTX1 NOT DISPLAYED AT HELP LEVEL 0 NOR IF TYPED.

DB 0EH  
 DB ' HELP LEVELS ',0EH  
 DB ' 3 all menus and explanations displayed ',0EH  
 DB ' 2 main editing menu (1-control-char commands) suppressed ',0EH  
 DB ' 1 prefix menus (2-character commands) also suppressed ',0EH  
 DB ' 0 command explanations (including this) also suppressed ',0EH,0

HELTX2: DB 0EH

DB ' CURRENT HELP LEVEL IS ',0 ;DIGIT TYPED HERE

HELTX3: DB ',0EH,0EH

DB ' ENTER Space OR NEW HELP LEVEL (0, 1, 2, OR 3): ',0

; TEXTS FOR LOG DISK COMMAND

SEDTX1: ;SEDTX1 NOT DISPLAYED AT HELP LEVEL 0 OR IF TYPEAHEAD

DB 0EH  
 DB ' The LOGGED DISK (or Current Disk or Default Disk) is the ',0EH  
 DB ' disk drive used for files except those files for which ',0EH  
 DB ' you enter a disk drive name as part of the file name. ',0EH  
 DB ' WordStar displays the File Directory of the Logged Disk. ',0EH,0

SEDTX2:

DB 0EH

DB ' THE LOGGED DISK DRIVE IS NOW ',0 ;DRIVE, CR, LF TYPED HERE BY PROGRAM

SEDTX3:

DB 0EH

DB ' NEW LOGGED DISK DRIVE (letter, colon, RETURN)? ',0

; INITIATE EDIT (N AND D) COMMANDS

NDOCTX: ;FOR NON-DOCUMENT (N) COMMAND ONLY

DB 0EH

DB ' Use this command to create and alter program source files ',0EH  
DB ' and other non-documents. Word wrap defaults off; ',0EH  
DB ' tabbing defaults to fixed (TAB chars in file; 8-col stops); ',0EH  
DB ' page breaks not shown; hi bit flags not used in file. ',0EH  
DB ' For normal word processing uses, use the "D" command instead. ',0EH,0  
;CR ABOVE LINE IS LAST LINE THAT FITS 16-LINE SCREEN \*\*\*\*\*

DOCTX: ;FOR DOCUMENT EDIT (D) ONLY

DB 0EH

DB 0A0H,' Use this command to create a new document file, ',0EH  
DB 0A0H,' or to initiate alteration of an existing document file. ',0EH,0

FILTX: ;FOR BOTH N AND D COMMANDS

DB 0EH

DB 13H,' A file name is 1-8 letters/digits, a period, ',0EH  
DB 13H,' and an optional 0-3 character type. ',0EH  
;;DB 0EH ;;;screen too full  
DB 13H,' File name may be preceded by disk drive letter A-D ',0EH  
DB 13H,' and colon, otherwise current logged disk is used. ',0

; DISPLAYED AFTER INITIATION OF EDIT OF SAME FILE AS THAT BEING PRINTED:

TXWEPS: DB 0EH

DB ' WARNING: You are editing the same file as you are printing. ',0EH  
DB ' WordStar will not allow you to save the edited version ',0EH  
DB ' until the print has completed or has been abandoned. ',0EH,0EH,07,07,07,0

TOOLEP: DB 0EH,' ALLOW PRINT TO FINISH BEFORE EDITING A FILE. ',0EH

DB ' YOUR SYSTEM DOES NOT HAVE ENOUGH MEMORY TO ',0EH  
DB ' PERMIT SIMULTANEOUS EDITING AND PRINTING. ',0EH,0

TXFFPF: DB 0EH,' CAN'T EDIT A FILE WHILE MERGE-PRINTING -- ',0EH

DB ' FINISH OR ABANDON MERGE-PRINT BEFORE EDITING ',0EH,0EH,0

; TEXTS FOR END EDIT AND SAVE COMMANDS (^KS, ^KD, ^KX)

FINPTX: DB 0EH,TAB+80H,TAB+80H,' FINISHING PRINT BEFORE EXIT  
DB 0EH,TAB+80H,TAB+80H,' (type ^U to cancel exit command) ...',0

; DISPLAYED AT SAVE COMMAND IF FILE BEING EDITED IS ALSO BEING PRINTED  
TXFIPS:

DB 0EH,TAB+80H,' FINISHING PRINT OF SAME FILE BEFORE SAVING '  
DB 0EH,TAB+80H,' (Type ^U to cancel Save command) ... ',0

; DISPLAYED AT SAVE COMMAND IF .BAK FILE OF FILE BEING EDITED IS BEING PRINTED

TXFIPB:

DB 0EH,TAB+80H,' FINISHING PRINT OF .BAK FILE BEFORE SAVING '  
DB 0EH,TAB+80H,' (Type ^U to cancel Save command) ... ',0

; TEXTS FOR ABANDON COMMAND (^KQ)

ABUNTX: DB 0EH,13H,' ABANDONING UNCHANGED ',0

ABCHTX: DB 0EH,13H,' ABANDON EDITED VERSION OF ',0

; FILE NAME ENTRY ERROR MESSAGES - USED IN MANY OVERLAYS

; "INVALID FILE NAME: XXXXX" MESSAGE FOR ALL FILE NAME INPUT QUESTIONS  
; 15H->" FILE ". 1AH->THE FILE NAME (CALLER SETS NFFCB)

TXBFN: DB TAB+80H,TAB+80H,' INVALID ',15H,' NAME: ',0 ;(INPUT TXT SHOWN HERE)  
TXBFN2: DB ' ',0EH,0 ;END OF "INVALID FILE NAME" MESSAGE

; "FILE XXXXX NOT FOUND"

; 15H->" FILE ". 1AH->THE FILE NAME (OPNSUB SETS NFFCB)

TXNF: DB TAB+80H,TAB+80H,' ',15H,' ',1AH,' NOT FOUND ',0EH,0

## ; \*\*\*\*\* PRINT COMMAND MESSAGES AND QUESTION TEXTS \*\*\*\*\*

;13H=STANDARD INDENT  
;16H PRINTS "MERGE-" IF MERGE PRINT

STPRM1: DB 0EH,13H,' Now ',16H,'printing file ',0 ;PROGRAM PRINTS FILENAME HERE  
STPPRM: DB 0EH,0EH,13H,' "Y" TO ABANDON PRINT, "N" TO RESUME, "U TO HOLD: ',0

ORG (\$+7FH) AND 0FF80H ;NEXT SECTOR BEGINNING

; CRLF," NAME OF FILE TO PRINT" OR " NAME OF FILE TO MERGE-PRINT"  
;14H EXPANDS TO "NAME OF FILE TO "  
;16H PRINTS "MERGE-" IF FINAL IS NZ

TXNAFP: DB 0EH,13H,14H,16H,'PRINT? ',0 ;13H IN TEXT INVOKES STD INDENT

POPHEP: DB 13H,' For default press RETURN for each question: ',0EH,0

SPQXTX: DB 13H,13H,' START AT PAGE NUMBER (RETURN for beginring)? ',0

STPQTX: DB 13H,13H,' STOP AFTER PAGE NUMBER (RETURN for end)? ',0

NCOPTX: DB 13H,13H,' NUMBER OF COPIES (RETURN for 1)? ',0 ;(MERGE PRINT ONLY)

DFOQTX: DB 13H,13H,' DISK ',15H,' OUTPUT (Y/N): ',0 ;15H => "FILE"

TXNAFO: DB 13H,13H,' OUTPUT ',15H,' NAME? ',0 ;15H => "FILE"

UFFQTX: DB 13H,13H,' USE FORM FEEDS (Y/N): ',0

SPFQTX: DB 13H,13H,' SUPPRESS PAGE FORMATTING (Y/N): ',0

PBPQTX: DB 13H,13H,' PAUSE FOR PAPER CHANGE BETWEEN PAGES (Y/N): ',0

RPTXT: DB 13H,' Ready printer, press RETURN: ',0

PAGE

; DISPLAYED AFTER INITIATION OF PRINT OF SAME FILE AS BEING EDITED:

; NO BLANK LINES B4/AFTER: MUST FIT SCREEN WITH PRINT OPTIONS QUESTIONS.

TXWPES:

DB ' WARNING: You are printing the same file as you are editing. ',0EH

DB ' The last saved version will be printed, not reflecting un- ',0EH

DB ' saved changes. Furthermore, WordStar will not allow you to ',0EH

DB ' save the file being edited while the print is in progress. ',0EH,07,07,07,0

TOOLPE: DB 0EH,' END EDIT (^KD) BEFORE STARTING PRINT. ',0EH

DB ' YOUR SYSTEM DOES NOT HAVE ENOUGH MEMORY TO ',0EH

DB ' PERMIT SIMULTANEOUS EDITING AND PRINTING. ',0EH,07,0

TOOLFP: DB 0EH,' TOO LITTLE MEMORY FOR MERGE-PRINT ',0EH,0EH,07,0 ;SHD NOT HAPPEN  
PAGE

;TEST DISPLAYED (UNDER MAIN EDITING MENU, VIA ONCMMSG) WHEN PRINT WITH DISK

;FILE OUTPUT HAS GOTTEN DISK FULL ERROR AND INVOKED A PRINT PAUSE TO

;PREVENT INFINITE REPETITION OF ERROR.

; "PRINT PAUSE" ALSO APPEARS IN STATUS LINE.

PPDFTX: DB 0EH

DB ' \*\*\* PRINT OUTPUT DISK IS FULL. PRINT PAUSED. \*\*\* ',0EH,0EH,07,07,07,0

;

; ERROR MESSAGE TEXTS, DISK PORTIONS, REFERENCED IN WMERR.MAC

;

; NOTES: "\*\*\*\* ERROR En: " IS DISPLAYED BEFORE MOST OF THESE MESSAGES.

; " \*\*\* HIT ESC KEY " IS DISPLAYED AFTER MOST ERROR MESSAGES.

;

ETPMNS: DB 'THAT PLACE MARKER NOT SET',  
ETBBNM: DB 'BLOCK BEGINNING NOT MARKED ',  
DB ' (OR MARKER IS UNDISPLAYED)',  
ETBENM: DB 'BLOCK END NOT MARKED ',  
DB ' (OR MARKER IS UNDISPLAYED)',  
ETEB4B: DB 'BLOCK END MARKER BEFORE BEGINNING MARKER',  
ETBTOO: DB 'BLOCK TOO LONG - ',  
DB ' MOVE OR DELETE IN TWO SMALLER BLOCKS',  
  
ETINOCR: DB 'CURSOR NOT IN RANGE FOR COLUMN MOVE/COPY',  
ETRWEL: DB 'COLUMN READ / WRITE NOT ALLOWED ',  
  
ETFXIS:  
DB 'THAT FILE EXISTS ON DESTINATION DISK.',  
DB ' DELETE EXISTING FILE FIRST, ',  
DB ' OR USE A DIFFERENT DISKETTE.',  
ETDFUL: DB 'DISK FULL',  
ETCOPY: DB 'INVALID COPY LENGTH',  
ETADDR: DB 'ADDRESS IN "HOLE" (TSTADR)',  
EIMFUL: DB 'MEMORY FULL (MAK256)',  
ETMSHT: DB 'MEMORY SHORTAGE (MKSP)',  
ETPTFR: DB 'POINTER > 64K FROM CURSOR (PPTOAD)',  
ETNEM: DB 'NOT ENOUGH MEMORY ',  
DB ' OR YOUR OPERATING SYSTEM IS NOT ',  
DB ' RELOCATED TO MAKE ALL RAM AVAILABLE ',  
ETDIRF: DB 'DISKETTE DIRECTORY FULL',  
ETCLS: DB 'CLOSE FAILURE - ',  
DB ' SYSTEM FAILURE, OR YOU CHANGED DISKETTES ',  
ETREN: DB 'RENAME FAILURE - ',  
DB ' SYSTEM FAILURE, OR YOU CHANGED DISKETTES ',  
ETBSS: DB 'INVALID SCREEN HEIGHT OR WIDTH ',  
ERERR: DB 10H,' MESSAGE ',10H,  
;"ERROR MESSAGE ERROR"  
  
IF ZEOOB  
ETZCLB: DB 'LOCATION ZERO CLOBBERED ',  
ENDIF  
IF BOOBAY  
ETPHOL: DB 'INVALID CALL TO "PUTHOLE"',  
ETIMER: DB 'MEMORY MANAGEMENT ERROR ',  
ETADD2: DB 'ADDRESS OUT OF BUFFER (TSTADR) ',  
ENDIF  
  
TXBAK: DB 0EH  
DB ' Can't edit a file of type .BAK or .\$\$\$ ',  
DB ' -- rEname or cOpy before editing ',  
0EH,07,07,

;OVERLAY-RELATED ERROR MESSAGE TEXTS

\*1.12\*

ETBOVN: DB 'BAD OVLY #',0 ;BAD OVERLAY NUMBER (INTERNAL ERROR)

ETBOVF: ;EOF WHILE READING OVERLAY FILE  
ETBOV1: ;BAD OVERLAY (MAGIC # AT BEGINNING)  
ETBOV2: ;BADLY TERMINATED OVLY (MAGIC # AT END)  
ETOV2L: ;OVERLAY TOO LONG FOR BUFFER  
ETBONO: ;OVERLAY # IN OVERLAY WRONG  
DB 'BAD OVERLAY FILE, OR ',0EH ;ALL OF ABOVE ARE THIS MESSAGE  
ETBOVL: ;OVERLAY LINKED FOR WRONG VERSION OF WS  
ETBOVV: ;BAD VERSION # IN OVERLAY  
DB ' WRONG VERSION OVERLAY FILE ',07,07,0 ;BOTH OF ABOVE ARE THIS MESSAGE

ETONF1: ;OVERLAY FILE #1 NOT FOUND  
DB 'Overlay file ',19H,' Not Found',0 ;NAME PRINTS IN PLACE OF 19H

ETONF2: ;OVERLAY FILE #2 NOT FOUND  
; OR SPELSTAR.OVR  
DB ' FILE ',19H,' NOT FOUND ',0EH  
DB 13H,' (The separately sold file ',19H,' ',0EH  
DB 13H,' is required for use of chosen function.) ',0  
;  
DB ' File MAILMRGE.OVR Not Found ' for alignment  
DB TAB+80H,' (The separately sold file MAILMRGE.OVR for alignment

; RUN EXTERNAL PROGRAM ERROR MESSAGE TEXTS AND OTHER MESSAGES

;FOLLOWING SHOULD NOT OCCUR SINCE PRE-CHECKED IN XPROG:

ETPNF: DB 'NOT FOUND',0 ;NOT FOUND IN XRUN OVERLAY

ETPNUL: DB 'PROGRAM IS AN EMPTY FILE!?',0 ;NULL FILE (XPRUN)

ETPTBG: DB 'PROGRAM TOO BIG FOR ',0EH

DB ' MEMORY AVAILABLE UNDER WordStar',0 ;XPRUN .

TXPBXD: DB 0EH,' LET PRINT COMPLETE BEFORE RUNNING A PROGRAM ',0EH,0EH,0 ;XPROG

;FOLLOWING SHOULD NOT BE ABLE TO OCCUR AT PRESENT:

TXNEMX: DB 0EH,' NOT ENOUGH MEMORY TO USE "RUN PROGRAM" COMMAND ',0EH,0EH,0 ;XPROG

TXWSNF: DB 0EH

DB ' File ',19H,' Not Found — ',0EH

DB ' Can't Run a program unless ',19H,' is available. ',0EH,0EH,0

;TEXT USED FOR RUNNING SPELLSTAR FROM NOFILE MENU

TXRNSP: DB 0EH

DB ' For spelling check, enter name of file to be checked. ',0EH

DB ' (^R for last file edited) ',0EH,0EH

DB ' For dictionary maintenance, enter name of file ',0EH

DB ' containing words to add to or delete from dictionary. ',0EH,0EH,0

#### PAGE

; TEXTS FOR COPY AND RENAME COMMANDS - NOFILE OVERLAY

; FILE D:NNNNNNNN.TYP ALREADY EXISTS

TXREN3: DB TAB+80H,TAB+80H,' FILE ',1AH,' ALREADY EXISTS ',07,0 ;1AH=FILENAME

; FILE D:NNNNNNNN.TYP NOT ON SAME DRIVE

TXREN4: DB TAB+80H,TAB+80H,' FILE ',1AH,' NOT ON SAME DRIVE ',0 ;1AH=FILENAME

TOOLCO: DB 0EH,13H,' TOO LITTLE MEMORY TO COPY WHILE ' ;(DOES NOT OCCUR)

DB 0EH,13H,' EDITING OR MERGE-PRINTING ',0EH,0EH,0

; FILE D:NNNNNNNN.TYP EXISTS — OVERWRITE? (Y/N): Y

TXCOP2: DB TAB+80H,' FILE ',1AH,' EXISTS — OVERWRITE? (Y/N): ',0 ;1AH=FILENAME

; FILE D:NNNNNNNN.TYP IN USE BY WordStar

IUSETX: DB TAB+80H,TAB+80H,' FILE ',1AH,' IN USE BY WordStar ',0 ;1AH=FILENAME

```
;
; TEXTS USED IN MERGE-PRINT
;
; "MENU" DISPLAYED DURING MERGE-PRINT EXECUTION (FPRUN.MAC)
TXFPMU:
DB 0EH
DB TAB+80H,'           ',0EH
DB TAB+80H,' P=',17H   , '  ',0EH ;17H PRINTS "STOP PRINT", HILITED
DB TAB+80H,'           ',0A0H,0 ;CURSOR DISPLAYS HERE
```

;DISPLAYED BEFORE SCREEN IS CLEARED B4 RETURN TO NOFILE MENU

FXTXT:
DB 0EH,0EH,13H,' Press space bar after reading screen: ',0

;INVALID DOT COMMAND ERROR MESSAGE (FPDOT.MAC).
; THE ERRONIOUS COMMAND IS DISPLAYED ON THE NEXT LINE.

BADOTX:
DB ' \*\*\* Invalid Dot Command Ignored: ',0
PAGE

```
;
;MESSAGES USED RE CHANGING DISKETTES FOR .FI COMMAND (S1SUB.MAC)
;
; *** File D:NNNNNNNN.TYP Not Found
FNFTX1: DB ' *** File ',0      ;FILE NAME PRINTED BETWEEN FNFTX1 AND FNFTX2.
FNFTX2: DB ' Not Found ',0
```

```
; *** But found, and will use, D.NNNNNNNN.TYP
FFTX1: DB ' *** But found, and will use, ',0
FFTX2: DB ' ',0
```

```
; *** Cannot change disk in drive D:, request ignored
CNCTX1: DB ' *** Cannot change disk in drive ',0
CNCTX2: DB ' , request ignored ',0
```

; Insert diskette with file D:NNNNNNNN.TYP then press RETURN:
DCHTX1: DB 'Insert diskette with file ',0
DCHTX2: DB ' then press RETURN: ',0

```
;
;MESSAGES USED BY .RV (READ VARIABLES) DOT COMMAND
;
TXNODF: DB ' *** No .DF before .RV: ',0
TXWLOD: DB ' *** WARNING: Overlong data value truncated ',0
TXWBVN: DB ' *** Invalid variable name in .RV command ignored ',0
TXWDEX: DB ' *** WARNING: Data exhausted, null value(s) used ',0 '
```

## ;PRINT DIRECTIVES DESCRIPTION - DISPLAYED BY ^JD COMMAND

DOTTX: ;NB TEXT CONTAINS TABS AND IS ALIGNED ON TAB STOP.

DB ' \*\*\*\*\* Print Directives \*\*\*\*\* ',0EH  
 DB ' PRINT CONTROL CHARACTERS may be entered anywhere in a line ',0EH  
 DB ' to invoke underlining, boldface, subscripts, pauses, etc. ',0EH  
 DB ' They are entered by typing ^P and a letter. A directory ',0EH  
 DB ' of most print controls is given on the ^P PREFIX MENU; ',0EH  
 DB ' see manual for more. ',0EH  
 DB ' DOT COMMANDS are special lines beginning with a period and ',0EH  
 DB ' a two-letter code. They control page breaks, headings, ',0EH  
 DB ' page numbering, page layout, etc. Dot commands are ',0EH  
 DB ' typed in like other text. ',0EH  
 DB ' Space bar for DOT COMMAND SUMMARY, ^U to return to editing: ',18H

DB ' \*\*\*\*\* Dot Commands \*\*\*\*\* ',0EH  
 DB ' PUT EACH DOT COMMAND ON SEPARATE LINE, WITH . IN COL 1 ',0EH  
 DB ' .PA new PAge ',0EH  
 DB ' .CP n new page if less than n lines left on this page ',0EH  
 DB ' .OP Omit Page numbers when printing, starting this page ',0EH  
 DB ' .PN print Page Numbers, starting this page (default) ',0EH  
 DB ' .PN n set Page Number to n, print page numbers ',0EH  
 DB ' .PC n Page number Column (default 33 (30 if 64-col screen)) ',0EH  
 DB ' .PO n Page Offset: extra indent when printed (default 8) ',0EH  
 DB ' .. text comment, not printed ',0EH  
 DB ' press space bar for next frame: ',18H

DB ' .HE text HEading used until next .HE (default blank) ',0EH  
 DB ' .FO text FOoting (replaces page number) (blank) ',0EH  
 DB ' .PL n Paper Length: total number of lines (default 66) ',0EH  
 DB ' .MT n Margin at Top: # lines, top paper to text (3) ',0EH  
 DB ' .MB n Margin at Bottom: # lines, end text to end paper (8) ',0EH  
 DB ' # lines text on page is PL - MT - MB (defaults to 55) ',0EH  
 DB ' .HM n Heading Margin: blank lines between head and text (2) ',0EH  
 DB ' .FM n Footing Margin: blank lines, text to footing (2) ',0EH  
 DB ' FOR PAGE BREAKS TO DISPLAY AS THEY WILL PRINT, USE ',0EH  
 DB ' .PL,.MT,.MB, AND .LH (next frame) AT FILE BEGINNING ONLY. ',0EH  
 DB ' Depress space bar for next frame: ',18H

; print directives...

DB ' THE FOLLOWING WORK ONLY WITH INCREMENTAL PRINTERS: ',0EH  
 DB ' .LH n Line Height in 48ths of an inch (default 8) ',0EH  
 DB ' .CW n Character Width in 120ths of an inch, for standard or ',0EH  
 DB ' alternate pitch, whichever is in use (see ^P menu). ',0EH  
 DB ' (default 12 for standard, 10 for alternate) ',0EH  
 DB ' .SR n Subscript / Superscript Roll in 48ths of an inch (3) ',0EH  
 DB ' .UJ OFF/ON "MicroJustification" off/on (default ON) ',0EH  
 DB ' Use insure that printed column alignment exactly ',0EH  
 DB ' matches screen, e.g. for tabular material: ',0EH  
 DB ' Put .UJ OFF before table, put .UJ ON after table. ',0EH  
 DB ' Space for next frame, ^U to return to editing: ',18H

DB ' SPECIAL CHARACTERS in HEADINGS (.HE) and FOOTINGS (.FO): ',0EH  
 DB ' # prints as current page number ',0EH  
 DB ' \ do not interpret next character as a special character ',0EH  
 DB ' ^K do not print following spaces if on even-numbered page ',0EH  
 DB ' PAGE NUMBER POSITIONING: If a footing text is specified (.FO ',0EH  
 DB ' dot command), the default bottom center page number is not ',0EH  
 DB ' printed. Use a # in heading or footing to position page ',0EH  
 DB ' number where desired. ^K followed by spaces followed by # ',0EH  
 DB ' may be used to produce alternating left/right page numbers. ',0EH  
 DB ' Space for next frame, ^U to return to editing: ',18H

DB ' \*\*\*\*\* Merge-Print Dot Commands \*\*\*\*\* ',0EH  
 DB ' .DF filename specify Data File for .RV ',0EH  
 DB ' .RV name,name,name,... Read Variable values from data file ',0EH  
 DB ' .AV "prompt",name Ask operator for Variable value ',0EH  
 DB ' &name& anywhere in doc'nt prints as variable value.',0EH  
 DB ' variable names are letter then 0-39 letters, digits, -'s.',0EH  
 DB ' .FI filename Insert document File ',0EH  
 DB ' .DM message Display Message ',0EH  
 DB ' See manual for details and additional commands. Merge-Print ',0EH  
 DB ' is an optional feature, operational only if MAILMRGE.OVR is ',0EH  
 DB ' on your diskette. Press any key to return to editing: ',18H,0

## STATX:

DB '	***** STATUS LINE (top line of screen) *****	',0EH
DB '	^JS at left end of line is command now executing	',0EH
DB '	A:NAME.TYP is name of file you are now editing	',0EH
DB '	PAGE n is page number of cursor (disregards .PN's)	',0EH
DB '	LINE n is printout line on page of cursor position	',0EH
DB '	COL n is printout column on line of cursor position	',0EH
DB '	INSERT ON shows if character insertion is on (^V command)	',0EH
DB '	MAR REL shows if margins are released (^OX command)	',0EH
DB '	decimal shows during decimal tabbing	',0EH
DB '	LINE SPACING n shows if line spacing is not 1 (^OS command)	',0EH
DB '	PRINT PAUSE shows if printer is stopped (^KP to resume)	',0EH
DB '	when WAIT appears, stop typing.	Press space bar: ',18H

DB '	If page break display is OFF (^OP command) or edit	',0EH
DB '	was started with N command, then Status Line shows	',0EH
DB '	FC=nnnn FL=nnnn in place of PAGE n LINE n.	',0EH
DB '		',0EH
DB '	FC=nnnn cursor position in characters (bytes) from	',0EH
DB '	beginning of file	',0EH
DB '	FL=nnnn cursor position in file lines from beginning	',0EH
DB '	of file, including dot command lines	',0EH
DB '		',0EH
DB '	space bar: ',18H,0	

## FLAGTX:

DB '	***** FLAG CHARACTERS (rightmost column of screen) *****	',0EH
DB '	< line ends in "hard" carriage return, entered by user	',0EH
DB '	space this line break arose from word wrap or paragraph	',0EH
DB '	reform, and may moved on subsequent reform	',0EH
DB '	+	',0EH
DB '	this line of document continues on next screen line	',0EH
DB '	- next line will overprint this line	',0EH
DB '	?	',0EH
DB '	unrecognized or incomplete dot command	',0EH
DB '	M Merge-Print (optional feature) dot command	',0EH
DB '	P page break	',0EH
DB '	:	',0EH
DB '	.	press space bar: ',18H,0

## FINCTX:

DB '	COMMANDS TO --	ARE --	',0EH
DB '	move cursor	on main and ^Q menus	',0EH
DB '	scroll file up or down	on main menu; also find (^QF)	',0EH
DB '	delete text	on main and ^Q menus; also ^KY	',0EH
DB '	move or copy text	on ^K menu	',0EH
DB '	end edit / save file	^KD; see ^K menu	',0EH
DB '	print (while editing)	^KP	',0EH
DB '	set tabs and margins	on ^O menu	',0EH
DB '	reformat text	^B; ^JB gives info	',0EH
DB '	find a string; replace	^QF; ^QA; ^L repeats last	',0EH
DB '		press space bar for "entering text":	',18H

DB '	***** ENTERING TEXT *****	',0EH
DB '	To enter text at cursor position, just type the text.	',0EH
DB '	Use RETURN key for paragraph end or other fixed line break;	',0EH
DB '	let word wrap form lines within paragraph.	',0EH
DB '	Type ^V to turn insertion off (to overtype) or back on.	',0EH
DB '	^N may be used to create blank lines ahead of cursor,	',0EH
DB '	as before inserting a paragraph.	',0EH
DB '	Use ^B to realign margins after corrections.	',0EH
DB '	^JM shows info on margins, tabs, table entry, outline entry.',0EH	
DB '	press space bar after reading: ',18H,0	

## MOVCTX:

DB '	***** TO MOVE A BLOCK OF TEXT *****	',0EH
DB '	1. Put cursor on first character, type ^KB to mark start.	',0EH
DB '	2. Put cursor after last character, type ^KK to mark end	',0EH
DB '	(for end line, use start next line to include RETURN).	',0EH
DB '	3. Put cursor at destination, type ^KV to move the text,	',0EH
DB '	or ^KC to make a duplicate copy.	',0EH
DB '	To undisplay markers afterwards, use ^KH.	',0EH
DB '	^KB and ^KK may be entered in either order, with or without	',0EH
DB '	other intervening commands.	',0EH
DB '	All above commands are on ^K menu. press space bar: ',18H,0	

## REFORX:

DB ' \*\*\*\*\* PARAGRAPH REFORM (^B) \*\*\*\*\* ',0EH  
DB ' To realign margins of a paragraph after corrections, place ',0EH  
DB ' cursor at beginning of paragraph and type ^B. ',0EH  
DB ' To change margins of paragraph already entered, set margins ',0EH  
DB ' (^OL, ^OR), place cursor at paragraph beginning, type ^B.',0EH  
DB ' To change between justified and ragged right, or change line ',0EH  
DB ' spacing, set desired justification (^OJ) & line spacing ',0EH  
DB ' (^OS), place cursor at paragraph beginning, and type ^B. ',0EH  
DB ' To obtain WordStar's help in hyphenating long words, place ',0EH  
DB ' cursor at beginning of paragraph and type ^B. ',0EH  
DB ' press space bar for more: ',18H

DB ' ^B reforms lines to end of paragraph as indicated by "hard" ',0EH  
DB ' carriage return (< in rightmost column). ',0EH  
DB ' Thus, it is important not to use RETURN between lines ',0EH  
DB ' within a paragraph when entering text. ',0EH  
DB ' ^B may be used to form hanging indents, change margins in ',0EH  
DB ' mid-paragraph, etc. The exact rule is: ',0EH  
DB ' ^B starts on the cursor line, at the left margin col- ',0EH  
DB ' umn, or at the cursor position, whichever is farther ',0EH  
DB ' left, and proceeds to the next "hard" carriage return. ',0EH  
DB ' press space bar: ',18H

DB ' \*\*\*\*\* Hyphen-Help \*\*\*\*\* ',0EH  
DB ' ^B will occasionally stop before the end of the paragraph ',0EH  
DB ' and ask you whether you wish a word hyphenated. ',0EH  
DB ' Following the instructions that appear on the screen, move ',0EH  
DB ' the cursor if desired to adjust the hyphen position, ',0EH  
DB ' then press "-" to hyphenate, or ^B to not hyphenate. ',0EH  
DB ' To turn off "hyphen-help", type ^OH. ',0EH  
DB ' press space bar: ',18H,0

## MARGX:

DB ' \*\*\*\*\* MARGINS \*\*\*\*\* ',0EH  
DB ' To set left margin: Type ^OL. WordStar will ask for column. ',0EH  
DB ' Type desired column number 1-240 and press RETURN. ',0EH  
DB ' Or, to use column of cursor in file, just press ESCAPE. ',0EH  
DB ' To set right margin: type ^OR, proceed as above. ',0EH  
DB ' To set both margins to match text in a line already entered: ',0EH  
DB ' place cursor in that line, type ^OF. ',0EH  
DB ' To temporarily set left margin to next tab stop: type ^OG. ',0EH  
DB ' Margins apply to text subsequently entered. To remarginate ',0EH  
DB ' text already entered: set margins and use ^B. ',0EH  
DB ' press space bar after reading: ',18H

DB ' \*\*\*\*\* LINE SPACING AND JUSTIFICATION \*\*\*\*\* ',0EH  
DB ' ',0EH  
DB ' To set line spacing: type ^OS. WordStar will ask for line ',0EH  
DB ' spacing. Enter a digit 1 thru 9. ',0EH  
DB ' To turn justification off (for ragged right format), ',0EH  
DB ' or to turn justification back on: type ^OJ. ',0EH  
DB ' Line spacing and justification settings apply to text ',0EH  
DB ' subsequently entered; they may be applied to previously ',0EH  
DB ' entered text with the paragraph reform command (^B). ',0EH  
DB ' press space bar for "Tab Stops": ',18H

DB ' \*\*\*\*\* TAB STOPS \*\*\*\*\* ',0EH  
DB ' ',0EH  
DB ' To set a tab: type ^OI. WordStar will ask for column number. ',0EH  
DB ' Type column number and press RETURN. Or, to use cursor ',0EH  
DB ' column, press the ESCAPE key. To set a decimal tab stop, ',0EH  
DB ' type "#" before typing column number or pressing ESCAPE. ',0EH  
DB ' To clear a tab stop or all tab stops: type ^ON. ',0EH  
DB ' To tab: type ^I, or press TAB key if present. Tabbing ',0EH  
DB ' inserts spaces to next tab stop if insertion (^V) is on. ',0EH  
DB ' Tabbing advances cursor over text if insertion is off. ',0EH  
DB ' press space bar: ',18H

;MARGX...

DB ' ENTERING A COLUMNAR TABLE -- We Suggest:	',0EH
DB '	',0EH
DB ' Set a tab stop for each column of table.	',0EH
DB ' Clear all other tab stops.	',0EH
DB ' If not at end file, turn on insertion (^V),	',0EH
DB ' or use ^N to make blank lines.	',0EH
DB ' Tab (^I) after entering each table item. After last column	',0EH
DB ' on a line, tabbing will move to first item on next line.	',0EH
DB ' space bar: ',18H	
DB ' OUTLINE FORMAT TEXT ENTRY -- We Suggest:	',0EH
DB ' Set tab stops at desired indentations.	',0EH
DB ' Set right margin as desired.	',0EH
DB ' For each item:	',0EH
DB '      Type ^OG's as required for item number indentation.	',0EH
DB '      Type item number.	',0EH
DB '      Type ^OG.	',0EH
DB '      Type text of item, without using RETURN.	',0EH
DB '      At end of item, press RETURN. Left margin resets.	',0EH
DB '      Press RETURN again if blank line desired.	',0EH
DB '      press space bar: ',18H,0	

EML.TX:

\*\*\*\*\* RULER LINE \*\*\*\*\*

DB ' ,0EH  
DB ' ,0EH  
DB ' L---!----!----!----!----!----!----!----R ,0EH  
DB ' ,0EH  
DB ' ,0EH  
DB ' L Left margin (set with ^OL) ,0EH  
DB ' R Right margin (set with ^OR) ,0EH  
DB ' ! regular tab stop (set with ^OI, clear with ^ON) ,0EH  
DB ' # decimal tab stop (set with ^OI, clear with ^ON) ,0EH  
DB ' - other positions between margins ,0EH  
DB ' ,0EH  
DB ' ,0EH  
press space bar after reading: ,18H,0

PLACTX:

;Markers <n> in following text have hi bit on for highlighting.

\*\*\*\*\* PLACE MARKERS \*\*\*\*\*

DB ' Up to 10 place markers, identified by numbers (n) 0-9,  
 DB ' may be set in a file while the file is being edited.  
 DB ' To set place marker n at the cursor position: type ^Kn.  
 DB ' ', '<' +80H, 'n' +80H, '>' +80H  
 DB ' will display to indicate the marker position.  
 DB ' To return the cursor to place marker n: type ^Qn any  
 DB ' time during the same edit.  
 DB ' To remove the ', '<' +80H, 'n' +80H, '>' +80H  
 DB ' from the display: type ^Kn when the  
 DB ' cursor is already at the marker position.  
 DB ' press space bar: ', 18H

\*\*\*\*\* OTHER MARKER & RELATED COMMANDS \*\*\*\*\*  
DB ' The block beginning marker, ','<'+'80H,'B'+80H,'>'+80H  
DB ' DB ', and the block end marker, ','+80H  
DB ' ','<'+'80H,'K'+80H,'>'+80H  
DB ' DB ', are set and moved to in a similar manner; the  
DB ' text between these markers can be moved (^KV), copied  
DB ' (^KC), deleted (^KY), or written to a file (^KW).  
DB '  
DB ' ^QP moves cursor to its position before preceding command.  
DB '  
DB ' ^QV moves cursor to start of last find/replace, or to  
DB ' source of text for last block move or copy.  
DB ' press space bar: ','18H,0

:SPARE - FOR UNDEFINED OR UNUSED TEXTS

SPARE: DB ' IF THIS DISPLAYS YOU ARE USING WRONG VERSION OF WSMGS.OVR ',0EH,0

END

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TITLE WSMSG2.MAC - EMBEDDED MESSAGES 05/10/81

; FOR WordStar 3.0 05/10/81

;\*\*\*\*\*  
;\* WSMSG2.MAC - CONTAINS THE MESSAGES THAT ARE EMBEDDED WITHIN WORDSTAR \*  
;\*

;\* THESE TEXTS ARE INCORPORATED INTO WordStar BY RUNNING \*  
;\* THE SPECIAL PROGRAM RETEXT. MAKE CERTAIN YOU HAVE \*  
;\* WSMSG2.COM, WSU.COM, WSOVLY1.OVR, AND (OPTIONAL) \*  
;\* MERGPRIN.OVR ON CURRENT DRIVE BEFORE RUNNING RETEXT. \*  
;\* WSMSG2.COM IS NOT USED EXCEPT BY RETEXT. \*  
;\*  
;\*\*\*\*\*

; ASSEMBLY OPTIONS OF INTEREST TO THE USER

TBASE EQU 100H ;WHERE PROGRAMS LOAD FOR NORMAL CP/M  
;(CP/M IS A TRADEMARK OF DIGITAL RESEARCH.)  
;CHANGE TBASE AS REQUIRED FOR TRS-80, ETC: SHOULD BE  
;CORRECT VALUE FOR SYSTEM ASSEMBLED AND LOADED ON.  
;NEED NOT MATCH SYSTEM WHERE WordStar IS RUN.

; ASCII CHARACTERS

CR EQU 0DH  
LF EQU 0AH  
TAB EQU 09H  
FF EQU 0CH  
CF EQU 0EH ;USED IN SPELLCHECK OVERLAY

ASEG ;SAY ABSOLUTE ASSEMBLY  
ORG TBASE ;START AT 100 HEX OR AS EQU'D

PAGE 65 ;SETS ASSEMBLY LISTING PAGE LENGTH

```
;*****  
;* TEXTS - OVERLAY # 0 (PART OF WSU.COM) *  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR "ROOT"  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 236 HEX  
;  
DW ETEXTS-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
;  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
;  
;CIO  
DW F0MSG-$  
DW MC16F-$  
DW MC16D-$  
DW MC17A-$  
DW MC17B-$  
DW MC17C-$  
DW M5OFF-$  
DW M5ON-$  
DW CRTXT-$  
DW MC10T-$  
DW MC11T-$  
DW MC12T-$  
DW MC13T-$  
DW MC14T-$  
DW MC15T-$  
;  
;INITA  
DW SOND-$ ;SIGN-ON INDENT  
DW TOLME-$  
DW NDTMS-$  
;  
;STAL1 (STATUS LINE)  
DW XTD SWTI-$  
DW XTS LPP-$  
DW XTFINL-$  
DW XTSNPF-$  
DW XTS LNF-$  
DW XTD IR0-$  
DW XTD IR1-$  
DW XTD IR2-$  
DW XTD IR3-$  
;  
;WMERR  
DW XTHESC-$  
DW XTINTE-$  
DW XTER-$  
DW XTIER-$  
DW XTFER-$  
DW XTCOSP-$ ;COLON-SPACE TEXT USED IN WMERR.MAC  
DW XTS PA-$ ;SPACE TEXT USED IN WMERR.MAC  
DW ANUL-$ ;USED IN WMERR, WMV2D  
;  
; POINTER AREA CONTINUES ON NEXT PAGE
```

;CLOOP.MAC

DW XTERA3-\$

```
DW 0           ;SPARE POINTER
DW 0           ;SPARE POINTER
```

```
; ***** CHARACTERS FOR "YES" AND "NO". FOR GENERAL USE *****
```

```
; MUST BE HERE (AT END OF POINTERS) FOR USER CHANGE VIA RETEXT PROGRAM,
; AND ABSOLUTE (NO POINTER) REFERENCE BY WORDSTAR.
```

```
; B4 TESTING AGAINST THESE, INPUT CHAR IS MADE UPPER CASE, NON-CONTROL.
```

YESCHR: DB 'Y'

NOCHR: DB 'N' ;NOCHR MUST BE AT .YESCHR+1: ALL REFERENCES RELATIVE TO YESCHR.

```
; ** TEXT PRINTED IN PLACE OF DISK TEXTS WHEN WSMSGS.OVR NOT FOUND (CIO.MAC) **
```

FOMSG: DB ' @@@@ '.0 ;USED FROM CIO.MAC.

```
; ***** TEXTS USED IN CIO.MAC IN EXPANDING IMBEDDED CNTROL CHARACTERS *****
```

```
; 2 TEXTS FOR 05H CODE
```

```
M5OFF: DB ' on (', '0'+80H, 'F'+80H, 'F'+80H, ')', 0      ;"OFF" hilighted
M5ON:  DB ' off (', '0'+80H, 'N'+80H, ')', 0      ;"ON" hilited
```

CRTXT: DB CR.LF, 0

MC11T: DB ' INTERNAL ' ;FALL THRU TO PRINT "ERROR"

MC10T: DB 'ERROR', 0

MC12T: DB 'FATAL', 0

MC13T: DB 0A0H, 0A0H, 0A0H, 0 ;A0=SPACE + 80H: INVERT VIDEO (ANOTHER TIME)

MC14T: DB ' NAME OF ', 15H, ' TO ', 0 ;RECURSIVE "FILE"

MC15T: DB 'FILE', 0

```
; 2 TEXTS FOR 16H CODE
```

```
MC16F: DB 'MERGE-' ;PRINTED FOR 16H IF FINAL PRINT.
; NB ANOTHER "MERGE-" TEXT AT TXFINL.
MC16D: DB 0 ;PRINTED FOR 16H IF DRAFT PRINT: NULL TEXT.
```

```
; THREE TEXTS FOR 17H. ALL SAME LENGTH: 15 COLS.
```

MC17A: DB 'Print a file ', 0

```
MC17B: ;DB ' STOP PRINT ' WITH 80H ADDED TO EACH CHARACTER TO
; REVERSE HIGHLIGHTING SO IT STANDS OUT
DB ' ' +80H, 'S' +80H, 'T' +80H, 'O' +80H, 'P' +80H, ' ' +80H
DB 'P' +80H, 'R' +80H, 'I' +80H, 'N' +80H, 'T' +80H, ' ' +80H, ' ', 0
```

MC17C: ;DB 'CONTINUE PRINT', 0 WITH 80H ADDED TO EACH CHAR FOR HILITING

DB 'C' +80H, 'O' +80H, 'N' +80H, 'T' +80H, 'I' +80H, 'N' +80H, 'U' +80H

DB 'E' +80H, ' ' +80H, 'P' +80H, 'R' +80H, 'I' +80H, 'N' +80H, 'T' +80H, 0

; \*\*\*\*\* TEXTS FOR INITA.MAC (INITIALIZE) \*\*\*\*\*

; TEXT USED TO INDENT BEFORE TERMINAL TYPE ETC IN SIGNON  
SOND: DB 13H,13H,13H,13H,0 ;13H=3 SPACES. 12 SPACES TOTAL.

; TEXT DISPLAYED IF THERE IS NOT EVEN ENOUGH MEMORY TO INITIALIZE ENOUGH  
; TO USE WS'S NORMAL ERROR MECHANISM AND DISK TEXTS. THIS IS A SHORTENED FORM  
; OF "ETNEM" MESSAGE (WSMSG.S.MAC) FOR WMERR.MAC.  
; NOTE THAT ERROR NUMBER SHOULD MATCH "ENEM" PARAMETER IN WMERR AND INIT,  
; AND FORMAT OF MESSAGE SHOULD MATCH FORMATTING PRODUCED BY WMERR.MAC.

TOLME: DB CR,LF,'\*\*\* FATAL ERR F25: NOT ENUF MEMORY',CR,LF,'\$',0  
; \$ AT END TERMINATES OUTPUT FOR CP/M "PRINT STRING" CALL.

; TEXT DISPLAYED AT STARTUP OR AT EACH NO-FILE COMMAND  
; WHEN DISK TEXT FILE NOT FOUND. DO NOT PUT ON DISK !!!!

NDTMS: DB 0EH  
;DB ' File WSMGS.OVR not found. ' FOR SPACING  
DB ' File ',19H,' not found. Menus & ',0EH  
DB ' messages will display as @@@@ only. ',0EH,0

; \*\*\*\*\* TEXTS FOR STAL1.MAC (STATUS LINE) \*\*\*\*\*

; CAUTION: NUMBER OF BLANKS AT BEGINNING, END OF FOLLOWING TEXTS VERY CAREFULLY  
; DETERMINED FOR DESIRED STATUS LINE APPEARANCE IN BOTH FULL-LINE AND  
; LOTS-OF-SPACE CASES. INTERACT WITH "TAB STOPS" USED BEFORE EACH  
; MESSAGE. CHANGE ONLY AFTER VERY CAREFUL CONSIDERATION AND TESTING  
; AND ONLY AFTER STUDYING PERTINENT CODE IN STAL1.MAC AND STAL2.MAC.

XIDSWT: DB 0A0H,' WAIT ',0EH,0 ;0A0H= UNVERSE VIDEO SPACE, 0EH=ERASE TO EOL

; FOLLOWING MESSAGES ARE DISPLAYED VIA SPECIAL CODE (STORCH SUBR) IN STALIN  
; THAT HIGHLIGHTS NON-BLANKS, DISPLAYS CONTROLS AS ^-LETTER, DISPLAYS A \ AS  
; HIGHLIGHTED BLANK. SEE CHANGE CAUTION ABOVE.

XTSLPP: DB ' PRINT\PAUSED ',0 ;\ = I.V. SPACE  
XTFIML: DB 'merge-',0 ; ALSO SEE MOC16F ABOVE  
XTSNPF: DB 'printing\',0  
XTSLNF: DB ' \editing\no\file\',0

; \*\*\*\*\* TEXTS FOR WMV1A.MAC (FILE DIRECTORY DISPLAY) \*\*\*\*\*  
; ;80H IS ADDED TO MOST BYTES FOR NON-INVERSE VIDEO DISPLAY: CANCELS (VIA XOR)  
; THE INVERSE VIDEO INVOKED IN "STORCH" SUBR IN STALIN.MAC.

XDIR0: DB 'p'+80H,'a'+80H,'r'+80H,'t'+80H,'i'+80H,'a'+80H,'l'+80H,' ',0  
XDIR1: DB 'D'+80H,'I'+80H,'R'+80H,'E'+80H,'C'+80H,'T'+80H,'O'+80H,'R'+80H,'Y'+80H  
DB ' ','o'+80H,'f'+80H,' ','d'+80H,'i'+80H,'s'+80H,'k'+80H,' ',0  
XDIR2: DB ' ','^'+80H,'Z'+80H,'='+80H,'s'+80H,'c'+80H,'r'+80H,'o'+80H  
DB 'l'+80H,'l'+80H,' ','u'+80H,'p'+80H,0  
XDIR3: DB ' ','^'+80H,'W'+80H,'-'+80H,'s'+80H,'c'+80H,'r'+80H,'o'+80H  
DB 'l'+80H,'l'+80H,' ','d'+80H,'o'+80H,'w'+80H,'n'+80H,0

; \*\*\*\*\* TEXTS FOR WMERR.MAC (ERROR ROUTINES) \*\*\*\*\*  
; ; " HIT ERROR RELEASE KEY" DISPLAYED AFTER MOST ERRORS:

XTHESC: DB '\*\*\* Press ESCAPE Key ',0 ;DO NOT MAKE LONGER  
; " INTERRUPTED " MESSAGE (^U).

XTINTE: DB 0EH,'\*\*\* INTERRUPTED',0  
; EDITING ERROR BY NUMBER HEADER TEXT (VERNA SUBR IN WMERR. ERROR # IN A)

XTER: DB 0EH,'\*\*\* ',10H,' E' ;ERR # PRINTS AFTER 'E'. 0EH: ERASE EOL,CR,LF  
ANUL: DB 0

; HEADER TEXT FOR INTERNAL ERROR BY NUMBER (IERR SUBR IN WMERR. ERROR # IN A)

XTIER: DB 0EH,'\*\*\* ',11H,' I',0 ;0EH: ERASE EOL,CR,LF. 11H: " INTERNAL ERROR"

; HEADER TEXT FOR FATAL ERROR (FER SUBR IN WMERR. ERROR NUMBER IN A)

XTFER: DB 0EH,'\*\*\* ',12H,' ',10H,' F',0 ;12H = "FATAL", 10H = "ERROR"

XTCOSP: DB ':' ;COLON-SPACE TEXT. PUT IN OTHER MSGS IF POSSIBLE.  
XTSPA: DB ' ',0 ;SPACE TEXT. PUT IN OTHER MSGS IF POSSIBLE.

; \*\*\*\*\* TEXT FOR CLOOP.MAC (COMMAND LOOP / SCREEN DISPLAY) \*\*\*\*\*  
; ;  
XTERA3: DB 0EH,0EH,0EH,0 ;ERASE 3 LINES WHERE QUESTION SPEC CHARS MENU WILL GO

ETEXTS: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT

```
;*****  
;* TEXTS - OVERLAY # 1 (PART OF WSOVLY1.OVR)  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR EDITOR MAIN OVERLAY  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 6A HEX  
;  
DW ETEXTA-$      ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW XTSLPA-$  
DW XTSLLI-$  
DW XTSLFC-$  
DW XTSFLF-$  
DW XTSLCO-$  
DW XTSLMR-$  
DW XTSLLIS-$  
DW XTDECT-$  
DW @          ;UNUSED (SPARE) POINTER  
DW XTSLLS-$  
  
;  
; EMBEDDED TEXTS FOR STAL2.MAC - STATUS LINE  
;  
; FOLLOWING MESSAGES ARE DISPLAYED VIA SPECIAL CODE (STORCH SUBR) IN  
; STAL1.MAC THAT HIGHLIGHTS NON-BLANKS, DISPLAYS CONTROLS AS ^-LETTER,  
; DISPLAYS A \ AS HIGHLIGHTED BLANK.  
XTSLPA: DB 'PAGE\',0           ;\ IS BLANK THAT INVERSE VIDEOS  
XTSLLI: DB 'LINE\',0  
XTSLFC: DB 'FC=',0  
XTSFLF: DB ' FL=',0  
XTSLCO: DB ' COL\',0  
XTSLMR: DB 'MAR\REL',0  
XTSLLIS: DB 'INSERT\ON',0     ;\ => SPACE WITH INVERSE VIDEO.  
XTDECT: DB 'decimal',0  
XTSLLS: DB 'LINE\SPACING\',0   ;13 CHARS  
  
ETEXTA:      ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # 2 (PART OF WSOVLY1.OVR)  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR NOFILE.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 65 HEX  
;  
DW ETEXTB-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW XTSPQU-$  
DW XTNADF-$  
DW XTREN1-$  
DW XTREN2-$  
DW XTCPY1-$  
DW XTCPY2-$  
  
XTSPQU: DB ' ?'.0 ;ERROR MESSAGE FOR INVALID DRIVE ENTERED  
  
;  
; DELETE FILE COMMAND ("K"J): " NAME OF FILE TO DELETE".  
; 13H PRINTS 3 SPACES, 14H PRINTS "NAME OF FILE TO ",  
XTNAFD: DB 0EH,13H,14H,'DELETE? ',0  
  
;  
; EMBEDDED TEXTS FOR RENAME COMMAND  
; 13H PRINTS AS 3 SPACES, 14H AS "NAME OF FILE TO "  
XTREN1: DB 0EH,13H,14H,'RENAME? ',0  
;" NAME OF FILE TO RENAME?  
;" NEW NAME? " LEADING SPACE IS 2 TABS + 1 SPACE  
XTREN2: DB TAB+80H,TAB+80H,0A0H,' NEW NAME? ',0  
  
;  
; EMBEDDED TEXTS FOR COPY COMMAND  
;  
XTCPY1: DB 0EH,13H,14H,'COPY FROM? ',0  
XTCPY2: DB 13H,14H,'COPY TO ? ',0  
  
ETEXTB: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # 3 (PART OF WSOVLY1.OVR)  
;  
;*****  
;  
; EMBEDDED TEXTS FOR ENSTAR.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 42 HEX  
;  
DW ETEXTC-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW XTQYN-$  
DW XTNafe-$  
DW XTSav-$  
DW XTFLSP-$  
DW BKTXT2-$  
  
;  
;ABANDON EDIT COMMAND (^K^Q WHEN FILE HAS BEEN CHANGED)  
;" ABANDON EDITED VERSION OF " IS IN WSMSG.S.MAC. SAYOUT SUBR PRINTS FILE NAME  
;  
; FINAL PART OF THE QUESTION " ABANDON EDITED VERSION OF XXXX.YYY ? (Y/N): ":  
XTQYN: DB ' ? (Y/N): ',0  
  
;EDIT FILE COMMANDS (N AND D)  
;" NAME OF FILE TO EDIT? ".  
XTNAFE: DB 0EH,13H,14H,'EDIT? ',0 ;TEXT FOR QUESTION  
;0EH=>ERASE LINE,CR,LF; 13H=>INDENT; 14H=>"NAME OF FILE TO "  
  
;FOR "SAYSAV" SUBR. INVOKED BY END EDIT COMMANDS (^KD, ^KX, ^KS):  
XTSAV: DB 0EH,13H,' SAVING ',0 ;TXFLSP AND FILE NAME TYPED AFTER THIS  
  
;FOR "SAYOUT" SUBR: "FILE ".  
; INVOKED BY END EDIT, ABANDON EDIT, ETC.  
XTFLSP: DB 15H,' ',0 ;15H=>"FILE"  
  
;FOR RENAMING FILE AT END OF EDIT:  
BKTXT2: DB 'BAK'  
  
ETEXTC: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # 4 (PART OF WSOVLY1.OVR) *  
;*  
;*****  
;  
; THERE ARE NO EMBEDDED TEXTS FOR ADBLK.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 2  
;  
DW 0          ;NO TEXTS THIS OVERLAY  
;  
;*****  
;* TEXTS - OVERLAY # 5 (PART OF WSOVLY1.OVR) *  
;*  
;*****  
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR ASKPRN.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;  
DW      0  
;
```

```
;*****  
;* TEXTS - OVERLAY # 6 (PART OF WSOVLY1.OVR) *  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR FINRP.MAC (FIND/REPLACE)  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 8A HEX  
;  
DW ETEXTIF-$      ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW XTFIND-$  
DW XTREPL-$  
DW XTOPTS-$  
DW XTNFE-$  
DW XTSASK-$  
DW XTOPE1-$  
DW XTOPE2-$  
  
; FIND AND REPLACE PROMPTS:  
;13H = STANDARD INVERSE INVERSE INDENT: 3 SPACES  
XTFIND: DB 0EH,13H,'FIND? ',0    ;.. UPDATE TDLIN, RESTORE CURSOR POSITION.  
XTREPL: DB 13H,'REPLACE WITH? ',0  
XTOPTS: DB 13H,'OPTIONS? (? FOR INFO) ',0  
  
; "NOT FOUND" ERROR MESSAGE.  
XTNFE: DB 0EH,'*** NOT FOUND: ',0      ;PROGRAM TYPES FIND STRING AND " HERE.  
  
; SUBSTITUTE-ASK TEXT, USED IN STATUS LINE:  
XTSASK: DB 'REPLACE\Y/N): ',0 ;\= INVERSE VIDEO SPACE (SEE STALIN)  
  
; ERROR MESSAGE FOR INVALID OPTION CHARACTER  
XTOPE1: DB 13H.0          ;13H=3 I.V. BLANKS  
; INVALID CHARACTER DISPLAYED HERE  
XTOPE2: DB ' ???'.0       ;REST OF INVALID OPTION MESSAGE  
;  
ETEXTIF:             ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # 7 (PART OF WSOVLY1.OVR)*  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR MARTB.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 112 HEX  
;  
DW ETEXTIG-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW XTNELS-$  
DW XTLMC-$  
DW XTRMC-$  
DW XTSTAB-$  
DW XTCTAB-$  
TABCON: DW TBCON-$  
TCON2: DW TCN2-$  
TCON3: DW TCN3-$  
PROCON: DW PRCN-$  
  
; SYMBOLS FOR SOME CONTROLS WHICH MAY BE IMBEDDED IN TEXTS:  
CCAL EQU 02H ;"SUBR CALL" TO TEXT (REL ADDR PTR IN NEXT 2 BYTES)  
  
; FOR "SET LINE SPACING" COMMAND (^O^S):  
XTNELS: DB ' ENTER space OR NEW LINE SPACING (1-9): ',0  
  
; PROMPT TEXTS FOR MARGIN AND TABS QUESTIONS:  
  
; FOR "SET LEFT MARGIN" COMMAND (^O^L):  
XTLMC: DB ' LEFT'  
PRCON: DB ' MARGIN COLUMN NUMBER'  
TCN2: DB CCAL  
DW TCON3-$  
DB 'umn)? ',0  
TCN3: DB '(ESCAPE for cursor col',0  
  
; FOR "SET RIGHT MARGIN" COMMAND (^O^R):  
XTRMC: DB ' RIGHT',CCAL  
DW PROCON-$  
DB 0
```

; FOR "SET TAB STOP" COMMAND (^O^I):

; " SET TAB AT COLUMN (ESCAPE for cursor column)? "

XITSTAB: DB ' For decimal tab stop enter "#" and decimal point column ',0EH

DB ' SET',CCAL

DW TABCON-\$

DB 'UMN',CCAL

DW TCON2-\$

DB 0

TBCON: DB ' TAB AT COL',0

; FOR "CLEAR TAB STOP / CLEAR ALL TABS" COMMAND (^O^N):

; " CLEAR TAB AT COL (ESCAPE for cursor col; A for all)? "

XITCTAB: DB ' CLEAR',CCAL

DW TABCON-\$

DB CCAL

DW TCON3-\$

DB ' ; A for all)? ',0

ETEXTIG: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT

```
;*****  
;* TEXTS - OVERLAY # 8 (PART OF WSOVLY1.OVR) *  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR ITED.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 34 HEX  
;  
DW ETEXTH-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW GBTXT-$  
DW DLTXT-$  
DW BKTXT-$  
DW XTNF1-$  
  
; NAME OF EDITOR WORK FILE FOR MOVING BACKWARDS ("GO-BACK" FILE OR "GOB")  
GBTXT: DB 'E$BACKUP' ;MUST BE 8 CHARS; DOLTXT MUST FOLLOW.  
  
; FILE TYPE FOR WORK FILES. MUST IMMEDIATELY FOLLOW GBTXT.  
DLTXT: DB '$$$' ;MUST BE 3 CHARS  
  
; FILE TYPE FOR BACKUP FILE (WHAT INPUT FILE IS RENAMED TO)  
BKTXT: DB 'BAK' ;MUST BE 3 CHARS. NB DUPLICATED IN ENSTAR.MAC.  
  
; TEXT DISPLAYED UPON INITIATION OF EDIT (N OR D) IF FILE IS NEW.  
XTNF1: DB 0EH,'NEW FILE',0EH,0EH,0  
  
ETEXTH: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
; TEXTS - OVERLAY # 9 (PART OF WSOVLY1.OVR)  
;  
;  
;  
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR PTTY.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;  
DW 0  
;
```

```
;*****  
; TEXTS - OVERLAY # 0A HEX (PART OF WSOVLY1.OVR)  
;  
;  
;  
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR PDAIS.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;  
DW 0
```

;\*\*\*\*\*  
; \* TEXTS - OVERLAY # 0B HEX (PART OF WSOVLY1.OVR) \*  
;\*\*\*\*\*  
;  
;  
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR POEM.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;  
DW 0

;\*\*\*\*\*  
; \* TEXTS - OVERLAY # 0C HEX (PART OF WSOVLY1.OVR) \*  
;\*\*\*\*\*  
;  
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR PDSK.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;  
DW 0

```
;  
*****  
;* TEXTS - OVERLAY # 0D HEX (PART OF MERGPRIN.OVR)  
;*  
*****  
;  
; EMBEDDED TEXTS FOR MERGE-PRINT OVERLAY  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD <= 1A HEX  
;  
DW ETEXTIM-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW B4VXT-$  
DW AFVXT-$  
  
;  
; EMBEDDED TEXTS USED IN FPDOT.MAC -- MERGE-PRINT DOT COMMANDS  
;  
; TEXT DISPLAYED BEFORE VARIABLE NAME WHEN ASKING FOR VARIABLE AND  
; USER GAVE NO PROMPT IN .AV COMMAND.  
B4VXT: DB 0 ;NOTHING. COULD CHANGE TO "Enter ", ETC.  
  
; TEXT DISPLAYED AFTER VARIABLE NAME WHEN ASKING FOR VARIABLE AND  
; USER GAVE NO PROMPT IN .AV COMMAND.  
AFVXT: DB '? ',0  
  
ETEXTIM: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # 0E HEX (PART OF WSOVLY1.OVR) *  
;*****  
;  
; EMBEDDED TEXTS FOR XPROG.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 0E7 HEX  
;  
DW ETEXTN-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING  
  
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP  
DW ER3RD-$  
DW XTXPRO-$  
DW XTWHAT-$  
DW XTNF-$  
DW XTPHEL-$  
DW XSPEL2-$  
  
ER3RD: DB 0FH,0FH,0EH,0 ;ERASES 3RD LINE DOWN (ERR MSG LINE)  
  
XTXPRO: DB 0EH,13H,' COMMAND? ',0 ;BLANK LINE, PROMPT ON NEXT LINE  
  
XTWHAT: DB TAB+80H,' WHAT???' ',0EH,0  
  
XTNF: DB TAB+80H,' ',19H,' NOT FOUND ',0EH,0  
  
;HELP MESSAGE, LEVELS 2 AND 3 ONLY:  
XTPHEL: DB 0EH  
DB ' Enter name of program you wish to Run, ',0EH  
DB ' optionally followed by appropriate arguments. ',0EH  
DB ' Example (shows disk space): STAT ',0EH,0  
  
XSPEL2: DB 0EH,13H,14H,'CHECK / ADD TO DICTIONARY? ',0  
DB 0,0,0,0  
DB 0,0,0,0  
DB 0,0,0,0  
DB 0,0,0,0  
DB 0,0,0,0  
  
ETEXTN: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # OF HEX (PART OF WSOVLY1.OVR)  
;*  
;*****  
;  
; EMBEDDED TEXTS FOR XPRUN.MAC  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 1C1 HEX  
;  
DW ETEXT0-$ ;LENGTH OF GROUP FOR RETEXT & USER CHECKING
```

```
; SELF-RELATIVE POINTERS TO TEXTS IN THIS GROUP
```

```
DW HKTRW-$  
DW XTAGIN-$  
DW XTWSNF-$  
DW XTWSTB-$  
DW XTWSTS-$  
DW XTSRV-$  
DW RCLF2-$  
DW RCLF-$  
DW CCMS-$  
DW CNRTW-$
```

```
HKTRW: DB CR,LF,'Hit any key to return to WordStar: ',0
```

```
; d:wordstar.com <- shows spacing
```

```
XTAGIN: DB CR,LF,'Replace diskette with file ',1AH,', hit any key: ',0
```

```
XTWSNF: DB ' *** file ',1AH,' still not found *** ',0
```

```
XTWSTB: DB ' *** file ',1AH,' bad (too big ??!@&) *** ',0
```

```
XTWSTS: DB ' *** file ',1AH,' bad (too short) *** ',0
```

```
; d:wordstar.com
```

```
XTSRV: DB ' *** ',1AH,' found is bad or incompatible version *** ',0
```

```
RCLF2: DB CR,LF
```

```
RCLF: DB CR,LF,0
```

```
CCMS: DB '^C'.CR,LF,0
```

```
CNRTW: DB CR,LF,CR,LF
```

```
DB ' Cannot return to WordStar. ',CR,LF
```

```
DB ' Replace system disk (if removed), ',CR,LF
```

```
DB ' Hit any key to return to Operating System: ',0
```

```
ETEXTO: ;MUST REMAIN AT END OF GROUP, AFTER ALL TEXT
```

```
;*****  
;* TEXTS - OVERLAY # 10 HEX (PART OF WSOVLY1.OVR) *  
;*  
;*****
```

```
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR INIPRN.MAC  
;
```

```
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;
```

```
DW 0
```

```
;  
;*****  
;* TEXTS - OVERLAY # 11 HEX (PART OF WSOVLY1.OVR) *  
;*  
;*****
```

```
;  
;  
; THERE ARE NO EMBEDDED TEXTS FOR DELTB.MAC  
;
```

```
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;
```

```
DW 0
```

```
;
;***** TEXTS - OVERLAY # 12 HEX (PART OF WSOVLY1.OVR) *****
;
; SPELLING CHECK MESSAGES
;
; ***** TEXTS USED IN THIS OVERLAY (FIND/REPLACE) *****
;
; ALSO: OPTIONS DECODING SHOULD USE A TABLE ETC SO CHARS CHANGEABLE
```

DW ETEXTP-\$ ;LENGTH OF LOCAL TEXTS AREA, FOR RETEXT PROGRAM

```
; SELF-RELATIVE POINTERS TO LOCAL TEXTS
TXOPTS: DW XSPPTS-$
TXOPE1: DW XSPPE1-$
TXOPE2: DW XSPPE2-$
TXACTN: DW XTACTN-$
TxFnct: DW XTFNCT-$
TxDone: DW XTDONE-$
TXADD: DW XTADD-$
TXADDS: DW XTADDS-$
TXWORD: DW 04C4H ;MUST BBE THIS VALUE TO WORK
TXADDQ: DW XTADDQ-$
;
XSPPTS: ;MOVED TO MESSAGE FILE LABEL NAMED MSPELL
; DB CF,13H,'OPTIONS? (G, B, ?)',0 ; ERROR MESSAGE FOR INVALID OPTION CHARACTER
XSPPE1: DB 13H,0 ;13H=3 I.V. BLANKS ; INVALID CHARACTER DISPLAYED HERE
XSPPE2: DB ' ???',0 ;REST OF INVALID OPTION MESSAGE
;
XTACTN: DB 'Action(F/B/I/D/S)?',0 ;FIX/BYPASS/IGNORE/DICT/SUPL
XTFnct: DB CF,13H,'Spelling Check',0 ;FUNCTION MESSAGE
XTDone: DB ' Completed',0 ;END OF
XTADD: DB CF,TAB,'Add to Dictionary: ',0 ;VALIDATE ADDITION TO DIC
XTADDS: DB CF,TAB,'Add to Supplement: ',0 ;VALIDATE ADDITION TO SUPPL
XTADDQ: DB ' (Y/N)? ',0 ;YES OR NO TO ADD WORD
;
```

```
ETEXTP:
PAGE
;
;***** TEXTS - OVERLAY # 13 HEX (PART OF WSOVLY1.OVR) *****
;
; READ/WRITE BLOCK EMBEDDED TEXTS
;
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD BE <= 42 HEX
;
DW ETExTQ-$ ;LENGTH OF LOCAL TEXTS AREA, FOR RETEXT PROGRAM
; SELF-RELATIVE POINTERS TO LOCAL TEXTS
```

TXNAFR: DW XTNAFR-\$  
TXNAFW: DW XTNAFW-\$

;ADDITIONAL FILE READ COMMAND (^K^R): " NAME OF FILE TO READ? "  
; 13H PRINTS 3 SPACES, 14H PRINTS "NAME OF FILE TO ",  
XTNAFR: DB 0EH,13H,14H,'READ? ',0

;ADDITIONAL FILE WRITE COMMAND (^K^W):  
; " NAME OF FILE TO WRITE MARKED TEXT ON? "  
; 13H=> INDENT, 14H=>"NAME OF FILE TO "  
XTNAFW: DB 0EH,13H,14H,'WRITE MARKED TEXT ON? ',0 ;TYPES TEXT FIRST

DW 0,0,0,0 ;TEXT EXPANSION SPACE  
DW 0,0,0,0 ;TEXT EXPANSION SPACE  
DW 0,0,0,0 ;TEXT EXPANSION SPACE

ETEXTQ:

;  
\*\*\*\*\*  
;\* TEXTS - OVERLAY # 14 HEX (PART OF WSOVLY1.OVR) \*  
;\*  
\*\*\*\*\*  
;  
; THERE ARE NO EMBEDDED TEXTS FOR INITB  
;  
; THE VALUE ASSEMBLED INTO THE FOLLOWING DW SHOULD = 0  
;  
; INITIALISATION -  
DW 0 ;NO MESSAGES FOR INIT  
  
END

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