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10 0000 ;*****
20 0000 ;
30 0000 ; NESTAR TEXT EDITOR
40 0000 ;
50 0000 ; AUXILLIARY ROUTINES
60 0000 ;
70 0000 ;
80 0000 ; L. J. SHUSTEK
90 0000 ;
100 0000 ; COPYRIGHT 1979,1980 NESTAR SYSTEMS INC.
110 0000 ;
120 0000 ;*****
130 7060 *=JFIND
140 7060 4C7B7A JMP FIND
150 705D *=JSETAB
160 705D 4C617B JMP SETABS
170 7063 *=JRENUM
180 7063 4C847B JMP RENUM
190 7066 *=JWINDO
200 7066 4CFC7B JMP WINDOW
210 7036 *=JPRVLN
220 7036 4C857E JMP PRVLIN
230 7069 *=JCOPY
240 7069 4C3A7D JMP COPY
250 706F *=JMOVE
260 706F 4C3E7D JMP MOVE
270 706C *=JCHNGE
280 706C 4C407C JMP CHANGE
290 7A7B *=BAUX
300 7A7B ;*****
310 7A7B ;
320 7A7B ; FIND/STRING/<RANGE>,N
330 7A7B ;
340 7A7B ; (ANY CHARACTER CAN BE SUBSTITUTED FOR THE / DELIMETER)
350 7A7B ;
360 7A7B ;*****
370 7A7B 203090 FIND JSR WMOVE SAVE CURRENT LINE
380 7A7E 31 .BYT LPTR,CTEMP1,0
380 7A7F 35
380 7A80 00
390 7A81 A901 LDA #1 DEFAULT N=1
400 7A83 8D7702 STA FCNT
410 7A86 20767E JSR SKIPBL SKIP BLANKS
420 7A89 A000 LDY #0
430 7A8B B127 LDA (NXTCHR),Y GET DELIMETER
440 7A8D 8D7D02 STA DELIM
450 7A90 C90D CMP #13
460 7A92 D00B BNE FIND7
470 7A94 A9FF LDA #$FF NO OPERANDS: SET HIGH=FF
480 7A96 8D7202 STA NHIGH AND SEARCH FROM CURRENT
490 7A99 8D7302 STA NHIGH+1
500 7A9C 4CD47A JMP FINDIT
510 7A9F 20F77A FIND7 JSR INCNXT SKIP DELIMITER
520 7AA2 20FE7A JSR PARSTR GET STRING INTO FSTR
530 7AA5 20327B JSR MOVSTR
540 7AA8 202470 JSR JRANGE PARSE RANGE
550 7AAB 200370 JSR SCAN
560 7AAE 2C .BYTE ',',13 PARSE ",N"
560 7AAF 0D
570 7AB0 F00A BEQ FIND6
580 7AB2 205A70 JSR JGETNM

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590 7AB5 D002 BNE FIND5  
 600 7AB7 A200 LDX #0 JUST COMMA: N=INFINITY  
 610 7AB9 8E7702 FIND5 STX FCNT  
 620 7ABC 202A70 FIND6 JSR JENDCM CHK FOR END OF CMD  
 630 7ABF 202D70 JSR JPNT1 START OF RANGE  
 640 7AC2 F02A BEQ FINDZ NONE...  
 650 7AC4 201270 FIND3 JSR UNPACK UNPACK LINE TO LBUF  
 660 7AC7 A982 LDA #LBUF\*256/256  
 670 7AC9 853B STA PSTR  
 680 7ACB A902 LDA #LBUF/256  
 690 7ACD 853C STA PSTR+1  
 700 7ACF 203E7B JSR SUBSTR FIND SUBSTRING  
 710 7AD2 B007 BCS FOUND  
 720 7AD4 203070 FINDIT JSR JRANXT NEXT LINE IN RANGE  
 730 7AD7 90EB BCC FIND3 MORE  
 740 7AD9 B013 BCS FINDZ NO MORE  
 750 7ADB 204E70 FOUND JSR JPRCUR PRINT SUCCESSFUL FIND  
 760 7ADE 203090 JSR WMOVE SAVE IT FOR CURRENT LINE  
 770 7AE1 31 .BYT LPTR,CTEMP1,0  
 770 7AE2 35  
 770 7AE3 00  
 780 7AE4 AD7702 LDA FCNT TEST "N"  
 790 7AE7 F0EB BEQ FINDIT INFINITY...  
 800 7AE9 CE7702 DEC FCNT ELSE COUNT DOWN  
 810 7AEC D0E6 BNE FINDIT  
 820 7AEE 203090 FINDZ JSR WMOVE RESTORE CURRENT LINE  
 830 7AF1 35 .BYT CTEMP1,LPTR,0  
 830 7AF2 31  
 830 7AF3 00  
 840 7AF4 4C2170 JMP COMMAN  
 850 7AF7 ;  
 860 7AF7 E627 INCNXT INC NXTCHR INCREMENT NXTCHR  
 870 7AF9 D002 BNE INCRTS  
 880 7AFB E628 INC NXTCHR+1  
 890 7AFD 60 INCRTS RTS  
 900 7AFE ;-----  
 910 7AFE ; PARSTR PARSE A STRING UP TO DELIMETER.  
 920 7AFE ; STORE AT CSTR, ENDING WITH CR  
 930 7AFE ;-----  
 940 7AFE A000 PARSTR LDY #0  
 950 7B00 A200 LDX #0  
 960 7B02 B127 PARST1 LDA (NXTCHR),Y MOVE A CHAR  
 970 7B04 9D4503 STA CSTR,X  
 980 7B07 E020 CPX #MFSTR  
 990 7B09 B019 BCS ERSTR TOO LONG  
 1000 7B0B C90D CMP #13  
 1010 7B0D F015 BEQ ERSTR MISSING DELIM  
 1020 7B0F CD7D02 CMP DELIM  
 1030 7B12 F007 BEQ PARST2 DONE...  
 1040 7B14 E8 INX  
 1050 7B15 20F77A JSR INCNXT NEXT CHAR  
 1060 7B18 4C027B JMP PARST1  
 1070 7B1B A90D PARST2 LDA #13 PUT IN CR AT END  
 1080 7B1D 9D4503 STA CSTR,X  
 1090 7B20 20F77A JSR INCNXT SKIP OVER DELIM  
 1100 7B23 60 RTS  
 1110 7B24 ;  
 1120 7B24 201570 ERSTR JSR ERRENT  
 1130 7B27 42 .BYT 'BAD STRING',0  
 1130 7B28 41  
 1130 7B29 44  
 1130 7B2A 20  
 1130 7B2B 53  
 1130 7B2C 54  
 1130 7B2D 52  
 1130 7B2E 49

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1130 7B2F 4E
1130 7B30 47
1130 7B31 00
1140 7B32
1150 7B32 ; MOVSTR: MOVE CSTR TO FSTR
1160 7B32 ;
1170 7B32 A220 MOVSTR LDX #MFSTR
1180 7B34 BD4403 MOVSTL LDA CSTR-1,X
1190 7B37 9D2303 STA FSTR-1,X
1200 7B3A CA DEX
1210 7B3B D0F7 BNE MOVSTL
1220 7B3D 60 RTS
1230 7B3E
1240 7B3E
1250 7B3E ; SUBSTR FIND 1ST OCCURENCE OF FSTR IN STRING @PSTR
1260 7B3E BOTH STRINGS END WITH CR
1270 7B3E UPDATES PSTR TO POINT TO OCCURENCE (OR END)
1280 7B3E RETURN C IF FOUND, Y HAS LENGTH OF FSTR (W/O CR)
1290 7B3E
1300 7B3E
1310 7B3E A000 SUBSTR LDY #0
1320 7B40 A90D SUBSTL LDA #13
1330 7B42 D92403 CMP FSTR,Y
1340 7B45 F016 BEQ SUBSTS END OF FSTR: SUCCESS
1350 7B47 D13B CMP (PSTR),Y
1360 7B49 F014 BEQ SUBSTF END OF PSTR: FAILURE
1370 7B4B B92403 LDA FSTR,Y
1380 7B4E D13B CMP (PSTR),Y
1390 7B50 D003 BNE SUBSTI MISMATCH: TRY NEXT POSITION IN PSTR
1400 7B52 C8INY
1410 7B53 D0EB BNE SUBSTL (UNC)
1420 7B55 E63B SUBSTI INC PSTR +PSTR
1430 7B57 D0E5 BNE SUBSTR
1440 7B59 E63C INC PSTR+1
1450 7B5B D0E1 BNE SUBSTR (UNC)
1460 7B5D 38SUBSTS SEC
1470 7B5E 60RTS
1480 7B5F 18SUBSTF CLC
1490 7B60 60RTS
1500 7B61 *****
1510 7B61 ;
1520 7B61 ; SET TABS N,N,N (UP TO 8)
1530 7B61 ;
1540 7B61 *****
1550 7B61 A900 SETABS LDA #0 TABS COUNTER
1560 7B63 48PHA
1570 7B64 200670 SETABL JSR NUMBER
1580 7B67 F015 BEQ SETABZ NO MORE...
1590 7B69 68PLA
1600 7B6A AA TAX
1610 7B6B A525 LDA GPPTR
1620 7B6D 9D6903 STA TABS,X STORE NEW TAB
1630 7B70 E8INX
1640 7B71 E008CPX #8
1650 7B73 F009BEQ SETABZ DID 8...
1660 7B75 8ATXA
1670 7B76 48PHA
1680 7B77 200370JSR SCAN
1690 7B7A 20.BYTE ',',13
1690 7B7B 0D
1700 7B7C D0E6BNE SETABL
1710 7B7E 202A70 SETABZ JSR JENDCM
1720 7B81 4C2170 JMP COMMAN
1730 7B84 *****
1740 7B84 ;
1750 7B84 ; RENUMBER (SIMPLE VERSION)

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1760 7B84 ;  
 1770 7B84 ;\*\*\*\*\*  
 1780 7B84 203090 RENUM JSR WMOVE  
 1790 7B87 31 .BYTE LPTR,CTEMP1,STEXT,LPTR,0 SAVE LPTR & GO TO 1ST  
 LINE  
 1790 7B88 35  
 1790 7B89 29  
 1790 7B8A 31  
 1790 7B8B 00  
 1800 7B8C 200370 JSR SCAN "BY NNN"  
 1810 7B8F 42 .BYTE 'BY',13  
 1810 7B90 59  
 1810 7B91 0D  
 1820 7B92 D007 BNE RENUMN  
 1830 7B94 200370 JSR SCAN  
 1840 7B97 2C .BYT ',',0  
 1840 7B98 00  
 1850 7B99 F007 BEQ RENUMD  
 1860 7B9B 205A70 RENUMN JSR JGETNM  
 1870 7B9E F038 BEQ ERROP  
 1880 7BA0 D004 BNE RENUMS HE GIVES IT...  
 1890 7BA2 A20A RENUMD LDX #10 DEFAULT IS 10  
 1900 7BA4 A000 LDY #0  
 1910 7BA6 8E7E02 RENUMS STX RENCUR  
 1920 7BA9 8C7F02 STY RENCUR+1  
 1930 7BAC 8E8002 STX RENINC  
 1940 7BAF 8C8102 STY RENINC+1  
 1950 7BB2 202A70 JSR JENDCM  
 1960 7BB5 203970 JSR JENDCK WHILE LPTR<ETEXT  
 1970 7BB8 F008 BEQ RENUMZ  
 1980 7BBA 20DB7B RENUML JSR NEWNUM DO NEW NUMBER  
 1990 7BBD 203370 JSR JNXTLN  
 2000 7BC0 D0F8 BNE RENUML  
 2010 7BC2 203090 RENUMZ JSR WMOVE RESTORE CURRENT LINE POINTER  
 2020 7BC5 35 .BYTE CTEMP1,LPTR,0  
 2020 7BC6 31  
 2020 7BC7 00  
 2030 7BC8 AD7E02 LDA RENCUR PRINT FINAL #  
 2040 7BCB 8511 STA \$11  
 2050 7BCD AD7F02 LDA RENCUR+1  
 2060 7BD0 8512 STA \$12  
 2070 7BD2 205490 JSR PRDEC  
 2080 7BD5 4C2170 JMP COMMAN  
 2090 7BD8 4C5770 ERROP JMP JEROP  
 2100 7BDB ;  
 2110 7BDB ; NEWNUM CHANGE THE LINE # OF GLPTR TO RENCUR  
 2120 7BDB ;  
 2130 7BDB A000 NEWNUM LDY #0  
 2140 7BDD AD7E02 LDA RENCUR  
 2150 7BE0 9131 STA (LPTR),Y  
 2160 7BE2 C8 INY  
 2170 7BE3 AD7F02 LDA RENCUR+1  
 2180 7BE6 9131 STA (LPTR),Y  
 2190 7BE8 18 CLC  
 2200 7BE9 AD7E02 LDA RENCUR RENCUR+:=RENINC  
 2210 7BEC 6D8002 ADC RENINC  
 2220 7BEF 8D7E02 STA RENCUR  
 2230 7BF2 AD7F02 LDA RENCUR+1  
 2240 7BF5 6D8102 ADC RENINC+1  
 2250 7BF8 8D7F02 STA RENCUR+1  
 2260 7BFB 60 RTS  
 2270 7BFC ;\*\*\*\*\*  
 2280 7BFC ;  
 2290 7BFC ; WINDOW W <LINE>!COUNT  
 2300 7BFC ;  
 2310 7BFC ; PRINT A WINDOW AROUND THE GIVEN LINE

2320 7BFC ;\*\*\*\*\*  
2330 7BFC ;\*\*\*\*\*  
2340 7BFC 203C70 WINDOW JSR JCHKCR OPERANDS?  
2350 7BFF D00B BNE WINDRG YES: GET RANGE  
2360 7C01 A90A LDA #10 NO: CNT=10  
2370 7C03 8D7402 STA NCNT  
2380 7C06 203970 JSR JENDCK DO END TEST ON CURRENT LINE  
2390 7C09 4C1F7C JMP WINDTS AND START LOOP  
2400 7C0C 202470 WINDRG JSR JRANGE PARSE LINE/COUNT  
2410 7C0F AD7402 LDA NCNT IF NCNT=0, NCNT\_10  
2420 7C12 D005 BNE WINDGO  
2430 7C14 A90A LDA #10  
2440 7C16 8D7402 STA NCNT  
2450 7C19 202A70 WINDGO JSR JENDCM CHK FOR END OF CMD  
2460 7C1C 202D70 JSR JPNT1 POINT TO LINE  
2470 7C1F F01C WINDTS BEQ WINDZ  
2480 7C21 AD7402 LDA NCNT FCNT\_NCNT/2  
2490 7C24 4A LSR A  
2500 7C25 8D7702 STA FCNT  
2510 7C28 20857E WINDLP JSR PRVLIN BACKUP 'FCNT' LINES  
2520 7C2B F005 BEQ WINDPR  
2530 7C2D CE7702 DEC FCNT  
2540 7C30 D0F6 BNE WINDLP  
2550 7C32 204E70 WINDPR JSR JPRCUR PRINT 'NCNT' LINES  
2560 7C35 203070 JSR JRANXT  
2570 7C38 90F8 BCC WINDPR  
2580 7C3A 203670 JSR JPRVLN LEAVE . AT LAST LINE  
2590 7C3D 4C2170 WINDZ JMP COMMAN  
2600 7C40 ;\*\*\*\*\*  
2610 7C40 ;  
2620 7C40 ; CHANGE COMMAND: CH /FROM/TO/<RANGE>  
2630 7C40 ;  
2640 7C40 ;\*\*\*\*\*  
2650 7C40 20767E CHANGE JSR SKIPBL SKIP LEADING BLANKS  
2660 7C43 A000 LDY #0  
2670 7C45 B127 LDA (NXTCHR),Y GET DELIM  
2680 7C47 8D7D02 STA DELIM  
2690 7C4A C90D CMP #13  
2700 7C4C D003 BNE \*+5  
2710 7C4E 4C247B JMP ERSTR  
2720 7C51 20F77A JSR INCNXT SKIP DELIM  
2730 7C54 20FE7A JSR PARSTR 1ST STRING TO FSTR  
2740 7C57 20327B JSR MOVSTR  
2750 7C5A AD2403 LDA FSTR  
2760 7C5D C90D CMP #13 CAN'T BE NULL  
2770 7C5F D003 BNE \*+5  
2780 7C61 4C247B JMP ERSTR  
2790 7C64 20FE7A JSR PARSTR 2ND STRING TO CSTR  
2800 7C67 202470 JSR JRANGE PARSE THE RANGE  
2810 7C6A 202A70 JSR JENDCM CHK END OF CMD  
2820 7C6D 202D70 JSR JPNT1 START OF RANGE  
2830 7C70 F049 BEQ CHZ VOID...  
2840 7C72 201270 CHLOOP JSR UNPACK UNPACK THE LINE TO LBUF  
2850 7C75 A982 LDA #LBUF\*256/256  
2860 7C77 853B STA PSTR  
2870 7C79 A902 LDA #LBUF/256  
2880 7C7B 853C STA PSTR+1  
2890 7C7D 20D17C JSR CHSTR FIND + CHANGE STRIG  
2900 7C80 9034 BCC CHNXL NOTHING: DO NEXT LINE  
2910 7C82 A000 CHCHKL LDY #0  
2920 7C84 B98202 CH3 LDA LBUF,Y COMPUTE NEW LENGTH  
2930 7C87 C8 INY  
2940 7C88 C90D CMP #13  
2950 7C8A D0F8 BNE CH3  
2960 7C8C C050 CPY #80  
2970 7C8E B02E BCS ERLEN TOO LONG

2980 7C90 20D17C JSR CHSTR TRY MORE CHANGES  
 2990 7C93 B0ED BCS CHCHKL CONTINUE 'TIL NO MORE  
 3000 7C95 A000 LDY #0 SAVE LINE# AS NLOW  
 3010 7C97 B131 LDA (LPTR),Y  
 3020 7C99 8D7002 STA NLOW  
 3030 7C9C C8 INY  
 3040 7C9D B131 LDA (LPTR),Y  
 3050 7C9F 8D7102 STA NLOW+1  
 3060 7CA2 204870 JSR JDELIN DELETE CURRENT LINE  
 3070 7CA5 A982 LDA #LEBUF\*256/256  
 3080 7CA7 8527 STA NXTCHR  
 3090 7CA9 A902 LDA #LEBUF/256  
 3100 7CAB 8528 STA NXTCHR+1  
 3110 7CAD 204B70 JSR JINSLN INSERT NEW LINE FROM LEUF  
 3120 7CB0 203670 JSR JPRVLN  
 3130 7CB3 204E70 JSR JPRCUR PRINT IT  
 3140 7CB6 203070 CHNXL JSR JRANXT NEXT LINE OF RANGE  
 3150 7CB9 90B7 BCC CHLOOP MORE...  
 3160 7CBB 4C2170 CHZ JMP COMMAN  
 3170 7CBE ;  
 3180 7CBE 201870 ERLEN JSR ER2ENT  
 3190 7CC1 4C .BYT 'LINE > 80 CHARS',0  
 3190 7CC2 49  
 3190 7CC3 4E  
 3190 7CC4 45  
 3190 7CC5 20  
 3190 7CC6 3E  
 3190 7CC7 20  
 3190 7CC8 38  
 3190 7CC9 30  
 3190 7CCA 20  
 3190 7CCB 43  
 3190 7CCC 48  
 3190 7CCD 41  
 3190 7CCE 52  
 3190 7CCF 53  
 3190 7CD0 00  
 3200 7CD1 ;-----  
 3210 7CD1 ; CHSTR CHANGE 1ST OCCURRENCE OF FSTR TO CSTR  
 3220 7CD1 ; IN @PSTR (EACH ENDS WITH CR.)  
 3230 7CD1 ; RET C IF CHANGED, WITH PSTR POINTING  
 3240 7CD1 ; TO AFTER THE CHANGED PIECE.  
 3250 7CD1 ;-----  
 3260 7CD1 203E7B CHSTR JSR SUBSTR FIND SUBSTRING  
 3270 7CD4 9060 BCC CHSTRZ NONE-EXIT  
 3280 7CD6 A200 LDX #0 REMOVE OLD STRING  
 3290 7CD8 8633 STX ZTEMP  
 3300 7CDA 8434 STY ZTEMP+1  
 3310 7CDC A434 CHSTR1 LDY ZTEMP+1 BY MOVING TAIL OF TEXT  
 3320 7CDE B13B LDA (PSTR),Y  
 3330 7CE0 A433 LDY ZTEMP  
 3340 7CE2 913B STA (PSTR),Y  
 3350 7CE4 E633 INC ZTEMP  
 3360 7CE6 E634 INC ZTEMP+1  
 3370 7CE8 C90D CMP #13  
 3380 7CEA D0F0 BNE CHSTR1  
 3390 7CEC A0FF LDY #\$FF COMPUTE LENGTH OF CSTR  
 3400 7CEE C8 CHSTR2 INY  
 3410 7CEF B94503 LDA CSTR,Y  
 3420 7CF2 C90D CMP #13  
 3430 7CF4 D0F8 BNE CHSTR2  
 3440 7CF6 98 TYA  
 3450 7CF7 F03D BEQ CHSTRZ NULL REPLACEMENT: EXIT  
 3460 7CF9 8D6603 STA CHLEN SAVE LENGTH  
 3470 7CFC A0FF LDY #\$FF FIND END OF PSTR  
 3480 7CFE C8 CHSTR3 INY

3490 7CFF B13B LDA (PSTR),Y  
 3500 7D01 C90D CMP #13  
 3510 7D03 D0F9 BNE CHSTR3  
 3520 7D05 98 TYA  
 3530 7D06 18 CLC  
 3540 7D07 6D6603 ADC CHLEN NEW END OF PSTR  
 3550 7D0A 8533 STA ZTEMP  
 3560 7D0C C8 INY  
 3570 7D0D 88 CHSTR4 DEY OPEN A GAP IN PSTR  
 3580 7D0E B13B LDA (PSTR),Y  
 3590 7D10 8434 STY ZTEMP+1  
 3600 7D12 A433 LDY ZTEMP  
 3610 7D14 913B STA (PSTR),Y  
 3620 7D16 88 DEY  
 3630 7D17 8433 STY ZTEMP  
 3640 7D19 A434 LDY ZTEMP+1  
 3650 7D1B D0F0 BNE CHSTR4  
 3660 7D1D B94503 CHSTR5 LDA CSTR,Y MOVE IN REPLACEMENT  
 3670 7D20 C90D CMP #13  
 3680 7D22 F005 BEQ CHSTR6  
 3690 7D24 913B STA (PSTR),Y  
 3700 7D26 C8 INY  
 3710 7D27 D0F4 BNE CHSTR5 (UNC)  
 3720 7D29 18 CHSTR6 CLC UPDATE PSTR BY LENGTH OF REPL  
 3730 7D2A 98 TYA  
 3740 7D2B 653B ADC PSTR  
 3750 7D2D 853B STA PSTR  
 3760 7D2F A53C LDA PSTR+1  
 3770 7D31 6900 ADC #0  
 3780 7D33 853C STA PSTR+1  
 3790 7D35 38 SEC RETURN C  
 3800 7D36 60 CHSTRZ RTS  
 3810 7D37 4C5770 ERROP2 JMP JEROP  
 3820 7D3A ;\*\*\*\*\*  
 3830 7D3A ;  
 3840 7D3A ; COPY/MOVE COMMAND  
 3850 7D3A ;  
 3860 7D3A ; C <RANGE> TO <NUMBER>  
 3870 7D3A ; M <RANGE> TO <NUMBER>  
 3880 7D3A ;  
 3890 7D3A ;\*\*\*\*\*  
 3900 7D3A A900 COPY LDA #0  
 3910 7D3C F002 BEQ COPYM  
 3920 7D3E A901 MOVE LDA #1  
 3930 7D40 8D7602 COPYM STA MOVFLG SET COPY/MOVE FLAG  
 3940 7D43 202470 JSR JRANGE SET NHIGH,NLOW,NCNT  
 3950 7D46 200370 JSR SCAN  
 3960 7D49 54 .BYT 'TO',13 'TO' OR COMMA  
 3960 7D4A 4F  
 3960 7D4B 0D  
 3970 7D4C D007 BNE COPY1  
 3980 7D4E 200370 JSR SCAN  
 3990 7D51 2C .BYT ',',0  
 3990 7D52 00  
 4000 7D53 F0E2 BEQ ERROP2  
 4010 7D55 202770 COPY1 JSR JNUMDT  
 4020 7D58 F0DD BEQ ERROP2  
 4030 7D5A 8635 STX CTEMP1  
 4040 7D5C 8436 STY CTEMP1+1  
 4050 7D5E 202D70 JSR JPNT1 1ST LINE OF RANGE  
 4060 7D61 D003 BNE \*+5  
 4070 7D63 4C5170 JMP JERVOI  
 4080 7D66 203090 JSR WMOVE  
 4090 7D69 31 .BYT LPTR,BPTR,0 SAVE START OF RANGE  
 4090 7D6A 2F  
 4090 7D6B 00

4100 7D60 203070 COPY2 JSR JRANXT SEARCH FOR END OF RANGE  
 4110 7D6F 90FB BCC COPY2  
 4120 7D71 203090 JSR WMOVE  
 4130 7D74 31 .BYT LPTR,CTEMP2,0  
 4130 7D75 37  
 4130 7D76 00  
 4140 7D77 A535 LDA CTEMP1  
 4150 7D79 8D7002 STA NLLOW  
 4160 7D7C A536 LDA CTEMP1+1  
 4170 7D7E 8D7102 STA NLLOW+1  
 4180 7D81 203F70 JSR JINSCK FIND PLACE TO INSERT  
 4190 7D84 9003 BCC \*+5  
 4200 7D86 4C5470 JMP JERLEX  
 4210 7D89 ; THE BLOCK FROM BPTR TO CTEMP2 IS TO MOVE TO LPTR.  
 4220 7D89 38 SEC GLEN=CTEMP2-BPTR (SIZE OF BLK)  
 4230 7D8A A537 LDA CTEMP2  
 4240 7D8C E52F SBC BPTR  
 4250 7D8E 853B STA GLEN  
 4260 7D90 A538 LDA CTEMP2+1  
 4270 7D92 E530 SBC BPTR+1  
 4280 7D94 853C STA GLEN+1  
 4290 7D96 ; IF LPTR>=BPTR AND LPTR<CTEMP2, THEN ERROR  
 4300 7D96 38 SEC  
 4310 7D97 A531 LDA LPTR  
 4320 7D99 E52F SBC BPTR  
 4330 7D9B A532 LDA LPTR+1  
 4340 7D9D E530 SBC BPTR+1  
 4350 7D9F 900D BCC COPY6  
 4360 7DA1 A531 LDA LPTR  
 4370 7DA3 E537 SBC CTEMP2  
 4380 7DA5 A532 LDA LPTR+1  
 4390 7DA7 E538 SBC CTEMP2+1  
 4400 7DA9 B01B BCS COPY7  
 4410 7DAB 4C647E JMP EROVLP  
 4420 7DAE ; IF LPTR<BPTR THEN ADD GLEN TO BPTR AND CTEMP2  
 4430 7DAE ; BECAUSE BLOCK TO MOVE WILL SHIFT WHEN GAP IS OPENED.  
 4440 7DAE A52F COPY6 LDA BPTR (C IS CLR)  
 4450 7DB0 653B ADC GLEN  
 4460 7DB2 852F STA BPTR  
 4470 7DB4 A530 LDA BPTR+1  
 4480 7DB6 653C ADC GLEN+1  
 4490 7DB8 8530 STA BPTR+1  
 4500 7DBA A537 LDA CTEMP2  
 4510 7DBC 653B ADC GLEN  
 4520 7DBE 8537 STA CTEMP2  
 4530 7DC0 A538 LDA CTEMP2+1  
 4540 7DC2 653C ADC GLEN+1  
 4550 7DC4 8538 STA CTEMP2+1  
 4560 7DC6 203090 COPY7 JSR WMOVE SAVE PTR FOR DELETE  
 4570 7DC9 2F .BYT BPTR,CTEMP3,0  
 4570 7DCA 39  
 4570 7DCB 00  
 4580 7DCC 204270 JSR JGOPEN OPEN A GAP AT LPTR  
 4590 7DCF 203090 JSR WMOVE  
 4600 7DD2 31 .BYT LPTR,CTEMP1,0  
 4600 7DD3 35  
 4600 7DD4 00  
 4610 7DD5 ; MOVE [BPTR TO CTEMP2] TO CTEMP1  
 4620 7DD5 A000 COPY3 LDY #0  
 4630 7DD7 B12F LDA (BPTR),Y @CTEMP1=@BPTR  
 4640 7DD9 9135 STA (CTEMP1),Y  
 4650 7DDB A22F LDX #BPTR +BPTR  
 4660 7DDD 20CF7E JSR INCW  
 4670 7DE0 A235 LDX #CTEMP1 +CTEMP1  
 4680 7DE2 20CF7E JSR INCW  
 4690 7DE5 A52F LDA BPTR BPTR=CTEMP2?

4700 7DE7 C537 CMP CTEMP2  
4710 7DE9 D0EA BNE COPY3  
4720 7DEB A530 LDA BPTR+1  
4730 7DED C538 CMP CTEMP2+1  
4740 7DEF D0E4 BNE COPY3  
4750 7DF1 ; PUT IN LINE NUMBERS FROM LPTR TO CTEMP1,  
4760 7DF1 ; BY 1, STARTING WITH NLOW  
4770 7DF1 A000 COPY4 LDY #0  
4780 7DF3 AD7002 LDA NLOW  
4790 7DF6 9131 STA (LPTR),Y  
4800 7DF8 C8 INY  
4810 7DF9 AD7102 LDA NLOW+1  
4820 7DFC 9131 STA (LPTR),Y  
4830 7DFE EE7002 INC NLOW  
4840 7E01 D003 BNE COPY5  
4850 7E03 EE7102 INC NLOW+1  
4860 7E06 203370 COPY5 JSR JNXTLN  
4870 7E09 A531 LDA LPTR  
4880 7E0B C535 CMP CTEMP1  
4890 7E0D D0E2 BNE COPY4  
4900 7E0F A532 LDA LPTR+1  
4910 7E11 C536 CMP CTEMP1+1  
4920 7E13 D0DC BNE COPY4  
4930 7E15 ; ISSUE WARNING IF NEXT LINE NUMBER IS SMALLER  
4940 7E15 203970 JSR JENDCK  
4950 7E18 F037 BEQ COPYZ CAN'T HAPPEN AT END  
4960 7E1A A000 LDY #0  
4970 7E1C 38 SEC COMPUTE NEXTLINE-NLOW  
4980 7E1D B131 LDA (LPTR),Y  
4990 7E1F ED7002 SBC NLOW  
5000 7E22 C8 INY  
5010 7E23 B131 LDA (LPTR),Y  
5020 7E25 ED7102 SBC NLOW+1  
5030 7E28 B027 BCS COPYZ GE: OK  
5040 7E2A ;  
5050 7E2A 204890 JSR PRSTR  
5060 7E2D 0D .BYT 13, 'WARNING: LINE NUMBERS OUT OF ORDER', 0  
5060 7E2E 57  
5060 7E2F 41  
5060 7E30 52  
5060 7E31 4E  
5060 7E32 49  
5060 7E33 4E  
5060 7E34 47  
5060 7E35 3A  
5060 7E36 20  
5060 7E37 4C  
5060 7E38 49  
5060 7E39 4E  
5060 7E3A 45  
5060 7E3B 20  
5060 7E3C 4F  
5060 7E3D 55  
5060 7E3E 4D  
5060 7E3F 42  
5060 7E40 45  
5060 7E41 52  
5060 7E42 53  
5060 7E43 20  
5060 7E44 4F  
5060 7E45 55  
5060 7E46 54  
5060 7E47 20  
5060 7E48 4F  
5060 7E49 46  
5060 7E4A 20

5060 7E4B 4F  
 5060 7E4C 52  
 5060 7E4D 44  
 5060 7E4E 45  
 5060 7E4F 52  
 5060 7E50 00  
 5070 7E51 ;  
 5080 7E51 AD7602 COPYZ LDA MOVFLG  
 5090 7E54 F00B BEQ MOVEZ EXIT IF COPY  
 5100 7E56 203090 JSR WMOVE  
 5110 7E59 39 .BYT CTEMP3,BPTR,CTEMP2,LPTR,0  
 5110 7E5A 2F  
 5110 7E5B 37  
 5110 7E5C 31  
 5110 7E5D 00  
 5120 7E5E 204570 JSR JGCLOS DELETE SOURCE RANGE  
 5130 7E61 4C2170 MOVEZ JMP COMMAN  
 5140 7E64 201870 EROVLP JSR ER2ENT  
 5150 7E67 52 .BYT 'RANGE OVERLAPS',0  
 5150 7E68 41  
 5150 7E69 4E  
 5150 7E6A 47  
 5150 7E6B 45  
 5150 7E6C 20  
 5150 7E6D 4F  
 5150 7E6E 56  
 5150 7E6F 45  
 5150 7E70 52  
 5150 7E71 40  
 5150 7E72 41  
 5150 7E73 50  
 5150 7E74 53  
 5150 7E75 00  
 5160 7E76 ;-----  
 5170 7E76 ; SKIPBK SKIP BLANKS  
 5180 7E76 ;-----  
 5190 7E76 A000 SKIPBL LDY #0  
 5200 7E78 B127 LDA (NXTCHR),Y  
 5210 7E7A C920 CMP #' .  
 5220 7E7C D006 BNE SKIPBZ  
 5230 7E7E 20F77A JSR INCNXT  
 5240 7E81 4C767E JMP SKIPBL  
 5250 7E84 60 SKIPBZ RTS  
 5260 7E85 ;-----  
 5270 7E85 ;  
 5280 7E85 ; PRVLIN POINT TO PREVIOUS LINE  
 5290 7E85 ; RET EQ IF ALREADY AT START  
 5300 7E85 ; (THIS IS SOMEWHAT HEURISTIC DUE TO THE POSSIBILITY OF CR'S  
 5310 7E85 ; IN THE LINE NUMBER, AND ON RARE OCCASIONS WILL BACK UP  
 5320 7E85 ; 2 OR MORE LINES.)  
 5330 7E85 ;  
 5340 7E85 ;-----  
 5350 7E85 20D67E PRVLIN JSR STRTST  
 5360 7E88 F035 BEQ PRVLIZ RET IF START  
 5370 7E8A 20C07E JSR PRVBKP -LPTR  
 5380 7E8D D06C BNE UGH1 NOT CR: INTERNAL ERROR  
 5390 7E8F 20D67E PRVLIL JSR STRTST  
 5400 7E92 F02B BEQ PRVLIZ RET IF START  
 5410 7E94 20C07E JSR PRVBKP BACKUP  
 5420 7E97 D0F6 BNE PRVLIL UNTIL CR  
 5430 7E99 ; SAVE THIS PTR AND CHECK THAT NEITHER OF THE PREVIOUS TWO  
 5440 7E99 ; CHARACTERS ARE CR. IF SO, THIS CANNOT BE A LINE NUMBER.  
 5450 7E99 203090 PRVSAY JSR WMOVE  
 5460 7E9C 31 .BYTE LPTR,ZTEMP,0  
 5460 7E9D 33  
 5460 7E9E 00

5470 7E9F 20D67E JSR STRTST  
5480 7EA2 F01B BEQ PRVLIZ  
5490 7EA4 20C07E JSR PRVBKP CHECK 1 BEFORE  
5500 7EA7 F0F0 BEQ PRVSAV CR: BACKUP MORE  
5510 7EA9 20D67E JSR STRTST  
5520 7EAC F011 BEQ PRVLIZ  
5530 7EAE 20C07E JSR PRVBKP CHECK 2 BEFORE  
5540 7EB1 F0E6 BEQ PRVSAV CR: BACKUP MORE  
5550 7EB3 203090 JSR WMOVE RESTORE PTR  
5560 7EB6 33 .BYTE ZTEMP,LPTR,0  
5560 7EB7 31  
5560 7EB8 00  
5570 7EB9 E631 INC LPTR  
5580 7EBB D002 BNE PRVLIZ  
5590 7EBD E632 INC LPTR+1  
5600 7EBF 60 PRVLIZ RTS RETURN Z/NZ  
5610 7EC0 ;  
5620 7EC0 A531 PRVBKP LDA LPTR -LPTR  
5630 7EC2 D002 BNE PRVBK2  
5640 7EC4 C632 DEC LPTR+1  
5650 7EC6 C631 PRVBK2 DEC LPTR  
5660 7EC8 A000 LDY #0  
5670 7ECA B131 LDA (LPTR),Y  
5680 7ECC C90D CMP #13 CHECK AG. CR  
5690 7ECE 60 RTS  
5700 7ECF ;-----  
5710 7ECF ; INCREMENT PAGE 0 WORD, OFFSET IN X  
5720 7ECF ;-----  
5730 7ECF F600 INCW INC 0,X  
5740 7ED1 D002 BNE INCWZ  
5750 7ED3 F601 INC 1,X  
5760 7ED5 60 INCWZ RTS  
5770 7ED6 ;-----  
5780 7ED6 ; STRTST TEST IF LPTR=STEXT, SET EQ  
5790 7ED6 ; ABORT WITH ERROR IF LPTR<STEXT  
5800 7ED6 ;-----  
5810 7ED6 A532 STRTST LDA LPTR+1  
5820 7ED8 C52A CMP STEXT+1  
5830 7EDA F003 BEQ STRTSE  
5840 7EDC 9009 BCC UGH2  
5850 7EDE 60 STRTSZ RTS  
5860 7EDF A531 STRTSE LDA LPTR  
5870 7EE1 C529 CMP STEXT  
5880 7EE3 F0F9 BEQ STRTSZ  
5890 7EE5 B0F7 BCS STRTSZ  
5900 7EE7 201870 UGH2 JSR ER2ENT  
5910 7EEA 49 .BYTE 'INTERNAL ERROR 2',0  
5910 7EEB 4E  
5910 7EEC 54  
5910 7EED 45  
5910 7EEE 52  
5910 7EEF 4E  
5910 7EF0 41  
5910 7EF1 4C  
5910 7EF2 20  
5910 7EF3 45  
5910 7EF4 52  
5910 7EF5 52  
5910 7EF6 4F  
5910 7EF7 52  
5910 7EF8 20  
5910 7EF9 32  
5910 7EFA 00  
5920 7EFB ;  
5930 7EFB 201870 UGH1 JSR ER2ENT  
5940 7EFF 49 .BYTE 'INTERNAL ERROR 1',0

5940 7EFF 4E  
5940 7F00 54  
5940 7F01 45  
5940 7F02 52  
5940 7F03 4E  
5940 7F04 41  
5940 7F05 4C  
5940 7F06 20  
5940 7F07 45  
5940 7F08 52  
5940 7F09 52  
5940 7F0A 4F  
5940 7F0B 52  
5940 7F0C 20  
5940 7F0D 31  
5940 7F0E 00