

WordStar version 3.30 labels and equates

by

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The newest version of the WordStar(tm), 3.30, by Micro-Pro, has expanded form of install program compared to the previous versions. However, the manual no longer includes the partial assembly code listings so that it can be hot patched for further customization. Patching is extremely important especially if the WordStar is to run under multi-user TurboDOS environment. The customer service personnel has told us about the label patch program to the "WINSTALL", MicroPro general purpose installation program. However its immediate availability is questionable. The following listing of labels and equates has been compiled by comparing the versions 3.30 and 3.00 of the WordStar under DDT. Certain labels as well as bytes reserved for future expansion in version 3.00 have been completely omitted in the version 3.30. The console drivers in the version 3.30 are also much better. The program no longer needs the extensive patching as it was required in version 3.00 in order to run under TurboDOS. When the accuracy of label location is in question, it is indicated by the question mark following it.

Label Name	Address in Version 3.00	Address in Version 3.30
*****	*****	*****
HITE	248	232
WID	249	233
CLEAD1	24A-252	234-23C
CLEAD2	253-257	23D-241
CTRAIL	258-25C	242-246
CB4FLG	25D	247
LINOFF	25E	248
COLOFF	25F	249
ASCUR	260	24A
UCRPOS	264-266	24B-24D
DW OUTCHR	267-268	24E-24F
ERAEOL	26D-273	250-256
LINDEL	274-27A	257-25D
LININS	27B-283	25E-266
IVUN	284-28A	267-26D
IVOFF	28B-291	26E-274
TRMINI	295-29A	275-27D
TRMUNI	29B-2A3	27E-286
INISUB	2A4-2A6	2A7-289
UNISUB	2A7-2A9	28A-28C
USELST	2AA	28D
DELCUS	2AE	28E

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Label Name	Address in Version 3.00	Address in Version 3.30
*****	*****	*****
DELMIS	2AF	28F
MEMAPV	2B0	290
MEMADR	2B1-2B2	291-292
HIBIV	2B3	293
HIBCUR	2B4	294
CRBLIV	2B5	295
ZAF CIN	2B6-2B7	296-297
RUBFXF	2B8	298
RFIXER	2B9	299
UCNSTA	2BA-2BC	29A-29C
UCONI	2BD-2BF	29D-29F
UCONO	2C0-2C2	2A0-2A2
SWIN	2C3-2C8	2A3-2A8
SWOUT	2C9-2CE	2A9-2AE
DEL1	2CF	2AF
DEL2	2D0	2B0
DEL3	2D1	2B1
DEL4	2D2	2B2
DEL5	2D3	2B3
TRSFLG	2D4	2B4
TRSCIF	2D5	2B5
HETHBS	2D6	2B6
APLFLG	2D7	2B7
NMOFUS	2D8-2D9	Eliminated
TCKFLG	2DA	Eliminated
RSTFLG	2DB	Eliminated
MPMFLG	Does not exist	2B8
DEFDSK	2DC	2B9
SCRLSZ	2DD	2BA
MORPAT	2E0-35B	2CB-34A
POSMTH	690	699
BLDSTR	691	69A
DBLSTR	692	69B
PSCRLF	696-6A0	69C-6A6
PSCHR	6A1-6A7	6A7-6AC
PSHALF	6A8-6AE	6AD-6B4
PBACKS	6AF-6B4	6B5-6BA
PALT	6B5-6B9	6BB-6BF
PSTD	6BA-6BE	6C0-6C4
ROLUP	6BF-6C3	6C5-6C9
ROLDOW	6C4-6C8	6CA-6CE
USR1	6C9-6CD	6CF-6D3
USR2	6CE-6D2	6D4-6D8
USR3	6D3-6D7	6D9-6DD
USR4	6D8-6DC	6DE-6E2
RIBBON	6DD-6E1	6E3-6E7
RIBOFF	6E2-6E6	6E8-6EC
PSINIT	6E7-6F7	6ED-6FD
PSFINI	6F8-708	6FE-70E
SOCHR	70B	70F
ULCHR	70C	710

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Label Name	Address in Version 3.00	Address in Version 3.30
*****	*****	*****
PRINIT	70D-70F	711-713
PRFINI	710-712	714-716
CSWTCH	717	717
HAVBSY	718	718
LIBSY	71A-71C	719-71B
LISEND	71D-724	71C-723
LISINP	725-727	724-726
POBSY	728-732	727-731
POSTAT	729	728
POMSK	72C	72B
POOM	72E	72D
POSEND	733-736	732-735
POOP	734	733
POINP	737-744	736-743
PISTAT	738	737
POINSK	73B	73A
POIM	73D	73C
POIP	741	740
PUBSY	74C-74E	744-746
PUSEND	74F-751	747-749
PUINP	752-754	74A-74C
ACBSY	758-75A	74D-74F
ACSEND	75B-763	750-758
ACSTR	777	76C
COUCH##	*****	20F0
ACFIN	76E	763
ACINP	764-776	759-76B
ACSTR	777	76C
CONSTA##	*****	1D55
INCHR##	*****	1D6C
ACFIN	76E-776	763-76B
ACSTA1	76F	764
ACSTAR	777-782	76C-777
CONFIE	77F	774
PROTCL	786	778
EAKBSZ	787	779

WordStar version 3.30 patches for TurboDOS

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The version 3.30 of WordStar(tm) by MicroPro has improved Console Drivers compared to the version 3.00. The version 3.00 used to check the Console Status very frequently. This was causing it to run sluggish under the TurboDOS. The patch to fix this problem is discussed in the file named "WS.DOC". The version 3.30 has expanded general purpose install program, called "WINSTALL", that requires a file named "WS.INS" to be on the installation disk drive. One may use the WINSTALL program to implement some of the patches. However the installed version of the WordStar still needs to be patched by a debugger. MONITOR command of TurboDOS is ideal for this purpose. Load the installed version of the WordStar by:

LWS.COM

Then start patching up the address locations given below by:

Eaaaa

To stop patching enter ^C. Save the patched up version by:

SWS.COM

To go back to the operating system enter :

@

Labels of the patch points	Address of the patch	Old value	New value
*****	*****	*****	*****
DEL1	02AF	03	00
DEL2	02B0	09	00
DEL3	02B1	19	19 +
DEL4	02B2	40	00
DEL5	02B3	09	00
DEFDSK x	02DC	01	05 ++
PSFINI x	06FE	00	01
x	06FF	00	1A +++
CSWTCH	0717	00	00
HAVBSY	0718	00	FF

WordStar version 3.30 patches for TurboDOS

+ This value determines the amount of time delay after the first key stroke, for two key stroke commands help level to appear on the terminal. If you are comfortable in using WordStar do not change this value so that the screen is not altered immediately. If you are a beginner then lower this value to 01.

* These values may be patched by the WINSTALL program during the installation process.

++ This value determines the default disk drive number that WordStar looks for the OVERLAY files incase they are not on the logged disk drive. Assign 01 for A, 02 for B, 05 for E.

+++ This value should be the same value as in EOPCHR parameter defined in OSMMASTER.PAR and OSSSLAVE.PAR files. The purpose of this character is to make the TurboDOS spooler work properly. Without such assignment one may not get printout from the spooler until WordStar is exited. Certain printers (Diablo, etc.) are known to react to the value of 1A hex. In that case assign different value to EOPCHR parameter in OSMMASTER.PAR , OSSSLAVE.PAR files and PSFINI + 1. 7E hex is known to work properly. Please read on about the other system modifications.

For multi user environment, one may place the WordStar files (COM and OVRlays) into the user level 0 on the hard disk whose number is assigned to the DEFDSK label. These files are then declared GLOBAL and READ ONLY with the SET command. If you are using the SPELLSTAR, assign GLOBAL attribute only (NO READ ONLY!) to the SPELSTAR.DCT file. Then add (or change if they already exist) the following parameters to OSMMASTER.PAR and OSSSLAVE.PAR files. Generate new system files. Do not forget to issue CHANGE command after you record the newly generated system files onto the system disk so that disk buffers are properly emptied.

```
EOPCHR = 1A      ( or another value ! )
COMPAT = 088
CPMVER = 22
```

With these changes, users may be assigned to the different user areas on the hard disk and share the same WordStar files.