

LOCN B1 B2 B3

\*  
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 \*  
 \* TECHNICAL SYSTEMS CONSULTANTS  
 \* BOX 2574  
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 \* (317) 742 7509  
 \*

## \* EXTERNAL EQUATES

01FF	STACK	EQU	\$01FF
E0D0	MIKBUG	EQU	<del>\$E0D0</del> E0E3 for RTL8 (aka MIKBUG)
0023	PROMPT	EQU	\$23
000D	CRGRET	EQU	\$D
0018	DELCD	EQU	\$18
0008	BACKSP	EQU	\$8
0007	BELL	EQU	\$7

ORG \$40

## \* TEMPORARY STORAGE

0040	TEMP	RMB	2
0042	XSAVE	RMB	2
0044	BUFPNT	RMB	2
0046	BUFSAV	RMB	2
0048	CURPOS	RMB	2
004A	NEWPOS	RMB	2
004C	SRCHPT	RMB	2
004E	STRNGB	RMB	2
0050	STRNGE	RMB	2
0052	STRGB1	RMB	2
0054	STRGE1	RMB	2
0056	STRPNT	RMB	2
0058	SPCPT1	RMB	2
005A	SPCPT2	RMB	2
005C	LASTNO	RMB	2
005E	ZONE1	RMB	2
0060	ZONE2	RMB	2
0062	ZONBUF	RMB	2
0064	CHGPNT	RMB	2
0066	CHGEND	RMB	2
0068	OCRTMP	RMB	2
006A	NUMFLG	RMB	1
006B	VERFLG	RMB	1
006C	MSLFLG	RMB	1
006D	PSTZFL	RMB	1
006E	OCRCNT	RMB	2
0070	FNDFLG	RMB	1
0071	STRCN1	RMB	1
0072	OVRBEG	RMB	1
0073	OVREND	RMB	1
0074	NOCURL	RMB	1

LOCN	B1	B2	B3			
0075				LINFLG	RMB	1
0076				NXTFLG	RMB	1
0077				ALLFLG	RMB	1
0078				OCRFLG	RMB	1
0079				CHGONF	RMB	1
007A				APPCOL	RMB	1
007B				STRCNT	RMB	1
007C				INCAMT	RMB	1
007D				BMPFLG	RMB	1
007E				EQUFLG	RMB	1
007F				INLMFL	RMB	1
0080				MOVFLG	RMB	1
0081				REPFLG	RMB	1
0082				TMPCHR	RMB	1
0083				CHKFLG	RMB	1
0084				SNGLIN	RMB	1
0085				CHGFLG	RMB	1
0086				STRCN2	RMB	1
0087				FNONFL	RMB	1
0088				LSTFLG	RMB	1
0089				DECCNT	RMB	1
008A				PRNFLG	RMB	1
008B				CPYDRC	RMB	1
008C				DRCTN	RMB	1
008D				CHRCNT	RMB	2
008F				INZFLG	RMB	1
0090				NUMBER	RMB	3
0093				TRGLIN	RMB	2
0095				DELIM	RMB	1
0096				HEDCNT	RMB	1
0097				FILBEG	RMB	2
0099				FILEND	RMB	2
009B				TABPNT	RMB	2
009D				TABBUF	RMB	20
00B1	00			TABEND	FCB	0
00B2	00			TABCH	FCB	0
00B3	20			FILL	FCC	' '
00B4	23			LIND	FCC	'*
00B5	00			EOL	FCB	0
00B6	06			DELAY	FCB	6
00B7	00			TONCH	FCB	0
00B8	00			TOFCH	FCB	0
00B9	00			RONCH	FCB	0
00BA	00			ROFCH	FCB	0
00BB				BUFFER	RMB	136

ORG \$0200

\* PROGRAM STARTS HERE

0200 7E 03 55 START JMP INITLZ

```

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0203 7E 03 83  RESTRT  JMP    PEDIT

```

## \* EXTERNAL I-O ROUTINES

```

0206 7E E1 AC  INCH    JMP    $E1AC
0209 7E E1 D1  OUTCH   JMP    $E1D1
020C 7E E1 AC  TINCH   JMP    $E1AC
020F 7E E1 D1  TOUCH   JMP    $E1D1
0212 1F FF     MEMEND  FDB    $1FFF

```

TAPE INPUT ROUTINE  
TAPE OUTPUT ROUTINE

## \* COMMAND TABLE

```

0214 41          TABLE  FCC    'APPEND'
0215 50
0216 50
0217 45
0218 4E
0219 44
021A 00          FCB    0
021B 12 DD      FDB    APPEND
021D 41          FCC    'A'

021E 00          FCB    0
021F 12 DD      FDB    APPEND
0221 42          FCC    'BOTTOM'
0222 4F
0223 54
0224 54
0225 4F
0226 4D
0227 00          FCB    0
0228 09 BE      FDB    BOTTOM
022A 42          FCC    'B'

022B 00          FCB    0
022C 09 BE      FDB    BOTTOM
022E 43          FCC    'CHANGE'
022F 48
0230 41
0231 4E
0232 47
0233 45
0234 00          FCB    0
0235 0D CB      FDB    CHANGE
0237 43          FCC    'COPY'
0238 4F
0239 50
023A 59
023B 00          FCB    0
023C 0F F3     FDB    COPY
023E 43          FCC    'CO'
023F 4F
0240 00          FCB    0
0241 0F F3     FDB    COPY

```

LOCN	B1	B2	B3		
0243	43			FCC	'C'
0244	00			FCB	0
0245	0D	CB		FDB	CHANGE
0247	44			FCC	'DELETE'
0248	45				
0249	4C				
024A	45				
024B	54				
024C	45				
024D	00			FCB	0
024E	0C	8A		FDB	DELETE
0250	44			FCC	'D'
0251	00			FCB	0
0252	0C	8A		FDB	DELETE
0254	45			FCC	'EXPAND'
0255	58				
0256	50				
0257	41				
0258	4E				
0259	44				
025A	00			FCB	0
025B	12	5C		FDB	EXPAND
025D	45			FCC	'EXP'
025E	58				
025F	50				
0260	00			FCB	0
0261	12	5C		FDB	EXPAND
0263	46			FCC	'FIND'
0264	49				
0265	4E				
0266	44				
0267	00			FCB	0
0268	09	CF		FDB	CFIND
026A	46			FCC	'F'
026B	00			FCB	0
026C	09	CF		FDB	CFIND
026E	47			FCC	'GAP'
026F	41				
0270	50				
0271	00			FCB	0
0272	14	13		FDB	GAP
0274	48			FCC	'HEADER'
0275	45				
0276	41				
0277	44				
0278	45				
0279	52				
027A	00			FCB	0
027B	11	1B		FDB	HEADER
027D	48			FCC	'H'
027E	00			FCB	0

LOCN	B1	B2	B3		
027F	11	1B		FDB	HEADER
0281	49			FCC	'INSERT'
0282	4E				
0283	53				
0284	45				
0285	52				
0286	54				
0287	00			FCB	0
0288	0A	CB		FDB	INSERT
028A	49			FCC	'I'
028B	00			FCB	0
028C	0A	CB		FDB	INSERT
028E	4C			FCC	'LOG' <i>LPR</i>
028F	4F				
0290	47				
0291	00			FCB	0
0292	09	B9		FDB	EXIT <i>LPR</i>
0294	4D			FCC	'MOVE'
0295	4F				
0296	56				
0297	45				
0298	00			FCB	0
0299	0F	D4		FDB	MOVE
029B	4D			FCC	'MO'
029C	4F				
029D	00			FCB	0
029E	0F	D4		FDB	MOVE
02A0	4E			FCC	'NEXT'
02A1	45				
02A2	58				
02A3	54				
02A4	00			FCB	0
02A5	09	CC		FDB	NEXT
02A7	4E			FCC	'NUMBERS'
02AB	55				
02A9	4D				
02AA	42				
02AB	45				
02AC	52				
02AD	53				
02AE	00			FCB	0
02AF	09	1D		FDB	NUMSET
02B1	4E			FCC	'NU'
02B2	55				
02B3	00			FCB	0
02B4	09	1D		FDB	NUMSET
02B6	4E			FCC	'N'
02B7	00			FCB	0
02B8	09	CC		FDB	NEXT
02BA	4F			FCC	'OVERLAY'
02BB	56				
02BC	45				
02BD	52				

LOCN	B1	B2	B3		
02BE	4C				
02BF	41				
02C0	59				
02C1	00			FCB	0
02C2	0F	21		FDB	OVERLA
02C4	4F			FCC	'0'
02C5	00			FCB	0
02C6	0F	21		FDB	OVERLA
02C8	50			FCC	'PRINT'
02C9	52				
02CA	49				
02CB	4E				
02CC	54				
02CD	00			FCB	0
02CE	08	77		FDB	PRINT
02D0	50			FCC	'P'
02D1	00			FCB	0
02D2	08	77		FDB	PRINT
02D4	52			FCC	'READ'
02D5	45				
02D6	41				
02D7	44				
02D8	00			FCB	0
02D9	14	2A		FDB	READ
02DB	52			FCC	'RENUMBER'
02DC	45				
02DD	4E				
02DE	55				
02DF	4D				
02E0	42				
02E1	45				
02E2	52				
02E3	00			FCB	0
02E4	06	A5		FDB	RENUMB
02E6	52			FCC	'REN'
02E7	45				
02E8	4E				
02E9	00			FCB	0
02EA	06	A5		FDB	RENUMB
02EC	52			FCC	'REPLACE'
02ED	45				
02EE	50				
02EF	4C				
02F0	41				
02F1	43				
02F2	45				
02F3	00			FCB	0
02F4	0C	87		FDB	REPLAC
02F6	52			FCC	'R'
02F7	00			FCB	0
02F8	0C	87		FDB	REPLAC
02FA	53			FCC	'SAVE'

LOCN	B1	B2	B3		
02FB	41				
02FC	56				
02FD	45				
02FE	00			FCB	0
02FF	13	9D		FDB	SAVE
0301	53			FCC	'SET'
0302	45				
0303	54				
0304	00			FCB	0
0305	11	CC		FDB	SET
0307	53			FCC	'STOP'
0308	54				
0309	4F				
030A	50				
030B	00			FCB	0
030C	09	89		FDB	EXIT
030E	53			FCC	'S'
030F	00			FCB	0
0310	09	89		FDB	EXIT
0312	54			FCC	'TAB'
0313	41				
0314	42				
0315	00			FCB	0
0316	10	DD		FDB	TAB
0318	54			FCC	'TOP'
0319	4F				
031A	50				
031B	00			FCB	0
031C	09	9D		FDB	TOP
031E	54			FCC	'T'
031F	00			FCB	0
0320	09	9D		FDB	TOP
0322	56			FCC	'VERIFY'
0323	45				
0324	52				
0325	49				
0326	46				
0327	59				
0328	00			FCB	0
0329	09	63		FDB	VERSET
032B	56			FCC	'V'
032C	00			FCB	0
032D	09	63		FDB	VERSET
032F	57			FCC	'WRITE'
0330	52				
0331	49				
0332	54				
0333	45				
0334	00			FCB	0
0335	13	AD		FDB	WRITE
0337	57			FCC	'W'

LOCN	B1	B2	B3		
0338	00			FCB	0
0339	13	AD		FDB	WRITE
033B	58			FCC	'X'
033C	00			FCB	0
033D	09	78		FDB	XCNTRL
033F	5A			FCC	'ZONE'
0340	4F				
0341	4E				
0342	45				
0343	00			FCB	0
0344	11	7E		FDB	SZONE
0346	5A			FCC	'Z'
0347	00			FCB	0
0348	11	7E		FDB	SZONE
034A	00			FCB	0

## \* NEW FILE STRING

034B	4E	NWFSTR	FCC	'NEW FILE:'
034C	45			
034D	57			
034E	20			
034F	46			
0350	49			
0351	4C			
0352	45			
0353	3A			
0354	04		FCB	4

## \* INITIALIZATION ROUTINE

0355	BE	01	FF	INITLZ	LDS	#STACK	
0358	CE	14	92		LDX	#BEGPNT	
035B	DF	97			STX	FILBEG	
035D	DF	99			STX	FILEND	SET END ALSO
035F	CE	02	03		LDX	#RESTRT	
0362	FF	A0	48		STX	\$A048	SET RESTART ADDRESS
0365	CE	00	01		LDX	#1	SET ZONES
0368	DF	5E			STX	ZONE1	
036A	CE	01	36		LDX	#\$0136	
036D	DF	60			STX	ZONE2	
036F	86	46			LDA	A #70	SET UP HEADER
0371	97	96			STA	A HEDCNT	
0373	4F				CLR	A	
0374	97	9D			STA	A TABBUF	FIX STORAGE
0376	4A				DEC	A	
0377	97	8F			STA	A INZFLG	
0379	97	6A			STA	A NUMFLG	TURN ON NUMBERS
037B	97	6B			STA	A VERFLG	ALSO VERIFICATION
037D	CE	03	48		LDX	#NWFSTR	POINT TO STRING
0380	BD	04	83		JSR	PSTRNG	OUTPUT IT

*DFC (CA)?*



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## \* RESTART ENTRY POINT

0383	DE	97	PEDIT	LDX	FILBEG	POINT TO BEGIN
0385	DF	48		STX	CURPOS	
0387	7F	00 6C		CLR	MSLFLG	

## \* MAIN EDIT LOOP

038A	BE	01 FF	EDIT	LDS	#STACK	SETUP STACK POINTER
038D	DF	40		STX	TEMP	SAVE POINTER
038F	DE	48		LDX	CURPOS	SET CURRENT POSITION
0391	DF	4A		STX	NEWPOS	SAVE IT
0393	CE	00 6D		LDX	#PSTZFL	
0396	4F			CLR	A	CLEAR ACC.
0397	A7	00	EDIT1	STA	A 0,X	CLEAR OUT LOCATION
0399	08			INX		BUMP POINTER
039A	BC	00 8E		CPX	#CHRCNT+1	
039D	26	F8		BNE	EDIT1	
039F	DE	40		LDX	TEMP	RESTORE POINTER
03A1	96	8F		LDA	A INZFLG	INITIALIZE?
03A3	27	06		BEQ	EDIT2	
03A5	7F	00 8F		CLR	INZFLG	
03A8	7E	0A EA		JMP	INSER4	GO INSERT LINES
03AB	96	6C	EDIT2	LDA	A MSLFLG	MULTIPLE ST. PER LINE?
03AD	26	22		BNE	EDIT55	
03AF	97	8E		STA	A CHRCNT+1	
03B1	CE	00 BB		LDX	#BUFFER	SET POINTER
03B4	BD	04 4E		JSR	PCRLF	
03B7	86	23		LDA	A #PROMPT	SETUP PROMPT
03B9	BD	02 09		JSR	OUTCH	OUTPUT IT
03BC	BD	04 99	EDIT3	JSR	INCHAR	
03BF	27	C9		BEQ	EDIT	
03C1	A7	00	EDIT4	STA	A 0,X	PUT CHAR IN BUFFER
03C3	B1	0D		CMP	A #CRGRET	IS IT A C.R.
03C5	27	05		BEQ	EDIT5	
03C7	BD	04 BB		JSR	BUFLIM	IS BUFFER FULL?
03CA	20	F0		BRA	EDIT3	REPEAT
03CC	CE	00 BB	EDIT5	LDX	#BUFFER	RESTORE POINTER
03CF	DF	44		STX	BUFPNT	
03D1	7F	00 6C	EDIT55	CLR	MSLFLG	
03D4	BD	04 D2		JSR	FINDL	PROCESS LINE INFO
03D7	4F			CLR	A	
03D8	97	75		STA	A LINFLG	CLEAR FLAS
03DA	97	8C		STA	A DRCTN	
03DC	DF	4A		STX	NEWPOS	SAVE POINTER
03DE	DE	44		LDX	BUFPNT	
03E0	BD	04 92		JSR	SKIPSP	SKIP SPACES
03E3	DF	44		STX	BUFPNT	SAVE POINTER
03E5	B1	3D		CMP	A #'='	IS IT AN '='?
03E7	26	08		BNE	EDIT56	
03E9	08			INX		BUMP POINTER
03EA	DF	44		STX	BUFPNT	

LOCN	B1	B2	B3				
03EC	CE	0A	A5		LDX	#EQUALS	
03EF	20	44			BRA	EDIT85	GO TO IT
03F1	BD	06	63	EDIT56	JSR	TSTEND	TEST END
03F4	26	05			BNE	EDIT58	
03F6	CE	08	77		LDX	#PRINT	POINT TO PRINT
03F9	20	3A			BRA	EDIT85	
03FB	DF	40		EDIT58	STX	TEMP	
03FD	CE	02	14		LDX	#TABLE	POINT TO TABLE
0400	DF	9B		EDIT6	STX	TABPNT	SAVE IT
0402	6D	00			TST	0,X	IS IT NULL?
0404	27	23			BEQ	EDIT8	
0406	A1	00			CMP	A 0,X	CHECK CHARACTER
0408	26	0C			BNE	EDIT7	ARE THEY EQUAL?
040A	DE	44			LDX	BUFPNT	RESTORE POINTER
040C	08				INX		BUMP IT
040D	A6	00		EDIT65	LDA	A 0,X	GET NEXT CHAR.
040F	DF	44			STX	BUFPNT	SAVE POINTER
0411	DE	9B			LDX	TABPNT	
0413	08				INX		BUMP THE TABLE PNTR
0414	20	EA			BRA	EDIT6	
0416	08			EDIT7	INX		BUMP THE POINTER
0417	6D	00			TST	0,X	IS IT NULL?
0419	26	FB			BNE	EDIT7	
041B	08				INX		BUMP POINTER 3 TIMES
041C	08				INX		
041D	08				INX		
041E	6D	00			TST	0,X	END OF TABLE?
0420	27	1F			BEQ	ERROR	REPORT ERROR
0422	09				DEX		
0423	DF	9B			STX	TABPNT	SAVE THE POINTER
0425	DE	40			LDX	TEMP	
0427	20	E4			BRA	EDIT65	REPEAT
0429	08			EDIT8	INX		BUMP THE POINTER
042A	EE	00			LDX	0,X	GET ADDRESS
042C	BC	0A	C8		CFX	#INSERT	IS IT INSERT?
042F	26	04			BNE	EDIT85	
0431	96	7F			LDA	A INLMFL	
0433	26	0A			BNE	EDIT88	
0435	BD	08	21	EDIT85	JSR	TSTOVR	LIMITS?
0438	26	25			BNE	NOTFND	
043A	4F				CLR	A	CLEAR FLAGS
043B	97	72			STA	A OVRBEG	
043D	97	73			STA	A OUREND	
043F	6E	00		EDIT88	JMP	0,X	GO TO IT

## \* ERROR ROUTINE

0441	CE	04	4C	ERROR	LDX	#ERRSTR	POINT TO STRING
------	----	----	----	-------	-----	---------	-----------------

## \* PRINT ERROR MESSAGE

0444	8D	3D		PREROR	BSR	PSTRNG	
0446	7F	00	6C		CLR	MSLFLG	CLEAR FLAG
0449	7E	03	8A		JMP	EDIT	RETURN

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044C 3F ERRSTR FCC '?'

044D 04 FCB 4

\* PRINT CARRIAGE RETURN & LINE FEED

044E DF 42 PCRLF STX XSAVE SAVE POINTER  
 0450 CE 04 58 LDX #CRLFST POINT TO STRING  
 0453 8D 30 BSR PDATA1  
 0455 DE 42 LDX XSAVE RESTORE STRING  
 0457 39 RTS RETURN

0458 0D CRLFST FCB \$D,\$A,0,0,0,0,4  
 0459 0A  
 045A 00  
 045B 00  
 045C 00  
 045D 00  
 045E 04

\* REPORT LINE NOT FOUND

045F CE 04 64 NOTFND LDX #NOFSTR POINT TO STRING  
 0462 20 E0 BRA PREROR

0464 4E NOFSTR FCC 'NO SUCH LINE'  
 0465 4F  
 0466 20  
 0467 53  
 0468 55  
 0469 43  
 046A 48  
 046B 20  
 046C 4C  
 046D 49  
 046E 4E  
 046F 45  
 0470 04 FCB 4

\* REPORT SYNTAX ERROR

0471 CE 04 76 SYNERR LDX #SYNSTR POINT TO STRING  
 0474 20 CE BRA PREROR

0476 53 SYNSTR FCC 'SYNTAX ERROR'  
 0477 59  
 0478 4E  
 0479 54  
 047A 41  
 047B 58  
 047C 20

LOCN B1 B2 B3  
 047D 45  
 047E 52  
 047F 52  
 0480 4F  
 0481 52  
 0482 04

FCB 4

\* PRINT STRING ROUTINE

0483	8D	C9	PSTRNG	BSR	PCRLF	OUT C.R. L.F.
0485	A6	00	PDATA1	LDA A	0,X	GET CHAR.
0487	81	04		CMP A	#4	IS IT TERM?
0489	27	0D		BEQ	SKIPS2	
048B	BD	02 09		JSR	OUTCH	OUTPUT IT
048E	08			INX		BUMP POINTER
048F	20	F4		BRA	PDATA1	

\* SKIP ALL SPACES

0491	08		SKIPSA	INX		
0492	A6	00	SKIPSP	LDA A	0,X	GET A CHAR.
0494	81	20		CMP A	#'	IS IT A SPACE?
0496	27	F9		BEQ	SKIPSA	REPEAT
0498	39		SKIPS2	RTS		RETURN

\* INPUT AND CHECK CHARACTER

0499	BD	02 06	INCHAR	JSR	INCH	GET CHAR
049C	81	08	INCHR1	CMP A	#BACKSP	IS IT A BACKSPACE?
049E	26	0B		BNE	INCHR3	
04A0	8C	00 BB		CPX	#BUFFER	BUFFER BEGINNING?
04A3	27	15		BEQ	INCHR4	
04A5	09			DEX		DEC THE POINTER
04A6	7A	00 BE		DEC	CHRCNT+1	
04A9	20	EE		BRA	INCHAR	
04AB	81	18	INCHR3	CMP A	#DELCOD	IS IT A DELETE?
04AD	27	0B		BEQ	INCHR4	
04AF	81	1F		CMP A	##1F	IS IT CONTROL?
04B1	22	04		BHI	INCH35	
04B3	81	0D		CMP A	#CRGRET	IS IT A C.R.?
04B5	26	E2		BNE	INCHAR	
04B7	7C	00 BE	INCH35	INC	CHRCNT+1	INC CHAR. COUNT
04BA	39		INCHR4	RTS		RETURN

\* CHECK FOR BUFFER OVERFLOW

04BB	08		BUFLIM	INX		BUMP THE POINTER
04BC	8C	01 43		CPX	#BUFFER+136	
04BF	26	F9		BNE	INCHR4	
04C1	86	07	OVER	LDA A	#BELL	LOAD UP BELL
04C3	BD	02 09		JSR	OUTCH	OUTPUT IT

LOCN	B1	B2	B3			
04C6	BD	02	06	JSR	INCH	GET NEW CHAR.
04C9	81	08		CMP A	#BACKSP	IS IT BACKSPACE?
04CB	26	F4		BNE	OVER	
04CD	09			DEX		DEC THE POINTER
04CE	7A	00	8E	DEC	CHRCNT+1	
04D1	39			RTS		RETURN

## \* PROCESS LINE ROUTINE

04D2	BD	BE		FINDL	BSR	SKIPSP	SKIP SPACES
04D4	81	3D			CMP A	#'=	IS IT '='?
04D6	27	0A			BEQ	FINDLO	
04D8	7C	00	75		INC	LINFLG	SET FLAG
04DB	BD	07	3B		JSR	CLASS	CLASSIFY CHAR.
04DE	C1	01			CMP B	#1	IS IT A LETTER
04E0	23	03			BLS	FINDL2	
04E2	DE	4A		FINDLO	LDX	NEWPOS	SET POINTER
04E4	39			FINDL1	RTS		RETURN
04E5	27	23		FINDL2	BEQ	FIND1	
04E7	20	14			BRA	FIND	

## \* TARGET ENTRY POINT

04E9	8D	03		FINDT	BSR	FINDTO	
04EB	DF	93			STX	TRGLIN	SAVE TARGET POS.
04ED	39				RTS		RETURN
04EE	7F	00	8C	FINDTO	CLR	DRCTN	
04F1	BD	07	38		JSR	SKPCLS	
04F4	C1	01			CMP B	#1	IS IT A LETTER?
04F6	23	03			BLS	FINDT2	
04F8	7E	04	71	FINDT1	JMP	SYNERR	REPORT SYNTAX ERROR
04FB	27	7D		FINDT2	BEQ	FIND62	
04FD	7F	00	8C	FIND	CLR	DRCTN	CLEAR DIRECTION
0500	91	84			CMP A	LINO	IS IT LINE NUMBER
0502	26	2E			BNE	FIND2	
0504	08				INX		BUMP THE POINTER
0505	BD	04	92		JSR	SKIPSP	
0508	DF	44			STX	BUFPT	
050A	BD	07	55	FIND1	JSR	BCDCON	
050D	DF	40			STX	TEMP	SAVE POINTER
050F	DE	4A			LDX	NEWPOS	
0511	96	90			LDA A	NUMBER	GET NUMBER
0513	A1	00			CMP A	0,X	COMPARE IT
0515	26	0A			BNE	FIND14	
0517	96	91			LDA A	NUMBER+1	GET NEXT NUM.
0519	A1	01			CMP A	1,X	COMPARE
051B	26	04			BNE	FIND14	
051D	96	92			LDA A	NUMBER+2	
051F	A1	02			CMP A	2,X	
0521	24	03		FIND14	BCC	FIND16	
0523	7A	00	8C		DEC	DRCTN	SET DIRECTION
0526	DE	40		FIND16	LDX	TEMP	RESTORE POINTER
0528	BD	07	AB		JSR	FNDNUM	FIND LINE NUMBER
052B	27	B7			BEQ	FINDL1	

LOCN	B1	B2	B3				
052D	D7	74			STA B	NOCURL	
052F	7E	07	F0		JMP	BAKONE	
0532	BD	06	63	FIND2	JSR	TSTEND	
0535	26	0A			BNE	FIND3	
0537	7D	00	76		TST	NXTFLG	CHECK FLAG
053A	27	A6			BEQ	FINDLO	
053C	DE	4A			LDX	NEWPOS	SET POINTER
053E	7E	08	0F		JMP	UPONE	UP ONE LINE
0541	81	21		FIND3	CMP A	#'!	IS IT A '!'?
0543	26	08			BNE	FIND4	
0545	08				INX		BUMP THE POINTER
0546	DF	44			STX	BUFNT	
0548	DE	99			LDX	FILEND	SET POINTER
054A	7E	07	F0		JMP	BAKONE	BACKUP ONE LINE
054D	81	5E		FIND4	CMP A	#'C	IS IT A 'C'? ^
054F	26	09			BNE	FIND5	
0551	7A	00	8C		DEC	DRCTN	SET DIRECTION
0554	08				INX		BUMP THE POINTER
0555	DF	44			STX	BUFNT	
0557	DE	97			LDX	FILBEG	SET POINTER TO BEGIN
0559	39				RTS		RETURN
055A	81	2B		FIND5	CMP A	#'+	IS IT A '+'?
055C	27	07			BEQ	FIND6	
055E	81	2D			CMP A	#'-	IS IT A '--'?
0560	26	47			BNE	FIND7	
0562	7A	00	8C		DEC	DRCTN	DEC DIRECTION
0565	08			FIND6	INX		BUMP THE POINTER
0566	BD	07	38		JSR	SKPCLS	SKIP SPACES
0569	C1	01			CMP B	#1	IS IT NUMBER?
056B	27	0D			BEQ	FIND62	
056D	23	3A			BLS	FIND7	
056F	D6	75			LDA B	LINFLG	TEST FLAG
0571	27	85			BEQ	FINDT1	
0573	BD	07	A3		JSR	CLRNUM	
0576	DE	4A			LDX	NEWPOS	SET POINTER
0578	20	1A			BRA	FIND66	
057A	BD	07	55	FIND62	JSR	BCDCON	CONVERT NUMBER
057D	DE	4A			LDX	NEWPOS	SET POINTER
057F	7D	00	75		TST	LINFLG	CHECK FLAG
0582	26	08			BNE	FIND65	
0584	BD	08	38	FIND63	JSR	TSTNUM	IS IT ZERO?
0587	27	1F			BEQ	FIND67	
0589	BD	08	2A		JSR	DECNUM	DEC NUMBER
058C	BD	08	38	FIND65	JSR	TSTNUM	TEST NUMBER
058F	27	17			BEQ	FIND67	
0591	BD	08	2A		JSR	DECNUM	
0594	BD	06	C3	FIND66	JSR	NXTLIN	GOTO NEXT LINE
0597	BD	08	21		JSR	TSTOVR	CHECK LIMITS
059A	27	F0			BEQ	FIND65	
059C	96	73			LDA A	OVREND	BEGINNING?
059E	26	08			BNE	FIND67	
05A0	BD	08	38		JSR	TSTNUM	
05A3	26	03			BNE	FIND67	
05A5	7C	00	7F		INC	INLMFL	
05A8	39			FIND67	RTS		RETURN

LOCN	B1	B2	B3					
05A9	8D	4F		FIND7	BSR	SETDEL		SET DELIMITER
05AB	8D	6D		FIN702	BSR	ZONE		SET ZONE
05AD	DE	4A			LDX	NEWPOS		SET POINTER
05AF	BD	06	C3		JSR	NXTLIN		GO TO NEXT
05B2	08			FIND71	INX			BUMP POINTER 3 TIMES
05B3	08				INX			
05B4	08				INX			
05B5	BD	06	5A	FIN711	JSR	FIXZON		CHECK FOR POSTZONE
05B8	BD	08	2A	FIND72	JSR	DECNUM		DEC COLUMN COUNT
05BB	27	22			BEQ	FIND75		
05BD	C6	0D			LDA B	#CRGRET		
05BF	E1	00			CMP B	0,X		TEST FOR C.R.
05C1	27	03			BEQ	FIND73		
05C3	08				INX			BUMP THE POINTER
05C4	20	F2			BRA	FIND72		REPEAT
05C6	96	85		FIND73	LDA A	CHGFLG		CHECK IF CHANGE
05C8	26	DE			BNE	FIND67		
05CA	08				INX			BUMP THE POINTER
05CB	9C	99			CPX	FILEND		END OF FILE ?
05CD	27	06			BEQ	*+08		
05CF	09				DEX			
05D0	96	85		FIND74	LDA A	CHGFLG		
05D2	26	D4			BNE	FIND67		
05D4	09				DEX			DEC THE POINTER
05D5	BD	06	C3		JSR	NXTLIN		
05D8	BD	08	21		JSR	TSTOVR		CHECK LIMITS
05DB	26	17			BNE	FIND77		
05DD	20	D3			BRA	FIND71		
05DF	BD	06	5A	FIND75	JSR	FIXZON		FIX UP ZONE
05E2	BD	06	CD		JSR	STRING		PROCESS STRING
05E5	7D	00	70		TST	FNDFLG		FIND IT?
05E8	27	E6			BEQ	FIND74		
05EA	5F				CLR B			
05EB	96	85			LDA A	CHGFLG		
05ED	26	05			BNE	FIND77		
05EF	BD	07	F6		JSR	BAKON2		
05F2	DF	93			STX	TRGLIN		SAVE TARGET POINTER
05F4	39			FIND77	RTS			RETURN
05F5	86	01		FIND78	LDA A	#1		SET FLAG
05F7	97	73			STA A	OVREND		
05F9	39				RTS			RETURN

## \* SET UP DELIMITERS

05FA	97	95		SETDEL	STA A	DELIM		SAVE DELIMITER
05FC	5F				CLR B			
05FD	08				INX			BUMP THE POINTER
05FE	DF	4E			STX	STRNGB		SAVE BEGINNING
0600	A6	00		SETDE2	LDA A	0,X		GET A CHARACTER
0602	8D	5F			BSR	TSTEND		
0604	27	08			BEQ	SETDE4		
0606	91	95			CMP A	DELIM		IS IT A DELIMITER?
0608	27	04			BEQ	SETDE4		
060A	08				INX			BUMP THE POINTER

LOCN	B1	B2	B3				
060B	5C			INC	B	BUMB COUNTER	
060C	20	F2		BRA	SETDE2	REPEAT	
060E	DF	50		SETDE4	STX	STRNGE	
0610	D7	7B			STA	B	STRCNT
0612	8D	4F			BSR	TSTEND	
0614	27	01			BEQ	SETDE5	
0616	08				INX		BUMP THE POINTER
0617	DF	44		SETDE5	STX	BUFPNT	
0619	39				RTS		RETURN

## \* SET UP ZONE

061A	BD	07	3B	ZONE	JSR	CLASS	GO CLASSIFY CHAR.
061D	7F	00	6D		CLR	PSTZFL	CLEAR FLAG
0620	C1	01			CMP	B	#1
0622	26	17			BNE	ZONE3	IS IT A NUMBER
0624	BD	07	55		JSR	BCDCON	CONVERT NUMBER
0627	8D	1B			BSR	CMPZN1	CHECK ZONE1
0629	25	10			BCS	ZONE3	
062B	8D	22			BSR	CMPZN2	CHECK ZONE2
062D	22	0C			BHI	ZONE3	
062F	7C	00	6D		INC	PSTZFL	SET FLAG
0632	96	90			LDA	A	NUMBER
0634	97	62			STA	A	ZONBUF
0636	96	91			LDA	A	NUMBER+1
0638	97	63			STA	A	ZONBUF+1
063A	39				RTS		RETURN
063B	96	5E		ZONE3	LDA	A	ZONE1
063D	97	62			STA	A	ZONBUF
063F	96	5F			LDA	A	ZONE1+1
0641	97	63			STA	A	ZONBUF+1
0643	39				RTS		RETURN

## \* COMPARE ZONE1 TO NUMBER

0644	D6	90		CMPZN1	LDA	B	NUMBER	GET NUMBER
0646	D1	5E			CMP	B	ZONE1	CHECK
0648	26	04			BNE	CMPZ14		
064A	D6	91			LDA	B	NUMBER+1	
064C	D1	5F			CMP	B	ZONE1+1	
064E	39			CMPZ14	RTS			RETURN

## \* COMPARE ZONE2 TO NUMBER

064F	D6	90		CMPZN2	LDA	B	NUMBER	GET NUMBER
0651	D1	60			CMP	B	ZONE2	CHECK
0653	26	04			BNE	CMPZ24		
0655	D6	91			LDA	B	NUMBER+1	
0657	D1	61			CMP	B	ZONE2+1	
0659	39			CMPZ24	RTS			RETURN



LOCN B1 B2 B3

\* PUT CORRECT ZONE IN NUMBER

```

065A 96 62   FIXZON  LDA A  ZONBUF   GET ZONE
065C 97 90           STA A  NUMBER   PUT IN NUMBER
065E 96 63           LDA A  ZONBUF+1
0660 97 91           STA A  NUMBER+1
0662 39                RTS           RETURN

```

\* TEST TERMINATOR (C.R. OR EOL)

```

0663 81 0D   TSTEND  CMP A  #CRGRET  IS IT C.R.?
0665 27 02           BEQ    TSTEN2
0667 91 B5           CMP A  EOL
0669 39       TSTEN2  RTS           RETURN

```

\* BUMP NUMBER BY 1, .1, OR .01

```

066A 86 01   BMPNUM  LDA A  #1
066C D6 7C           LDA B  INCAMT   CHECK AMOUNT
066E 27 0C           BEQ    INCNUM
0670 2A 02           BPL   BMPNU4
0672 86 10           LDA A  ##10   SET BUMP
0674 9B 92   BMPNU4  ADD A  NUMBER+2  ADD IN
0676 19                DAA           ADJUST IT
0677 97 92           STA A  NUMBER+2  SAVE
0679 25 01           BCS   INCNUM
067B 39                RTS           RETURN

```

\* INCREMENT NUMBER BY ONE

```

067C 86 01   INCNUM  LDA A  #1           SET UP ONE
067E 5F                CLR B
067F 9B 91           ADD A  NUMBER+1  ADD IN ONE
0681 19                DAA           ADJUST IT
0682 97 91           STA A  NUMBER+1  SAVE IT
0684 17                TBA
0685 99 90           ADC A  NUMBER
0687 19                DAA           ADJUST NUMBER
0688 97 90           STA A  NUMBER
068A 39                RTS           RETURN

```

\* PUT NUMBER AT X

```

068B 96 90   PUTNUM  LDA A  NUMBER   GET NUMBER
068D A7 00           STA A  0,X   SAVE IT
068F 96 91           LDA A  NUMBER+1
0691 A7 01           STA A  1,X
0693 96 92           LDA A  NUMBER+2
0695 A7 02           STA A  2,X
0697 39                RTS           RETURN

```

LOCN B1 B2 B3

## \* GET NUMBER FROM X

0698	A6	00	GETNUM	LDA	A	0,X	GET NUMBER
069A	97	90		STA	A	NUMBER	SAVE IT
069C	A6	01		LDA	A	1,X	
069E	97	91		STA	A	NUMBER+1	
06A0	A6	02		LDA	A	2,X	
06A2	97	92		STA	A	NUMBER+2	
06A4	39			RTS			RETURN

## \* RENUMBER FILE

06A5	BD	09	A4	RENUMB	JSR	TFORCR		
06A8	DE	97			LDX	FILBEG	SET POINTER	
06AA	7F	00	7C	RENUM1	CLR	INCACT		
06AD	BD	07	A3		JSR	CLRNUM	CLEAR NUMBER	
06B0	8D	B8		RENUM2	BSR	BMPNUM	BUMP NUMBER	
06B2	8D	D7			BSR	PUTNUM	SAVE IT	
06B4	BD	08	0F		JSR	UPONE		
06B7	96	73			LDA	A	OVREND	HIT LIMIT?
06B9	27	F5			BEQ	RENUM2	REPEAT	
06BB	96	83			LDA	A	CHKFLG	CHECK FLAG
06BD	27	01			BEQ	RENUM4		
06BF	39				RTS		RETURN	
06C0	7E	08	A2	RENUM4	JMP	PRINT6	RETURN	

## \* GO TO NEXT LINE

06C3	96	8C		NXTLIN	LDA	A	DRCTN	CHECK DIRECTION
06C5	2B	03			BMI	NXTLI2		
06C7	7E	08	0F		JMP	UPONE	MOVE UP ONE	
06CA	7E	07	F0	NXTLI2	JMP	BAKONE	MOVE BACK ONE	

## \* PROCESS STRING ROUTINE

06CD	7F	00	70	STRING	CLR	FNDFLG	CLEAR FLAG	
06D0	D6	7B			LDA	B	STRCNT	
06D2	26	06			BNE	STRIN1		
06D4	7C	00	70		INC	FNDFLG	FOUND NULL STRING	
06D7	DF	5C			STX	LASTNO	SAVE POINTER	
06D9	39				RTS		RETURN	
06DA	C6	0D		STRIN1	LDA	B	#CRGRET	
06DC	DF	4C			STX	SRCHPT	SAVE POINTER	
06DE	IF	5C			STX	LASTNO	SAVE POINTER	
06E0	DE	4E			LDX	STRNGB	POINT TO BEGIN	
06E2	DF	56		STRIN2	STX	STRPNT	SAVE POINTER	
06E4	A6	00			LDA	A	0,X	GET A CHARACTER
06E6	DE	4C			LDX	SRCHPT	RESTORE POINTER	
06E8	E1	00		STRIN3	CMP	B	0,X	C. RET. ?
06EA	27	1D			BEQ	STRIN4		
06EC	A1	00			CMP	A	0,X	COMP. CHAR.

LOCN B1 B2 B3					
06EE 27 1D			BEQ	STRINS	
06F0 7D 00 6D			TST	PSTZFL	POST ZONE?
06F3 26 14			BNE	STRIN4	
06F5 7D 00 70			TST	FNDFLG	FOUND?
06F8 26 22			BNE	STRIN6	
06FA 08			INX		BUMP THE POINTER
06FB DF 5C			STX	LASTNO	SAVE IT
06FD 36			PSH A		SAVE ACC.
06FE 37			PSH B		
06FF BD 06 7C			JSR	INCNUM	INC NUMBER
0702 BD 06 4F			JSR	CMPZN2	CHECK ZONE2
0705 33			PUL B		RESTORE ACC
0706 32			PUL A		
0707 23 DF			BLS	STRIN3	
0709 7F 00 70	STRIN4		CLR	FNDFLG	CLEAR FLAG
070C 39			RTS		RETURN
070D 08	STRIN5		INX		
070E DF 4C			STX	SRCHPT	SAVE IT
0710 7C 00 70			INC	FNDFLG	SET FLAG
0713 DE 56			LDX	STRPNT	POINT TO STRING
0715 08			INX		BUMP THE POINTER
0716 9C 50			CPX	STRNGE	END OF STRING?
0718 27 0F			BEQ	STRIN7	
071A 20 C6			BRA	STRIN2	
071C DE 5C	STRIN6		LDX	LASTNO	RESTORE POINTER
071E 08			INX		
071F BD 06 7C			JSR	INCNUM	BUMP NUMBER
0722 BD 06 4F			JSR	CMPZN2	CHECK ZONE
0725 23 A6			BLS	STRING	
0727 20 E0			BRA	STRIN4	
0729 D6 7B	STRIN7		LDA B	STRCNT	GET COUNT
072B 27 08	STRIN8		BEQ	STRIN9	
072D 37			PSH B		SAVE
072E BD 06 7C			JSR	INCNUM	FIX COL
0731 33			PUL B		
0732 5A			DEC B		DEC COUNT
0733 26 F6			BNE	STRIN8	
0735 DE 5C	STRIN9		LDX	LASTNO	
0737 39			RTS		RETURN

## \* SKIP AND CLASSIFY

0738 BD 04 92	SKPCLS	JSR	SKIPSP	
---------------	--------	-----	--------	--

## \* CLASSIFY CHARACTER

073B DF 44	CLASS	STX	BUFPNT	SAVE POINTER
073D A6 00		LDA A	0,X	GET CHARACTER
073F 5F		CLR B		
0740 81 2F		CMP A	#\$2F	CHECK IF NUMBER
0742 23 10		BLS	CLASS4	
0744 81 39		CMP A	#\$'9	
0746 22 02		BHI	CLASS2	

LOCN	B1	B2	B3			
0748	5C			INC	B	SHOW NUMBER
0749	39			RTS		RETURN
074A	81	40		CLASS2	CMP A	##40
074C	23	06			BLS	CLASS4
074E	81	5A			CMP A	#'Z
0750	22	02			BHI	CLASS4
0752	C6	02			LDA B	#2
0754	39			CLASS4	RTS	SHOW LETTER
						RETURN

## \* CONVERT ASCII TO BCD

0755	8D	4C		BCDCON	BSR	CLRNUM	CLEAR NUMBER
0757	8D	E2		BCDC01	BSR	CLASS	CLASSIFY CHAR.
0759	C1	01			CMP B	#1	IS IT A NUMBER?
075B	27	07			BEQ	BCDC02	
075D	81	2E			CMP A	#'	IS IT A '.'?
075F	27	17			BEQ	BCDC05	
0761	DF	44		BCDC15	STX	BUFPNT	SAVE POINTER
0763	39				RTS		RETURN
0764	08			BCDC02	INX		BUMP THE POINTER
0765	84	0F			AND A	##0F	MASK ASCII
0767	C6	04			LDA B	#4	SET COUNTER
0769	78	00	91	BCDC04	ASL	NUMBER+1	
076C	79	00	90		ROL	NUMBER	SHIFT EVERYTHING LEFT
076F	5A				DEC B		DEC THE COUNTER
0770	26	F7			BNE	BCDC04	
0772	9B	91			ADD A	NUMBER+1	ADD IN NUMBER
0774	97	91			STA A	NUMBER+1	
0776	20	DF			BRA	BCDC01	
0778	C6	02		BCDC05	LDA B	#2	SET COUNTER
077A	D7	89			STA B	DECCNT	
077C	08			BCDC06	INX		BUMP THE POINTER
077D	8D	BC			BSR	CLASS	CLASSIFY CHAR.
077F	C1	01			CMP B	#1	IS IT NUMBER?
0781	27	04			BEQ	BCDC65	
0783	4F				CLR A		
0784	09				DEX		DEC THE POINTER
0785	20	02			BRA	BCDC67	
0787	84	0F		BCDC65	AND A	##0F	MASK ASCII
0789	C6	04		BCDC67	LDA B	#4	SET COUNTER
078B	78	00	92	BCDC07	ASL	NUMBER+2	
078E	5A				DEC B		
078F	26	FA			BNE	BCDC07	
0791	9B	92			ADD A	NUMBER+2	
0793	97	92			STA A	NUMBER+2	
0795	7A	00	89		DEC	DECCNT	DEC COUNTER
0798	26	E2			BNE	BCDC06	
079A	08			BCDC08	INX		BUMP THE POINTER
079B	8D	9E			BSR	CLASS	CLASSIFY CHAR.
079D	C1	01			CMP B	#1	IS IT NUMBER?
079F	27	F9			BEQ	BCDC08	
07A1	20	BE			BRA	BCDC15	

LOCN B1 B2 B3

## \* CLEAR NUMBER ROUTINE

07A3	4F	CLRNUM	CLR A	CLEAR ACC.
07A4	97 90		STA A NUMBER	
07A6	97 91		STA A NUMBER+1	CLEAR ALL OUT
07A8	97 92		STA A NUMBER+2	
07AA	39		RTS	RETURN

## \* FIND NUMBERED LINE

07AB	D6 90	FNDNUM	LDA B NUMBER	GET DIGIT
07AD	96 91		LDA A NUMBER+1	
07AF	DE 97		LDX FILBEG	SET POINTER TO BEGIN
07B1	9C 99	FNDNU1	CPX FILEND	END OF FILE?
07B3	26 05		BNE FNDNU4	
07B5	7C 00 73		INC OVREND	SET ERROR FLAG
07B8	5C	FNDNU2	INC B	
07B9	39		RTS	RETURN
07BA	E1 00	FNDNU4	CMP B 0,X	COMPARE DIGIT
07BC	22 1C		BHI FNDNU5	
07BE	26 F8		BNE FNDNU2	
07C0	A1 01		CMP A 1,X	COMP NEXT DIGIT
07C2	22 16		BHI FNDNU5	
07C4	26 F2		BNE FNDNU2	
07C6	D6 92		LDA B NUMBER+2	NEXT DIGIT
07C8	E1 02		CMP B 2,X	CHECK DIGIT
07CA	22 0E		BHI FNDNU5	
07CC	26 EA		BNE FNDNU2	
07CE	7D 00 84		TST SNGLIN	
07D1	26 05		BNE FNDNU5	
07D3	7D 00 83		TST CHKFLG	
07D6	26 E0		BNE FNDNU2	
07D8	5F	FNDNU5	CLR B	
07D9	39		RTS	RETURN
07DA	7D 00 83	FNDNU5	TST CHKFLG	
07DD	26 F9		BNE FNDNU5	
07DF	8D 05		BSR FNDCRT	FIND C.R.
07E1	D6 90		LDA B NUMBER	RESTORE NUM
07E3	08		INX	BUMP THE POINTER
07E4	20 CB		BRA FNDNU1	REPEAT

## \* FIND THE NEXT CARRIAGE RETURN

07E6	36	FNDCRT	PSH A	SAVE ACC.
07E7	86 0D		LDA A #CRGRET	
07E9	08	FNDCCR2	INX	BUMP THE POINTER
07EA	A1 00		CMP A 0,X	CHECK FOR C.R.
07EC	26 FB		BNE FNDCCR2	
07EE	32		PUL A	RESTORE ACC.
07EF	39		RTS	RETURN

## \* MOVE BACK ONE LINE

LOCN B1 B2 B3

07F0	9C	97	BAKONE	CPX	FILBEG	
07F2	27	17		BEQ	BAKON6	
07F4	C6	01		LDA B	#1	SET COUNTER
07F6	09		BAKON2	DEX		DEC THE POINTER
07F7	9C	97		CPX	FILBEG	BEGINNING?
07F9	27	0D		BEQ	BAKON5	
07FB	A6	00		LDA A	0,X	GET A CHAR.
07FD	81	0D		CMP A	#CRGRET	IS IT C.R.?
07FF	26	F5		BNE	BAKON2	
0801	5A			DEC B		DEC THE COUNTER
0802	2A	F2		BPL	BAKON2	
0804	08			INX		BUMP THE POINTER
0805	C6	01		LDA B	#1	
0807	39		BAKON4	RTS		RETURN
0808	5D		BAKON5	TST B		
0809	27	FC		BEQ	BAKON4	
080B	7C	00 72	BAKON6	INC	OVRBEG	SET ERROR FLAG
080E	39			RTS		RETURN

\* MOVE UP ONE LINE

080F	9C	99	UPONE	CPX	FILEND	END OF FILE?
0811	26	06		BNE	UPONE2	
0813	C6	01	UPONE1	LDA B	#1	SET ERROR FLAG
0815	D7	73		STA B	OVREND	
0817	20	D7		BRA	BAKONE	
0819	8D	CB	UPONE2	BSR	FNDCRT	FIND NEXT C.R.
081B	08			INX		BUMP THE POINTER
081C	9C	99		CPX	FILEND	END?
081E	27	F3		BEQ	UPONE1	
0820	39			RTS		RETURN

\* TEST FOR OVER END LIMITS

0821	7D	00 72	TSTOVR	TST	OVRBEG	BEGINNING?
0824	26	03		BNE	TSTOV2	
0826	7D	00 73		TST	OVREND	END?
0829	39		TSTOV2	RTS		RETURN

\* DECREMENT NUMBER BY ONE

082A	86	99	DECNUM	LDA A	#\$99	
082C	16			TAB		SET UP \$9999
082D	9B	91		ADD A	NUMBER+1	ADD IN
082F	19			DAA		ADJUST IT
0830	97	91		STA A	NUMBER+1	SAVE
0832	17			TBA		
0833	99	90		ADC A	NUMBER	
0835	19			DAA		
0836	97	90		STA A	NUMBER	

LOCN B1 B2 B3

## \* TEST NUMBER FOR ZERO

0838	96	90	TSTNUM	LDA A	NUMBER	CHECK IF ZERO
083A	26	02		BNE	TSTNU2	
083C	96	91		LDA A	NUMBER+1	
083E	39		TSTNU2	RTS		RETURN

## \* VERIFY LINE ROUTINE

083F	DF	4A	VERLIN	STX	NEWPOS	SAVE POINTER
0841	BD	07		JSR	FNDCRT	
0844	DF	5A		STX	SPCPT2	SAVE POSITION
0846	4F			CLR A		
0847	97	8D		STA A	CHRCNT	
0849	09		VERLI1	DEX		DEC POINTER
084A	09			DEX		
084B	09			DEX		
084C	09		VERL12	DEX		DEC THE POINTER
084D	E6	00		LDA B	0,X	CHECK CHAR
084F	C1	0D		CMP B	#CRGRET	IS IT C.R.?
0851	27	09		BEQ	VERL15	
0853	E6	03		LDA B	3,X	CHECK
0855	C1	20		CMP B	#'	IS IT A SPACE?
0857	26	03		BNE	VERL15	
0859	4C			INC A		
085A	20	F0		BRA	VERL12	
085C	97	8E	VERL15	STA A	CHRCNT+1	SAVE COUNT
085E	08			INX		
085F	08			INX		
0860	08			INX		BUMP POINTER
0861	08			INX		
0862	DF	58		STX	SPCPT1	
0864	BD	0D	43	JSR	DELCHR	DELETE SPACES
0867	DE	4A		LDX	NEWPOS	
0869	96	6B		LDA A	VERFLG	CHECK FLAG
086B	27	05		BEQ	VERLI2	
086D	8D	40		BSR	OUTLIN	OUTPUT LINE
086F	BD	07	F0	JSR	BAKONE	BACKUP ONE LINE
0872	DF	48	VERLI2	STX	CURPOS	SAVE POINTER
0874	DF	4A		STX	NEWPOS	
0876	39			RTS		RETURN

## \* PRINT ROUTINE

0877	8D	2F	PRINT	BSR	TSTEMP	
0879	DE	44		LDX	BUFPT	SET POINTER
087B	BD	04	E9	JSR	FINDT	FIND TARGET
087E	DE	4A	PRINT0	LDX	NEWPOS	SET POINTER
0880	7C	00	8A	INC	PRNFLG	SET FLAG
0883	DF	48		STX	CURPOS	SAVE IT
0885	9C	93	PRINT1	CPX	TRGLIN	TARGET LINE?
0887	26	03		BNE	PRIN12	

LOCN	B1	B2	B3					
0889	7F	00	8A		CLR	PRNFLG		CLEAR FLAG
088C	8D	21		PRIN12	BSR	OUTLIN		
088E	96	8A			LDA A	PRNFLG		CHECK FLAG
0890	27	0B			BEQ	PRINT5		
0892	96	8C			LDA A	DRCTN		CHECK DIRECTION
0894	27	EF			BEQ	PRINT1		
0896	09				DEX			DEC POINTER TWICE
0897	09				DEX			
0898	BD	07	F0		JSR	BAKONE		MOVE BACK ONE
089B	20	E8			BRA	PRINT1		
089D	BD	07	F0	PRINT5	JSR	BAKONE		MOVE BACK ONE
08A0	DF	48			STX	CURPOS		SAVE POINTER
08A2	BD	09	B5	PRINT6	JSR	TSTMSL		
08A5	7E	03	8A		JMP	EDIT		RETURN

## \* TEST IF FILE EMPTY

08A8	DE	97		TSTEMP	LDX	FILBEG		
08AA	9C	99			CPX	FILEND		
08AC	27	F4			BEQ	PRINT6		
08AE	39				RTS			

## \* OUTPUT ONE LINE

08AF	BD	04	4E	OUTLIN	JSR	PCRLF		
08B2	96	6A			LDA A	NUMFLG		
08B4	26	06			BNE	OUTL15		
08B6	8D	15			BSR	OUTSPC		OUTPUT SPACE
08B8	08				INX			BUMP THE POINTER
08B9	08				INX			
08BA	20	03			BRA	OUTLI2		
08BC	8D	16		OUTL15	BSR	OUTBCD		OUTPUT LINE NO.
08BE	09				DEX			
08BF	08			OUTLI2	INX			
08C0	A6	00			LDA A	0,X		GET A CHAR.
08C2	81	0D			CMP A	#CRGRET		IS IT C.R.?
08C4	27	05			BEQ	OUTLI4		
08C6	BD	02	09		JSR	OUTCH		OUTPUT IT
08C9	20	F4			BRA	OUTLI2		REPEAT
08CB	08			OUTLI4	INX			BUMP THE POINTER
08CC	39				RTS			RETURN

## \* OUTPUT A SPACE

08CD	86	20		OUTSPC	LDA A	#'		LOAD UP SPACE
08CF	BD	02	09		JSR	OUTCH		OUTPUT IT
08D2	0C				CLC			
08D3	39				RTS			RETURN

## \* OUTPUT A BCD NUMBER



LOCN	B1	B2	B3					
08D4	96	6A		OUTBCD	LDA A	NUMFLG		CHECK FLAG
08D6	27	2E			BEQ	OUTB75		
08D8	8D	F3			BSR	OUTSPC		OUTPUT A SPACE
08DA	C6	02			LDA B	#2		SET COUNTER
08DC	0C				CLC			
08DD	A6	00		OUTBC2	LDA A	0,X		GET CHAR.
08DF	85	F0			BIT A	#\$F0		MASK
08E1	25	02			BCS	OUTBC3		
08E3	27	06			BEQ	OUTB35		
08E5	BD	09	13	OUTBC3	JSR	OUTH		OUTPUT DIGIT
08E8	0D				SEC			SET FLAG
08E9	20	02			BRA	OUTBC4		
08EB	8D	E0		OUTB35	BSR	OUTSPC		
08ED	A6	00		OUTBC4	LDA A	0,X		GET DIGIT
08EF	C5	FE			BIT B	#\$FE		CHECK IF DONE
08F1	27	06			BEQ	OUTBC6		
08F3	85	0F			BIT A	#\$0F		MASK
08F5	25	02			BCS	OUTBC6		
08F7	27	05			BEQ	OUTB65		
08F9	8D	1C		OUTBC6	BSR	OUTH		OUTPUT DIGIT
08FB	0D				SEC			
08FC	20	02			BRA	OUTBC7		
08FE	8D	CD		OUTB65	BSR	OUTSPC		
0900	08			OUTBC7	INX			BUMP THE POINTER
0901	5A				DEC B			DEC THE COUNTER
0902	27	07			BEQ	OUTBC8		
0904	2A	D7			BPL	OUTBC2		
0906	86	3D		OUTB75	LDA A	#'=		
0908	7E	02	09	OUTB78	JMP	OUTCH		OUTPUT A "="
090B	86	2E		OUTBC8	LDA A	#'.		OUTPUT A "."
090D	BD	02	09		JSR	OUTCH		
0910	0D				SEC			
0911	20	CA			BRA	OUTBC2		GO FINISH

## \* OUTPUT DIGITS ROUTINE

0913	44			OUTH	LSR A			SHIFT LEFT FOUR TIMES
0914	44				LSR A			
0915	44				LSR A			
0916	44				LSR A			
0917	84	0F		OUTH	AND A	#\$0F		MASK
0919	8B	30			ADD A	#\$30		MAKE ASCII
091B	20	EB			BRA	OUTB78		

## \* SET NUMBERS ON OR OFF

091D	8D	18		NUMSET	BSR	ONOFF		GET ON OFF
091F	27	07			BEQ	NUMSE2		
0921	2B	0A			BMI	NUMSE4		
0923	7F	00	6A		CLR	NUMFLG		CLEAR FLAG
0926	20	08			BRA	NUMSE6		
0928	43			NUMSE2	COM A			COM. FLAG
0929	97	6A			STA A	NUMFLG		SAVE IN FLAG

LOCN	B1	B2	B3			
092B	20	03		BRA	NUMSE6	
092D	73	00	6A	NUMSE4	COM	NUMFLG
0930	DE	4A		NUMSE6	LDX	NEWPOS
0932	DF	48			STX	CURPOS
0934	7E	08	A2		JMP	PRINT6
						COM FLAG
						SET POINTER

## \* CHECK FOR ON OR OFF

0937	DE	44		ONOFF	LDX	BUFNT	SET POINTER
0939	BD	04	92		JSR	SKIPSP	SKIP SPACES
093C	DF	44			STX	BUFNT	SAVE POINTER
093E	DF	40			STX	TEMP	
0940	CE	09	46		LDX	#ONOFFB	POINT TO TABLE
0943	7E	04	00		JMP	EDIT6	

## \* TABLE FOR ON OFF

0946	4F			ONOFFB	FCC	'ON'
0947	4E					
0948	00				FCB	0
0949	09	56			FDB	ON
094B	4F				FCC	'OFF'
094C	46					
094D	46					
094E	00				FCB	0
094F	09	58			FDB	OFF
0951	0D				FCB	CRGRET
0952	00				FCB	0
0953	09	5B			FDB	TOGGLE
0955	00				FCB	0

## \* ON OFF ROUTINES

0956	4F			ON	CLR	A	
0957	39				RTS		RETURN
0958	B6	01		OFF	LDA	A #1	SET FLAG
095A	39				RTS		RETURN
095B	DE	44		TOGGLE	LDX	BUFNT	
095D	09				DEX		
095E	DF	44			STX	BUFNT	FIX
0960	B6	FF			LDA	A #FF	SET FLAG
0962	39				RTS		RETURN

## \* SET VERIFY FLAG

0963	8D	D2		VERSET	BSR	ONOFF	CHECK ON OFF
0965	27	07			BEQ	VERSE2	
0967	2B	0A			BMI	VERSE4	
0969	7F	00	6B		CLR	VERFLG	CLEAR FLAG
096C	20	08			BRA	VERSE6	
096E	43			VERSE2	COM	A	

LOCN	B1	B2	B3				
096F	97	6B		STA	A	VERFLG	
0971	20	03		BRA		VERSE6	
0973	73	00	6B	VERSE4	COM	VERFLG	COM. FLAG
0976	20	B8		VERSE6	BRA	NUMSE6	

## \* CURSOR CONTROL COMMAND "X"

0978	8D	2A		XCNTL	BSR	TFORCR	
097A	CE	09	82		LDX	#CNRSTR	POINT TO STRING
097D	BD	04	85		JSR	PDATA1	OUTPUT IT
0980	20	AE			BRA	NUMSE6	

0982	00			CNRSTR	FCB	0,0,0,0,0,0	
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0983 00

0984 00

0985 00

0986 00

0987 00

0988	04			FCB	4		THIS 4 MUST REMAIN !!
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## \* EXIT ROUTINE

0989	8D	19		EXIT	BSR	TFORCR	
098B	7E	E0	D0		JMP	MIKBUG	EXIT

## \* SET POINTER TO BOTTOM

098E	8D	14		BOTTOM	BSR	TFORCR	
0990	BD	08	A8	BOTTO1	JSR	TSTEMP	
0993	DE	99			LDX	FILEND	
0995	BD	07	F0		JSR	BAKONE	MOVE BACK ONE
0998	DF	48		BOTTO2	STX	CURPOS	SAVE-POINTER
099A	7E	08	A2		JMP	PRINT6	

## \* SET POINTER TO TOP

099D	8D	05		TOP	BSR	TFORCR	
099F	BD	08	A8		JSR	TSTEMP	
09A2	20	F4			BRA	BOTTO2	

## \* TEST OR C.R.

09A4	DE	44		TFORCR	LDX	BUFPNT	SET POINTER
09A6	BD	04	92		JSR	SKIPSP	
09A9	81	0D			CMP	A #CRGRET	IS IT C.R.?
09AB	27	04			BEQ	TFORC2	
09AD	91	B5			CMP	A EOL	
09AF	26	01			BNE	TFORC3	
09B1	39			TFORC2	RTS		RETURN
09B2	7E	04	71	TFORC3	JMP	SYNERR	

LOCN B1 B2 B3

## \* TEST FOR MULTIPLE STATEMENTS PER LINE

09B5	DE	44	TSTMSL	LDX	BUFPT	GET POINTER
09B7	B6	0D		LDA A	#CRGRET	GET C.R.
09B9	D6	B5		LDA B	EOL	GET EOL CHAR.
09BB	A1	00	TSTMS2	CMP A	0,X	CHECK CHARACTER
09BD	27	0C		BEQ	TSTMS5	
09BF	E1	00		CMP B	0,X	
09C1	27	03		BEQ	TSTMS4	
09C3	08			INX		BUMP POINTER ONE
09C4	20	F5		BRA	TSTMS2	REPEAT
09C6	08		TSTMS4	INX		
09C7	DF	44		STX	BUFPT	SAVE BUFFER POINT
09C9	97	6C		STA A	MSLFLG	SET FLAG
09CB	39		TSTMS5	RTS		RETURN

## \* PROCESS THE NEXT COMMAND

09CC	7C	00	76	NEXT	INC	NXTFLG
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## \* FIND COMMAND

09CF	BD	08	A8	CFIND	JSR	TSTEMP	
09D2	7C	00	75		INC	LINFLG	SET FLAG
09D5	8D	71			BSR	OCCURR	CHECK FOR OCCURRENCE
09D7	DE	93			LDX	TRGLIN	SET POINTER
09D9	BD	08	21		JSR	TSTOVR	CHECK LIMITS
09DC	27	2A			BEQ	CFIND2	
09DE	D6	76			LDA B	NXTFLG	CHECK FLAG
09E0	26	43			BNE	CFIND5	
09E2	20	04			BRA	CFIN12	
09E4	96	77		CFIND1	LDA A	ALLFLG	CHECK IF ALL
09E6	26	40			BNE	CFIND6	
09E8	CE	0A	31	CFIN12	LDX	#CFNTST	POINT TO STRING
09EB	BD	04	83		JSR	PSTRNG	OUTPUT IT
09EE	DE	5E			LDX	ZONE1	CHECK ZONES
09F0	8C	00	01		CPX	#0001	
09F3	26	07			BNE	CFIN13	
09F5	DE	60			LDX	ZONE2	CHECK ZONE 2
09F7	8C	01	36		CPX	#0136	
09FA	27	06			BEQ	CFIN14	
09FC	CE	0A	3B	CFIN13	LDX	#ZOKSTR	POINT TO STRING
09FF	BD	04	85		JSR	PDATA1	OUTPUT IT
0A02	7F	00	6C	CFIN14	CLR	MSLFLG	
0A05	7E	03	8A	CFIN15	JMP	EDIT	RETURN
0A08	DE	93		CFIND2	LDX	TRGLIN	POINT TO TARGET
0A0A	9C	4A			CPX	NEWPOS	SAME ONE?
0A0C	27	1A			BEQ	CFIND6	
0A0E	DF	4A			STX	NEWPOS	SAVE IT
0A10	D6	78		CFIND3	LDA B	OCRFLG	CHECK FLAG
0A12	27	11			BEQ	CFIND5	

LOCN	B1	B2	B3				
0A14	D6	76			LDA B	NXTFLG	CHECK FLAG
0A16	26	03			BNE	CFIND4	
0A18	BD	08	3F		JSR	VERLIN	VERIFY LINE
0A1B	BD	0A	83	CFIND4	JSR	NXTOCR	CHECK NEXT OCCUR.
0A1E	BD	08	21		JSR	TSTOVR	CHECK LIMITS
0A21	27	E5			BEQ	CFIND2	
0A23	20	06			BRA	CFIND9	
0A25	BD	08	3F	CFIND5	JSR	VERLIN	VERIFY LINE
0A28	7E	08	A2	CFIND6	JMP	PRINT6	
0A2B	D6	76		CFIND9	LDA B	NXTFLG	CHECK FLAG
0A2D	26	F6			BNE	CFIND5	
0A2F	20	B3			BRA	CFIND1	

0A31	4E		CFNTST	FCC		'NOT FOUND'
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0A32 4F

0A33 54

0A34 20

0A35 46

0A36 4F

0A37 55

0A38 4E

0A39 44

0A3A 04

FCB 4

0A3B	2E		ZOKSTR	FCC		'...ZONES OK?'
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0A3C 2E

0A3D 2E

0A3E 5A

0A3F 4F

0A40 4E

0A41 45

0A42 53

0A43 20

0A44 4F

0A45 4B

0A46 3F

0A47 04

FCB 4

## \* CHECK FOR OCCURRENCE

0A48	DE	44	OCCURR	LDX	BUFFNT	SET POINTER
0A4A	DF	46		STX	BUFSAV	SAVE IT
0A4C	7F	00	77	CLR	ALLFLG	
0A4F	7F	00	78	CLR	OCRFLG	
0A52	BD	04	E9	JSR	FINDT	FIND TARGET
0A55	DE	44		LDX	BUFFNT	RESTORE POINTER
0A57	BD	07	38	JSR	SKPCLS	
0A5A	C1	01		CMP B	#1	IS IT NUMBER?
0A5C	27	09		BEQ	OCCUR3	
0A5E	81	2A		CMP A	#'*	IS IT A '*'?
0A60	26	17		BNE	OCCUR5	
0A62	7C	00	77	INC	ALLFLG	SET FOR ALL OCCUR.
0A65	20	0F		BRA	OCCUR4	

LOCN	B1	B2	B3				
0A67	BD	07	55	OCCUR3	JSR	BCDCON	GET NUMBER
0A6A	BD	08	38		JSR	TSTNUM	ZERO?
0A6D	27	0A			BEQ	OCCUR5	
0A6F	BD	08	2A		JSR	DECNUM	DEC NUMBER
0A72	27	05			BEQ	OCCUR5	
0A74	8D	04			BSR	SAVOCR	SAVE OCCURRENCE
0A76	7C	00	78	OCCUR4	INC	OCRFLG	SET FLAG
0A79	39			OCCUR5	RTS		RETURN

## \* SAVE PRESENT OCCURRENCE COUNT

0A7A	96	90		SAVOCR	LDA A	NUMBER	GET NUMBER
0A7C	97	6E			STA A	OCRCNT	SAVE IT
0A7E	96	91			LDA A	NUMBER+1	
0A80	97	6F			STA A	OCRCNT+1	
0A82	39				RTS		RETURN

## \* PROCESS NEXT OCCURRENCE

0A83	96	77		NXTOCR	LDA A	ALLFLG	CHECK FOR ALL
0A85	26	0F			BNE	NXTOC1	
0A87	96	6E		NXTOC0	LDA A	OCRCNT	GET COUNT
0A89	97	90			STA A	NUMBER	PUT IN NUMBER
0A8B	96	6F			LDA A	OCRCNT+1	
0A8D	97	91			STA A	NUMBER+1	
0A8F	BD	08	2A		JSR	DECNUM	DEC THE COUNT
0A92	27	0B			BEQ	NXTOC2	
0A94	8D	E4			BSR	SAVOCR	SAVE COUNT
0A96	96	85		NXTOC1	LDA A	CHGFLG	
0A98	26	0A			BNE	NXTOC3	
0A9A	DE	46			LDX	BUFSAV	RESTORE POINTER
0A9C	7E	04	E9		JMP	FINDT	FIND TARGET AND RET
0A9F	7F	00	78	NXTOC2	CLR	OCRFLG	CLEAR FLAG
0AA2	20	F2			BRA	NXTOC1	
0AA4	39			NXTOC3	RTS		RETURN

## \* EQUALS COMMAND

0AA5	BD	08	A8	EQUALS	JSR	TSTEMP	
0AA8	DE	44			LDX	BUFPNT	SET POINTER
0AAA	7F	00	7D		CLR	BMPFLG	
0AAD	7C	00	84		INC	SNGLIN	
0AB0	7C	00	7E		INC	EQUFLG	
0AB3	96	74			LDA A	NOCURL	CURRENT LINE?
0AB5	26	20			BNE	INSER1	
0AB7	DE	4A			LDX	NEWPOS	
0AB9	DF	93			STX	TRGLIN	FIX TARGET
0ABB	BD	06	98		JSR	GETNUM	GET NUMBER
0ABE	7C	00	81		INC	REPFLG	SET FLAG
0AC1	96	8E			LDA A	CHRCNT+1	
0AC3	97	82			STA A	TMPCHR	
0AC5	7E	0C	BB		JMP	DELETO	

LOCN B1 B2 B3

## \* INSERT ROUTINE

0ACB DE 44	INSERT	LDX	BUFNT	SET POINTER
0ACA 7F 00 7D		CLR	BMPFLG	CLEAR FLAG
0ACD A6 00		LDA A	0,X	GET CHAR.
0ACF 81 0D		CMP A	#CRGRET	
0AD1 27 17		BEQ	INSER4	
0AD3 7C 00 84		INC	SNGLIN	SET FLAG
0AD6 08		INX		BUMP THE POINTER
0AD7 DF 44	INSER1	STX	BUFNT	SAVE IT
0AD9 CE 00 BB		LDX	#BUFFER	
0ADC 96 8E		LDA A	CHRCNT+1	GET COUNT
0ADE 9C 44	INSER2	CPX	BUFNT	CHECK POINT
0AEO 27 04		BEQ	INSER3	
0AE2 4A		DEC A		DEC THE COUNTER
0AE3 08		INX		BUMP THE POINTER
0AE4 20 F8		BRA	INSER2	
0AE6 8B 03	INSER3	ADD A	#3	FIX COUNT
0AEB 97 8E		STA A	CHRCNT+1	
0AEA IE 4A	INSER4	LDX	NEWPOS	SET POINTER
0AEC DF 48		STX	CURPOS	SAVE POINTER
0AEE 96 7E		LDA A	EQUFLG	
0AF0 27 06		BEQ	INSE42	
0AF2 96 72		LDA A	OVRBEG	CHECK LIMIT
0AF4 27 14		BEQ	INSE43	
0AF6 20 25		BRA	INSER5	
0AF8 BD 06 98	INSE42	JSR	GETNUM	
0AFB 96 7F		LDA A	INLMFL	CHECK FLAG
0AFD 27 0B		BEQ	INSE43	
0AFF 9C 99		CPX	FILEND	EMPTY?
0B01 27 07		BEQ	INSE43	
0B03 5F		CLR B		CLEAR ACC.
0B04 D7 90		STA B	NUMBER	SAVE IN NUMBER
0B06 D7 91		STA B	NUMBER+1	
0B08 20 13		BRA	INSER5	
0B0A BD 08 0F	INSE43	JSR	UPONE	UP ONE LINE
0B0D E6 02		LDA B	2,X	GET DIGIT
0B0F 96 73		LDA A	OUREND	LIMIT?
0B11 27 0A		BEQ	INSER5	
0B13 5F	INSE45	CLR B		
0B14 IE 99		LDX	FILEND	
0B16 9C 97		CPX	FILBEG	
0B18 26 03		BNE	INSER5	
0B1A BD 07 A3		JSR	CLRNUM	CLEAR OUT NUMBER

## \* CALCULATE LINE NUMBER INCREMENT

0B1D DF 58	INSER5	STX	SPCPT1	SAVE POINTER
0B1F 96 7E		LDA A	EQUFLG	
0B21 26 2C		BNE	INSE60	
0B23 96 73		LDA A	OUREND	LIMIT?
0B25 27 05		BEQ	INSE51	
0B27 7F 00 92		CLR	NUMBER+2	

LOCN	B1	B2	B3			
OB2A	20	1C			BRA	INSERT6
OB2C	96	7D		INSE51	LDA A	BMPFLG
OB2E	26	18			BNE	INSERT6
OB30	96	92			LDA A	NUMBER+2 GET NUMBER
OB32	D7	82			STA B	TMPCHR
OB34	9A	82			ORA A	TMPCHR
OB36	27	0D			BEQ	INSE55
OB38	96	7F			LDA A	INLMFL CHECK FLAG
OB3A	27	03			BEQ	INSE52
OB3C	7F	00	92		CLR	NUMBER+2
OB3F	86	01		INSE52	LDA A	#1
OB41	97	7C			STA A	INCAMT SET AMOUNT
OB43	20	03			BRA	INSERT6
OB45	7A	00	7C	INSE55	DEC	INCAMT
OB48	BD	06	6A	INSERT6	JSR	BMPNUM BUMP NUMBER
OB4B	96	84			LDA A	SNGLIN CHECK IF SINGLE IN
OB4D	27	04			BEQ	INSE61

## \* ENTER BUFFERED INPUT MODE

OB4F	DE	44		INSE60	LDX	BUFPNT	
OB51	20	2D			BRA	INSE71	
OB53	7F	00	7F	INSE61	CLR	INLMFL	
OB56	BD	04	4E		JSR	PCRLF	
OB59	CE	00	90		LDX	#NUMBER	POINT TO NUMBER
OB5C	BD	08	D4		JSR	OUTBCD	OUTPUT IT
OB5F	7F	00	8D		CLR	CHRCNT	
OB62	86	03			LDA A	#3	SET COUNTER
OB64	97	8E			STA A	CHRCNT+1	
OB66	97	7D			STA A	BMPFLG	SET FLAG
OB68	CE	00	BB		LDX	#BUFFER	SET POINTER
OB6B	BD	04	99	INSE62	JSR	INCHAR	GET A CHARACTER
OB6E	27	E3			BEQ	INSE61	
OB70	81	0D			CMP A	#CRGRET	IS IT C.R.?
OB72	27	07			BEQ	INSERT7	
OB74	A7	00			STA A	0,X	
OB76	BD	04	BB		JSR	BUFLIM	CHECK LIMIT
OB79	20	F0			BRA	INSE62	REPEAT
OB7B	A7	00		INSERT7	STA A	0,X	
OB7D	CE	00	BB		LDX	#BUFFER	SET POINTER
OB80	DF	44		INSE71	STX	BUFPNT	SAVE IT
OB82	A6	00			LDA A	0,X	GET CHAR.
OB84	91	B4			CMP A	LIND	ESCAPE?
OB86	26	40			BNE	INSE72	
OB88	96	8E			LDA A	CHRCNT+1	
OB8A	80	03			SUB A	#3	FIX COUNT
OB8C	97	8E			STA A	CHRCNT+1	
OB8E	08				INX		BUMP THE POINTER

## \* CHECK IF RENUMBERING NECESSARY

OB8F	DF	40		INS710	STX	TEMP	SAVE POINTER
OB91	DE	4A			LDX	NEWPOS	
OB93	BD	08	0F		JSR	UPONE	UP ONE LINE
OB96	7D	00	73		TST	OVREND	LIMIT?



LOCN B1 B2 B3				
OB99 26 1A		BNE	INS711	
OB9B 7C 00 83		INC	CHKFLG	SET FLAG
OB9E D6 90		LDA B	NUMBER	GET NUMBER
OBA0 96 91		LDA A	NUMBER+1	
OBA2 BD 07 BA		JSR	FNDNU4	CHECK NUMBER
OBA5 26 0E		BNE	INS711	
OBA7 4F		CLR A		
OBA8 97 7C		STA A	INCAMT	SET INC AMOUNT
OBAA 97 92		STA A	NUMBER+2	
OBAC BD 06 B0		JSR	RENUM2	RENUMBER FILE
OBAB CE 0B F2		LDX	#RENSTR	POINT TO STRING
OBBD BD 04 83		JSR	PSTRNG	OUTPUT IT
OBBD DE 40	INS711	LDX	TEMP	RESTORE POINTER
OBBD 7D 00 84		TST	SNGLIN	
OBBA 27 06		BEG	INS712	
OBBC DE 4A		LDX	NEWPOS	FIX POINTER
OBBD DF 48		STX	CURPOS	
ORCO 20 03		BRA	INS713	
OBC2 7C 00 6C	INS712	INC	MSLFLG	SET FLAG
OBC5 7E 03 8A	INS713	JMP	EDIT	

## \* ACTUAL LINE INSERT

OBC8 8D 3E	INSE72	BSR	MAKSPC	MAKE SOME SPACE
OBCA DE 40		LDX	TEMP	RESTORE POINTER
OBCC DF 4A		STX	NEWPOS	
OBCE BD 06 8B		JSR	PUTNUM	PUT NUMBER
OBD1 08		INX		BUMP 3 TIMES
OBD2 08		INX		
OBD3 08		INX		
ORD4 DF 40		STX	TEMP	SAVE POINTER
ORD6 DE 44	INSE75	LDX	BUFPNT	
OBDB A6 00		LDA A	0,X	GET CHAR.
OBDA 08		INX		BUMP THE POINTER
OBDB DF 44		STX	BUFPNT	SAVE IT
OBDD DE 40		LDX	TEMP	
OBDF A7 00		STA A	0,X	PUT CHAR.
OBE1 08		INX		BUMP
OBE2 DF 40		STX	TEMP	SAVE
OBE4 81 0D		CMP A	#CRGRET	
OBE6 26 EE		BNE	INSE75	REPEAT
OBE8 BD 12 85		JSR	EXPLIN	EXPAND TABS
OBEB 96 84		LDA A	SNGLIN	
OBED 26 A0		BNE	INS710	
OBEB 7E 0A EA		JMP	INSER4	

OBF2 53	RENSTR	FCC	'SOME LINES RENUMBERED'
OBF3 4F			
OBF4 4D			
OBF5 45			
OBF6 20			
OBF7 4C			
OBF8 49			
OBF9 4E			

LOCN B1 B2 B3  
 OBFA 45  
 OBFB 53  
 OBFC 20  
 OBFD 52  
 OBFE 45  
 OBFF 4E  
 OC00 55  
 OC01 4D  
 OC02 42  
 OC03 45  
 OC04 52  
 OC05 45  
 OC06 44  
 OC07 04

FCB 4

## \* MAKE ROOM FOR INSERT

OC08	7F	00	89	MAKSPC	CLR	DECCNT	CLEAR COUNT
OC0B	DE	58			LDX	SPCPT1	SET POINTER
OC0D	DF	40			STX	TEMP	SAVE
OC0F	9C	99			CPX	FILEND	END OF FILE?
OC11	26	03			BNE	MAKSP1	
OC13	7C	00	89		INC	DECCNT	
OC16	DE	99		MAKSP1	LDX	FILEND	SET POINTER
OC18	DF	58			STX	SPCPT1	SAVE
OC1A	D6	8D			LDA B	CHRCNT	
OC1C	96	8E			LDA A	CHRCNT+1	
OC1E	26	03			BNE	MAKS21	
OC20	5D			MAKS18	TST B		
OC21	27	37		MAKSP2	BEQ	MAKSP4	
OC23	BC	02	12	MAKS21	CPX	MEMEND	END OF MEMORY?
OC26	27	26			BEQ	MAKSP3	
OC28	08				INX		BUMP THE POINTER
OC29	7D	00	8C		TST	DRCTN	WHICH DIRECTION?
OC2C	26	04			BNE	MAKS22	
OC2E	DF	42			STX	XSAVE	SAVE POINTER
OC30	20	0C			BRA	MAK222	
OC32	7D	00	8B	MAKS22	TST	CPYDRC	
OC35	27	0E			BEQ	MAKS23	
OC37	DF	42			STX	XSAVE	SAVE THE POINTER
OC39	DE	4A			LDX	NEWPOS	GET POSITION
OC3B	08				INX		BUMP IT
OC3C	DF	4A			STX	NEWPOS	SAVE IT
OC3E	DE	93		MAK222	LDX	TRGLIN	GET TARGET
OC40	08				INX		BUMP IT
OC41	DF	93			STX	TRGLIN	
OC43	DE	42			LDX	XSAVE	RESTORE POINTER
OC45	4D			MAKS23	TST A		TEST THE ACC.
OC46	26	01			BNE	MAKS24	
OC48	5A				DEC B		DEC THE COUNTER
OC49	4A			MAKS24	DEC A		
OC4A	26	D7			BNE	MAKS21	
OC4C	20	D2			BRA	MAKS18	REPEAT
OC4E	CE	0C	77	MAKSP3	LDX	#NORMST	POINT TO STRING

LOCN	B1	B2	B3				
0C51	BD	04	83		JSR	PSTRNG	OUTPUT IT
0C54	7F	00	6C		CLR	MSLFLG	
0C57	7E	03	8A		JMP	EDIT	RETURN
0C5A	DF	99		MAKSP4	STX	FILEND	SAVE POINTER
0C5C	DF	5A			STX	SPCPT2	SAVE POINTER
0C5E	96	89			LDA A	DECCNT	CHECK
0C60	26	14			BNE	MAKSP6	
0C62	DF	5A		MAKSP5	STX	SPCPT2	SAVE POINTER
0C64	DE	58		MAKS55	LDX	SPCPT1	
0C66	9C	40			CPX	TEMP	DONE?
0C68	27	0C			BEQ	MAKSP6	
0C6A	09				DEX		DEC THE POINTER
0C6B	A6	00			LDA A	0,X	GET CHAR.
0C6D	DF	58			STX	SPCPT1	SAVE POINTER
0C6F	DE	5A			LDX	SPCPT2	
0C71	09				DEX		DEC THE POINTER
0C72	A7	00			STA A	0,X	PUT THE CHAR.
0C74	20	EC			BRA	MAKSP5	REPEAT
0C76	39			MAKSP6	RTS		RETURN

0C77	4E			NORMST	FCC	'NOT ENOUGH ROOM'
0C78	4F					
0C79	54					
0C7A	20					
0C7B	45					
0C7C	4E					
0C7D	4F					
0C7E	55					
0C7F	47					
0C80	48					
0C81	20					
0C82	52					
0C83	4F					
0C84	4F					
0C85	4D					
0C86	04				FCB	4

## \* REPLACE LINES ROUTINE

0C87	7C	00	81	REPLAC	INC	REPFLG	SET FLAG
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## \* DELETE LINES ROUTINE

0C8A	DE	44		DELETE	LDX	BUFPNT	SET POINTER
0C8C	BD	04	E9		JSR	FINDT	FIND TARGET
0C8F	BD	08	21		JSR	TSTOVR	LIMITS?
0C92	27	27			BEQ	DELETO	
0C94	CE	0D	7F	DELE02	LDX	#NTRCHS	POINT TO STRING
0C97	BD	04	83		JSR	PSTRNG	OUTPUT IT
0C9A	CE	00	BB		LDX	#BUFFER	POINT TO BUFFER
0C9D	BD	04	99	DELE04	JSR	INCHAR	GET A CHARACTER
0CA0	27	F2			BEQ	DELE02	

LOCN B1 B2 B3				
OCA2 A7 00		STA A	O,X	SAVE IT
OCA4 08		INX		
OCA5 81 0D		CMP A	#CRGRET	C.R.?
OCA7 26 F4		BNE	DELE04	REPEAT
OCA9 CE 00 BB		LDX	#BUFFER	
OCAC BD 04 92		JSR	SKIPSP	SKIP SPACES
OCAF 81 59		CMP A	#'Y	WAS IT 'Y'ES?
OCB1 27 08		BEQ	DELETO	
OCB3 CE 0D A3		LDX	#NLDSTR	POINT TO STRING
OCB6 BD 04 83		JSR	PSTRNG	
OCB9 20 60		BRA	DELET5	RETURN
OCBB DE 4A	DELETO	LDX	NEWPOS	SET POINTER
OCBD 96 8C		LDA A	DRCTN	CHECK DIRECTION
OCBF 27 15		BEQ	DELET1	
OCC1 BD 08 OF		JSR	UPONE	MOVE UP ONE
OCC4 96 73		LDA A	OVREND	LIMIT?
OCC6 27 02		BEQ	DELE15	
OCC8 DE 99		LDX	FILEND	
OCCA DF 5A	DELE15	STX	SPCPT2	
OCCE DE 93		LDX	TRGLIN	GET TARGET
OCDE DF 48		STX	CURPOS	MAKE CURRENT
OCDO DF 58		STX	SPCPT1	
OCD2 DE 5A		LDX	SPCPT2	GET POINTER
OCD4 20 11		BRA	DELE25	
OCD6 DF 58	DELET1	STX	SPCPT1	SAVE
OCD8 DF 48		STX	CURPOS	
OCDA DE 93		LDX	TRGLIN	POINT TO TARGET
OCDC BD 08 OF		JSR	UPONE	MOVE UP ONE
OCDF 96 73		LDA A	OVREND	LIMIT?
OCE1 27 02		BEQ	DELET2	
OCE3 DE 99		LDX	FILEND	POINT TO END
OCE5 DF 5A	DELET2	STX	SPCPT2	SAVE POINTER
OCE7 4F	DELE25	CLR A		
OCE8 5F		CLR B		
OCE9 9C 58	DELET3	CPX	SPCPT1	
OCEB 27 07		BEQ	DELET4	
OCED 4C		INC A		
OCEE 26 01		BNE	DELE35	
OCFO 5C		INC B		BUMP THE COUNTER
OCF1 09	DELE35	DEX		
OCF2 20 F5		BRA	DELET3	
OCF4 97 8E	DELET4	STA A	CHRCNT+1	SAVE COUNT
OCF6 D7 8D		STA B	CHRCNT	
OCF8 8D 49		BSR	DELCHR	DELETE CHARACTERS
OCFA 96 81		LDA A	REPFLG	REPLACE?
OCFC 27 1D		BEQ	DELET5	
OCFE DE 48		LDX	CURPOS	SET POINTER
OD00 BD 07 FO		JSR	BAKONE	BACKUP ONE LINE
OD03 96 7E		LDA A	EQUFLG	
OD05 26 2C		BNE	DELET7	
OD07 96 72		LDA A	OVRBEG	CHECK LIMIT
OD09 27 08		BEQ	DELE45	
OD0B BD 07 A3		JSR	CLRNUM	CLEAR NUMBER
OD0E DF 4A		STX	NEWPOS	SAVE NEW POSITION
OD10 7E 0B 1D		JMP	INSER5	

LOCN	B1	B2	B3					
0D13	DF	4A		DELE45	STX	NEWPOS		SAVE
0D15	7F	00	7D		CLR	BMPFLG		
0D18	7E	0A	EA		JMP	INSER4		GO TO INSERT
0D1B	DE	48		DELET5	LDX	CURPOS		CHECK POSITION
0D1D	9C	99			CPX	FILEND		END?
0D1F	26	0D			BNE	DELET6		
0D21	BD	07	F0		JSR	BAKONE		MOVE IT BACK
0D24	DF	40			STX	TEMP		SAVE POINTER
0D26	CE	0D	B4		LDX	#BFRSTR		POINT TO STRING
0D29	BD	04	83		JSR	PSTRNG		OUTPUT IT
0D2C	DE	40			LDX	TEMP		RESTORE
0D2E	DF	48		DELET6	STX	CURPOS		
0D30	7E	08	A2		JMP	PRINT6		
0D33	DF	4A		DELET7	STX	NEWPOS		SAVE POINTER
0D35	96	82			LDA A	TMPCHR		GET CHAR COUNT
0D37	97	8E			STA A	CHRCNT+1		
0D39	4F				CLR A			
0D3A	97	7D			STA A	BMPFLG		CLEAR FLAG
0D3C	97	8D			STA A	CHRCNT		
0D3E	DE	44			LDX	BUFNT		SET POINTER
0D40	7E	0A	D7		JMP	INSER1		GO INSERT IT

## \* DELETE CHARACTER BLOCK

0D43	DE	5A		DELCHR	LDX	SPCPT2		SET POINTER
0D45	9C	58			CPX	SPCPT1		EQUAL?
0D47	27	35			BEQ	DELCH5		
0D49	9C	99			CPX	FILEND		END OF FILE?
0D4B	27	0E			BEQ	DELCH2		
0D4D	A6	00			LDA A	0,X		GET A CHAR.
0D4F	08				INX			BUMP THE POINTER
0D50	DF	5A			STX	SPCPT2		SAVE
0D52	DE	58			LDX	SPCPT1		
0D54	A7	00			STA A	0,X		PUT CHAR.
0D56	08				INX			
0D57	DF	58			STX	SPCPT1		SAVE POINTER
0D59	20	E8			BRA	DELCHR		REPEAT
0D5B	D6	8D		DELCH2	LDA B	CHRCNT		GET COUNT
0D5D	96	8E			LDA A	CHRCNT+1		
0D5F	26	03			BNE	DEL31		
0D61	5D			DEL31	TST B			CHECK COUNT
0D62	27	18		DELCH3	BEQ	DELCH4		
0D64	09			DEL31	DEX			DEC THE POINTER
0D65	7D	00	8C		TST	DRCTN		WHICH DIRECTION?
0D68	26	09			BNE	DEL32		
0D6A	DF	42			STX	XSAVE		
0D6C	DE	93			LDX	TRGLIN		GET TARGET
0D6E	09				DEX			DEC IT
0D6F	DF	93			STX	TRGLIN		PUT IT BACK
0D71	DE	42			LDX	XSAVE		RESTORE POINTER
0D73	4D			DEL32	TST A			TEST COUNT
0D74	26	01			BNE	DEL34		
0D76	5A				DEC B			DEC THE COUNTER
0D77	4A			DEL34	DEC A			

LOCN	B1	B2	B3				
0D78	26	EA		BNE		DELC31	
0D7A	20	E5		BRA		DELC21	
0D7C	DF	99		DELCH4	STX	FILEND	SET NEW END
0D7E	39			DELCH5	RTS		RETURN
0D7F	54			NTRCHS	FCC	'TARGET NOT REACHED!'	
0D80	41						
0D81	52						
0D82	47						
0D83	45						
0D84	54						
0D85	20						
0D86	4E						
0D87	4F						
0D88	54						
0D89	20						
0D8A	52						
0D8B	45						
0D8C	41						
0D8D	43						
0D8E	48						
0D8F	45						
0D90	44						
0D91	21						
0D92	0D			FCB		\$D,\$A,0,0,0,0	
0D93	0A						
0D94	00						
0D95	00						
0D96	00						
0D97	00						
0D98	59			FCC		'YOU SURE? '	
0D99	4F						
0D9A	55						
0D9B	20						
0D9C	53						
0D9D	55						
0D9E	52						
0D9F	45						
0DA0	3F						
0DA1	20						
0DA2	04			FCB		4	
0DA3	4E			NLDSTR	FCC	'NO LINES DELETED'	
0DA4	4F						
0DA5	20						
0DA6	4C						
0DA7	49						
0DA8	4E						
0DA9	45						
0DAA	53						
0DAB	20						
0DAC	44						
0DAD	45						
0DAE	4C						

LOCN	B1	B2	B3		
ODAF	45				
ODB0	54				
ODB1	45				
ODB2	44				
ODB3	04			FCB	4
ODB4	42			BFRSTR	FCC
					'BOTTOM OF FILE REACHED'
ODB5	4F				
ODB6	54				
ODB7	54				
ODB8	4F				
ODB9	4D				
ODBA	20				
ODBB	4F				
ODBC	46				
ODBD	20				
ODBE	46				
ODBF	49				
ODC0	4C				
ODC1	45				
ODC2	20				
ODC3	52				
ODC4	45				
ODC5	41				
ODC6	43				
ODC7	48				
ODC8	45				
ODC9	44				
ODCA	04			FCB	4

## \* CHANGE COMMAND ROUTINE

ODCB	BD	08	A8	CHANGE	JSR	TSTEMP	
ODCE	DE	44			LDX	BUFPT	POINT TO BUFFER
ODD0	BD	07	38		JSR	SKPCLS	
ODD3	BD	06	63		JSR	TSTEND	
ODD6	27	03			BEQ	CHAN12	ERROR
ODD8	5D			CHANG1	TST	B	
ODD9	27	03			BEQ	CHAN15	ERROR
ODDB	7E	0F	04	CHAN12	JMP	CHANG9	
ODDE	7C	00	85	CHAN15	INC	CHGFLG	SET FLAG
ODE1	BD	05	FA		JSR	SETDEL	SET DELIMITERS
ODE4	5F				CLR	B	CLEAR COUNT
ODE5	A6	00		CHANG2	LDA	A	0,X
ODE7	BD	06	63		JSR	TSTEND	
ODEA	27	08			BEQ	CHANG3	
ODEC	91	95			CMP	A	DELIM
ODEE	27	04			BEQ	CHANG3	IS IT DELIMITER?
ODF0	08				INX		BUMP THE POINTER
ODF1	5C				INC	B	BUMP THE COUNT
ODF2	20	F1			BRA	CHANG2	
ODF4	DF	66		CHANG3	STX	CHGEND	SAVE POINTER
ODF6	D7	86			STA	B	SAVE COUNT
ODF8	BD	06	63		JSR	TSTEND	

LOCN B1 B2 B3			
0DFB 27 01		BEQ	CHAN35
0DFD 08		INX	
0DFE DF 44	CHAN35	STX	BUFPT
0E00 DE 4A		LDX	NEWPOS
0E02 08	CHAN37	INX	
0E03 08		INX	
0E04 08		INX	
0E05 DF 64		STX	CHGPNT
0E07 BD 0F 07		JSR	SVSTPT
0E0A 7F 00 85		CLR	CHGFLG
0E0D BD 0A 48		JSR	OCCURR
0E10 7C 00 85		INC	CHGFLG
0E13 BD 0F 14		JSR	RSTSPT
0E16 7F 00 6D		CLR	PSTZFL
0E19 DE 6E		LDX	OCRCNT
0E1B DF 68		STX	OCRTMP
0E1D 96 78		LDA A	OCRFLG
0E1F 27 07		BEQ	CHANG4
0E21 96 7B		LDA A	STRCNT
0E23 26 03		BNE	CHANG4
0E25 7E 0F 04		JMP	CHANG9
0E28 DE 4A	CHANG4	LDX	NEWPOS
0E2A 9C 93		CPX	TRGLIN
0E2C 26 03		BNE	CHANG5
0E2E 7C 00 88		INC	LSTFLG
0E31 BD 06 3B	CHANG5	JSR	ZONE3
0E34 7F 00 79		CLR	CHGONF
0E37 DE 64		LDX	CHGPNT
0E39 BD 06 5A		JSR	FIXZON
0E3C BD 05 B8		JSR	FIND72
0E3F 20 10		BRA	CHA510

## \* LOOP THROUGH OCCURRENCES

0E41 7F 00 79	CHAN50	CLR	CHGONF	
0E44 DE 64	CHAN51	LDX	CHGPNT	SET POINTER
0E46 BD 06 5A		JSR	FIXZON	
0E49 BD 06 4F		JSR	CMPZN2	CHECK ZONE
0E4C 22 7A		BHI	CHANG8	
0E4E BD 03 DF		JSR	FIND75	
0E51 96 90	CHA510	LDA A	NUMBER	GET NUMBER
0E53 97 62		STA A	ZONBUF	PUT IN BUFFER
0E55 96 91		LDA A	NUMBER+1	
0E57 97 63		STA A	ZONBUF+1	
0E59 5D		TST B		
0E5A 26 6C		BNE	CHANG8	
0E5C 5C		INC B		BUMP COUNTER
0E5D D7 87		STA B	FNONFL	SET FLAG
0E5F 96 78	CHAN52	LDA A	OCRFLG	ANY OCCURR.?
0E61 27 0E		BEQ	CHANG6	
0E63 96 77		LDA A	ALLFLG	CHANGE ALL?
0E65 26 0A		BNE	CHANG6	
0E67 BD 0A 87		JSR	NXTOCO	
0E6A DE 5C	CHAN55	LDX	LASTNO	SET POINTER
0E6C 08		INX		BUMP IT



LOCN	B1	B2	B3			
0E6D	DF	64		STX	CHGPNT	
0E6F	20	D0		BRA	CHAN50	

## \* DELETE STRING ONE

0E71	7C	00	79	CHANG6	INC	CHGONF	SET FLAG
0E74	DE	68			LDX	OCRTPM	CHECK COUNT
0E76	27	04			BEQ	CHAN61	
0E78	86	01			LDA A	#1	
0E7A	97	78			STA A	OCRFLG	
0E7C	DF	6E		CHAN61	STX	OCRCNT	FIX COUNT
0E7E	DE	5C			LDX	LASTNO	GET STR. LOCATION
0E80	DF	58			STX	SPCPT1	
0E82	D6	7B			LDA B	STRCNT	
0E84	27	10			BEQ	CHAN66	
0E86	7F	00	8D		CLR	CHRCNT	CLEAR COUNT
0E89	D7	8E			STA B	CHRCNT+1	
0E8B	27	04		CHAN62	BEQ	CHAN65	
0E8D	08				INX		BUMP POINTER
0E8E	5A				DEC B		DEC THE COUNTER
0E8F	20	FA			BRA	CHAN62	REPEAT
0E91	DF	5A		CHAN65	STX	SPCPT2	SAVE POINTER
0E93	BD	0D	43		JSR	DELCHR	GO DELETE

## \* INSERT STRING TWO

0E96	D6	86		CHAN66	LDA B	STRCN2	GET COUNT
0E98	27	23			BEQ	CHA675	
0E9A	7F	00	8D		CLR	CHRCNT	CLEAR OUT COUNT
0E9D	D7	8E			STA B	CHRCNT+1	SET COUNTER
0E9F	DE	5C			LDX	LASTNO	SET POINTER
0EA1	DF	58			STX	SPCPT1	
0EA3	BD	0C	08		JSR	MAKSPC	GO MAKE ROOM
0EA6	D6	8E			LDA B	CHRCNT+1	
0EA8	DE	50			LDX	STRNGE	POINT TO STRING END
0EAA	08			CHAN67	INX		BUMP IT
0EAB	A6	00			LDA A	0,X	GET CHAR
0EAD	DF	40			STX	TEMP	
0EAF	DE	5C			LDX	LASTNO	
0EB1	A7	00			STA A	0,X	PUT CHARACTER
0EB3	08				INX		BUMP POINTER
0EB4	DF	5C			STX	LASTNO	SAVE
0EB6	DF	64			STX	CHGPNT	
0EB8	DE	40			LDX	TEMP	RESTORE
0EBA	5A				DEC B		DEC THE COUNTER
0EBB	26	ED			BNE	CHAN67	
0EBD	96	77		CHA675	LDA A	ALLFLG	DO ALL?
0EBF	27	1C			BEQ	CHAN81	
0EC1	DE	5C			LDX	LASTNO	
0EC3	DF	64			STX	CHGPNT	SAVE POINTER
0EC5	7E	0E	44		JMP	CHAN51	REPEAT

## \* CHANGE CLEANUP AND FINISH

0ECB	7F	00	78	CHANG8	CLR	OCRFLG	CLEAR FLAG
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LOCN	B1	B2	B3					
0ECB	DE	68			LDX	OCRTMP		GET COUNT
0ECD	27	04			BEQ	CHAN80		
0ECF	86	01			LDA A	#1		SET FLAG
0ED1	97	78			STA A	OCRFLG		
0ED3	DF	6E		CHAN80	STX	OCRCNT		SET OCCUR. COUNT
0ED5	96	87			LDA A	FNONFL		CHECK FLAG
0ED7	26	04			BNE	CHAN81		
0ED9	96	88			LDA A	LSTFLG		
0EDB	26	27			BNE	CHANG9		
0EDD	DE	4A		CHAN81	LDX	NEWPOS		
0EDF	96	79			LDA A	CHGONF		
0EE1	27	03			BEQ	CHAN82		
0EE3	BD	08	3F		JSR	VERLIN		VERIFY CHANGE
0EE6	96	88		CHAN82	LDA A	LSTFLG		
0EE8	27	06			BEQ	CHAN84		
0EEA	7F	00	79		CLR	CHGONF		CLEAR FLAG
0EED	7E	08	A2		JMP	PRINT6		
0EF0	BD	06	C3	CHAN84	JSR	NXTLIN		FIND NEXT LINE
0EF3	DF	4A			STX	NEWPOS		SAVE POINTER
0EF5	9C	93			CPX	TRGLIN		TARGET LINE?
0EF7	26	03			BNE	CHAN86		
0EF9	7C	00	88		INC	LSTFLG		SET LAST FLAG
0EFC	08			CHAN86	INX			BUMP 3 TIMES
0EFD	08				INX			
0EFE	08				INX			
0EFF	DF	64			STX	CHGPNT		SAVE POINTER
0F01	7E	0E	31		JMP	CHANG5		REPEAT
0F04	7E	04	41	CHANG9	JMP	ERROR		REPORT ERROR

## \* SAVE STRING POINTER INFO

0F07	DE	4E		SVSTPT	LDX	STRNGB		GET POINTER
0F09	DF	52			STX	STRGB1		SAVE IT
0F0B	DE	50			LDX	STRNGE		
0F0D	DF	54			STX	STRGE1		
0F0F	96	7B			LDA A	STRCNT		GET COUNT
0F11	97	71			STA A	STRCN1		SAVE IT
0F13	39				RTS			RETURN

## \* RESTORE STRING POINTER INFO

0F14	DE	52		RSTSPT	LDX	STRGB1		GET POINTER
0F16	DF	4E			STX	STRNGB		RESTORE
0F18	DE	54			LDX	STRGE1		
0F1A	DF	50			STX	STRNGE		
0F1C	96	71			LDA A	STRCN1		GET COUNT
0F1E	97	7B			STA A	STRCNT		RESTORE IT
0F20	39				RTS			RETURN

## \* OVERLAY ROUTINE

0F21	BD	08	AB	OVERLA	JSR	TSTEMP		
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LOCN	B1	B2	B3			
0F24	86	20			LDA A	SETUP SPACE
0F26	97	95			STA A	AS DELIMITER
0F28	7F	00	BC		CLR	DRCTN
0F2B	DE	44			LDX	BUFNT
0F2D	A6	00			LDA A	0,X
0F2F	81	0D			CMP A	#CRGRET
0F31	27	12			BEQ	OVRLA1
0F33	BD	07	3B		JSR	CLASS
0F36	5D				TST B	
0F37	27	03			BEQ	OVRLA0
0F39	7E	04	71		JMP	SYNERR
0F3C	97	95		OVRLA0	STA A	DELIM
0F3E	08				INX	
0F3F	A6	00			LDA A	0,X
0F41	81	0D			CMP A	#CRGRET
0F43	26	2C			BNE	OVRL35
0F45	DE	4A		OVRLA1	LDX	NEWPOS
0F47	BD	08	AF	OVRL11	JSR	OUTLIN
0F4A	96	6A			LDA A	NUMFLG
0F4C	26	05			BNE	OVRL12
0F4E	CE	0F	D2		LDX	#OVRLST+8
0F51	20	03			BRA	OVRL16
0F53	CE	0F	CA	OVRL12	LDX	#OVRLST
0F56	BD	04	83	OVRL16	JSR	PSTRNG
0F59	CE	00	BB		LDX	#BUFFER
0F5C	BD	04	99	OVRLA2	JSR	INCHAR
0F5F	27	E4			BEQ	OVRLA1
0F61	81	0D			CMP A	#CRGRET
0F63	27	07			BEQ	OVRLA3
0F65	A7	00			STA A	0,X
0F67	BD	04	BB		JSR	BUFLIM
0F6A	20	F0			BRA	OVRLA2
0F6C	A7	00		OVRLA3	STA A	0,X
0F6E	CE	00	BB		LDX	#BUFFER
0F71	DF	44		OVRL35	STX	BUFNT
0F73	C6	0D			LDA B	#CRGRET
0F75	DE	4A			LDX	NEWPOS
0F77	08				INX	
0F78	08				INX	
0F79	08				INX	
0F7A	DF	40			STX	TEMP
0F7C	DE	44		OVRLA4	LDX	BUFNT
0F7E	A6	00		OVRL41	LDA A	0,X
0F80	08				INX	
0F81	DF	44			STX	BUFNT
0F83	81	0D			CMP A	#CRGRET
0F85	27	3B			BEQ	OVRLA7
0F87	DE	40			LDX	TEMP
0F89	7D	00	BC		TST	DRCTN
0F8C	26	08			BNE	OVRL43
0F8E	E1	00			CMP B	0,X
0F90	27	0B			BEQ	OVRLA5
0F92	91	95			CMP A	DELIM
0F94	27	02			BEQ	OVRL45
0F96	A7	00		OVRL43	STA A	0,X



LOCN B1 B2 B3

## \* COPY LINES COMMAND

OFF3	DE	44		COPY	LDX	BUFNT	POINT TO BUFFER
OFF5	7C	00	76		INC	NXTFLG	SET FLAG
OFF8	7C	00	75		INC	LINFLG	SET FLAG
OFFB	BD	04	E9		JSR	FINDT	FIND TARGET
OFFE	9C	99			CPX	FILEND	
1000	27	1A			BEQ	COPY0	
1002	7F	00	75		CLR	LINFLG	
1005	7F	00	76		CLR	NXTFLG	
1008	9C	97			CPX	FILBEG	BEGINNING?
100A	26	04			BNE	COPY02	
100C	9C	4A			CPX	NEWPOS	
100E	27	04			BEQ	COPY05	
1010	96	8C		COPY02	LDA A	DRCTN	FIX DIRECTION
1012	97	8B			STA A	CPYDRC	
1014	7F	00	8C	COPY05	CLR	DRCTN	
1017	BD	08	21		JSR	TSTOVR	LIMITS?
101A	27	03			BEQ	COPY1	
101C	7E	04	5F	COPY0	JMP	NOTFND	REPORT ERROR
101F	BD	07	E6	COPY1	JSR	FNDCRT	FIND NEXT C.R.
1022	08				INX		BUMP POINTER ONE
1023	DF	58			STX	SPCPT1	
1025	DE	44			LDX	BUFNT	
1027	BD	04	E9		JSR	FINDT	GO FIND TARGET
102A	BD	08	21		JSR	TSTOVR	LIMITS?
102D	26	ED			BNE	COPY0	
102F	7D	00	8C		TST	DRCTN	DIRECTION?
1032	26	08			BNE	COPY15	
1034	DE	4A			LDX	NEWPOS	GET POINTER
1036	DF	40			STX	TEMP	
1038	DE	93			LDX	TRGLIN	
103A	20	06			BRA	COPY18	
103C	DE	93		COPY15	LDX	TRGLIN	GET TARGET
103E	DF	40			STX	TEMP	SAVE IT
1040	DE	4A			LDX	NEWPOS	
1042	BD	07	E6	COPY18	JSR	FNDCRT	GET NEXT C.R.
1045	08				INX		BUMP POINTER
1046	DF	93			STX	TRGLIN	SET TARGET
1048	DE	40			LDX	TEMP	
104A	DF	4A			STX	NEWPOS	
104C	4F				CLR A		CLEAR ACCUMULATORS
104D	5F				CLR B		
104E	08			COPY2	INX		BUMP THE POINTER
104F	4C				INC A		BUMP COUNT
1050	26	01			BNE	COPY25	
1052	5C				INC B		
1053	9C	93		COPY25	CPX	TRGLIN	FINISHED?
1055	27	10			BEQ	COPY3	
1057	9C	58			CPX	SPCPT1	OVERLAP?
1059	26	F3			BNE	COPY2	
105B	CE	10	B4		LDX	#OVLPT	POINT TO STRING
105E	BD	04	83		JSR	PSTRNG	OUTPUT IT

LOCN B1 B2 B3			
1061 7F 00 6C		CLR	MSLFLG
1064 7E 03 8A		JMP	EDIT
1067 97 8E	COPY3	STA A	CHRCNT+1
1069 D7 8D		STA B	CHRCNT
106B 86 01		LDA A	#1
106D 97 8C		STA A	DRCTN
106F BD 0C 08		JSR	MAKSPC
1072 DE 5A		LDX	SPCPT2
1074 DF 48		STX	CURPOS
1076 DE 58		LDX	SPCPT1
1078 DF 42		STX	XSAVE
107A DE 93		LDX	TRGLIN
107C DF 58		STX	SPCPT1
107E DE 4A		LDX	NEWPOS
1080 DF 40		STX	TEMP
1082 BD 0C 64		JSR	MAKSS5
1085 DE 42		LDX	XSAVE
1087 7F 00 72		CLR	OVRBEG
108A BD 07 F0		JSR	BAKONE
108D 96 72		LDA A	OVRBEG
108F 27 18		BEQ	COPY5
1091 BD 07 A3		JSR	CLRNUM
1094 7C 00 83	COPY4	INC	CHKFLG
1097 BD 06 B0		JSR	RENUM2
109A DE 48		LDX	CURPOS
109C BD 07 F0		JSR	BAKONE
109F DF 48		STX	CURPOS
10A1 96 80		LDA A	MOVFLG
10A3 27 01		BEQ	COPY45
10A5 39		RTS	
10A6 7E 08 A2	COPY45	JMP	PRINT6
10A9 BD 06 98	COPY5	JSR	GETNUM
10AC 4F		CLR A	
10AD 97 92		STA A	NUMBER+2
10AF BD 08 0F		JSR	UFONE
10B2 20 E0		BRA	COPY4
10B4 53	OVL PST	FCC	'SOURCE OVERLAPS DESTINATION'
10B5 4F			
10B6 55			
10B7 52			
10B8 43			
10B9 45			
10BA 20			
10BB 4F			
10BC 56			
10BD 45			
10BE 52			
10BF 4C			
10C0 41			
10C1 50			
10C2 53			
10C3 20			
10C4 44			
10C5 45			

LOCN B1 B2 B3  
 10C6 53  
 10C7 54  
 10C8 49  
 10C9 4E  
 10CA 41  
 10CB 54  
 10CC 49  
 10CD 4F  
 10CE 4E  
 10CF 04

FCB 4

\* TAB SET COMMAND

10D0	CE	00	9D	TAB	LDX	#TABBUF	SET POINTER
10D3	DF	9B			STX	TABPNT	
10D5	DE	44		TAB2	LDX	BUFPNT	POINT TO BUFFER
10D7	BD	04	92		JSR	SKIPSP	
10DA	DF	44			STX	BUFPNT	SAVE
10DC	BD	06	63		JSR	TSTEND	
10DF	27	2F			BEQ	TAB6	
10E1	BD	07	3B		JSR	CLASS	CLASSIFY CHAR.
10E4	C1	01			CMP	B #1	IS IT A NUMBER?
10E6	27	07			BEQ	TAB4	
10E8	22	2E			BHI	TAB8	
10EA	08				INX		BUMP THE POINTER
10EB	DF	44			STX	BUFPNT	SAVE IT
10ED	20	E6			BRA	TAB2	
10EF	BD	07	55	TAB4	JSR	BCICON	GET COLUMN
10F2	DF	44			STX	BUFPNT	
10F4	5F				CLR	B	
10F5	BD	08	3B		JSR	TSTNUM	IS IT ZERO?
10F8	27	16			BEQ	TAB6	
10FA	5C			TAB5	INC	B	BUMP COUNT
10FB	37				PSH	B	
10FC	BD	08	2A		JSR	DECNUM	DEC THE COUNT
10FF	33				PUL	B	
1100	26	F8			BNE	TAB5	
1102	DE	9B			LDX	TABPNT	POINT TO TABS
1104	E7	00			STA	B 0,X	SAVE COUNT
1106	08				INX		
1107	DF	9B			STX	TABPNT	FIX TAB POINTER
1109	8C	00	B1		CPX	#TABEND	
110C	27	02			BEQ	TAB6	
110E	20	C5			BRA	TAB2	
1110	4F			TAB6	CLR	A	
1111	DE	9B			LDX	TABPNT	
1113	A7	00			STA	A 0,X	CLEAR TAB
1115	7E	09	30		JMP	NUMSE6	
1118	7E	04	71	TAB8	JMP	SYNERR	REPORT ERROR

\* PRINT HEADER COMMAND

111B CE 00 9D HEADER LDX #TABBUF SET POINTER

111E	DF	9B		STX	TABPNT		
1120	DE	44		LDX	BUFNT		
1122	BD	04	92	JSR	SKIPSP	SKIP ALL SPACES	
1125	BD	06	63	JSR	TSTEND		
1128	27	1C		BEQ	HEAD42		
112A	BD	07	3B	HEADE2	JSR	CLASS	CLASSIFY CHAR.
112D	C1	01		CMP	B #1		IS IT NUMBER?
112F	26	E7		BNE	TAB8		ERROR
1131	BD	07	55	JSR	BCDCON		GET NUMBER COUNT
1134	DF	44		STX	BUFNT		
1136	BD	08	38	JSR	TSTNUM		IS IT ZERO?
1139	27	40		BEQ	HEADE7		
113B	5F			CLR	B		
113C	5C		HEADE3	INC	B		BUMP COUNTER
113D	37			PSH	B		
113E	BD	08	2A	JSR	DECNUM		DEC NUMBER
1141	33			PUL	B		
1142	26	F8		BNE	HEADE3		
1144	D7	96	HEADE4	STA	B	HEDCNT	SAVE COUNT
1146	BD	07	A3	HEAD42	JSR	CLRNUM	CLEAR NUMBER
1149	BD	04	4E	JSR	PCRLF		OUTPUT C.R. L.F.
114C	96	6A		LDA	A NUMFLG		LINE NUMBERS ON?
114E	27	08		BEQ	HEADE5		
1150	C6	08		LDA	B #8		SET COUNT
1152	BD	08	CD	HEAD45	JSR	OUTSPC	OUT SPACE
1155	5A			DEC	B		
1156	26	FA		BNE	HEAD45		
1158	BD	08	CD	HEADE5	JSR	OUTSPC	
115B	5F			CLR	B		CLEAR COUNT
115C	37		HEAD55	PSH	B		
115D	BD	06	7C	JSR	INCNUM		BUMP NUMBER
1160	33			PUL	B		
1161	5C			INC	B		BUMP COUNT
1162	DE	9B		LDX	TABPNT		GET TAB COL.
1164	E1	00		CMP	B 0,X		THERE?
1166	26	0A		BNE	HEAD57		
1168	86	2D		LDA	A #'-		SET UP '-'
116A	BD	02	09	JSR	OUTCH		OUTPUT IT
116D	08			INX			BUMP POINTER
116E	DF	9B		STX	TABPNT		
1170	20	05		BRA	HEAD58		
1172	96	91	HEAD57	LDA	A NUMBER+1		GET NUMBER
1174	BD	09	17	JSR	OUTHR		OUTPUT IT
1177	D1	96	HEAD58	CMP	B HEDCNT		
1179	26	E1		BNE	HEAD55		REPEAT TIL DONE
117B	7E	09	30	HEADE7	JMP	NUMSE6	

## \* SET UP ZONE COLUMN COMMAND

117E	DE	44	SZONE	LDX	BUFNT	POINT TO BUFFER
1180	BD	04	92	JSR	SKIPSP	
1183	BD	06	63	JSR	TSTEND	
1186	27	0A		BEQ	SZONE2	
1188	BD	07	3B	JSR	CLASS	CLASSIFY CHARACTER



LOCN	B1	B2	B3					
118B	C1	01			CMP B	#1		IS IT A NUMBER?
118D	27	0A			BEQ	SZONE3		
118F	22	38			BHI	SZONE8		
1191	08				INX			
1192	DF	44		SZONE2	STX	BUFPNT		SAVE POINTER
1194	CE	00	01		LDX	#\$0001		SET COLUMN 1
1197	20	07			BRA	SZONE4		
1199	BD	07	55	SZONE3	JSR	BCDCON		GET NUMBER
119C	DF	44			STX	BUFPNT		SAVE POINTER
119E	DE	90			LDX	NUMBER		
11A0	DF	5E		SZONE4	STX	ZONE1		FIX ZONE1
11A2	DE	44			LDX	BUFPNT		
11A4	BD	04	92	SZONE5	JSR	SKIPSP		SKIP ALL SPACES
11A7	BD	06	63		JSR	TSTEND		
11AA	27	0C			BEQ	SZONE6		
11AC	BD	07	3B		JSR	CLASS		GO CLASSIFY
11AF	C1	01			CMP B	#1		IS IT A NUMBER?
11B1	27	0A			BEQ	SZONE7		
11B3	22	14			BHI	SZONE8		ERROR
11B5	08				INX			BUMP POINTER
11B6	20	EC			BRA	SZONE5		
11B8	CE	01	36	SZONE6	LDX	#\$0136		SET COLUMN 136
11BB	20	07			BRA	SZON75		
11BD	BD	07	55	SZONE7	JSR	BCDCON		GET NUMBER
11C0	DF	44			STX	BUFPNT		SAVE POINTER
11C2	DE	90			LDX	NUMBER		
11C4	DF	60		SZON75	STX	ZONE2		SET ZONE2
11C6	7E	09	30		JMP	NUMSE6		
11C9	7E	04	41	SZONE8	JMP	ERROR		REPORT ERROR

## \* SET SPECIAL CHARATERS COMMAND

11CC	DE	44		SET	LDX	BUFPNT		SET POINTER
11CE	BD	04	92		JSR	SKIPSP		
11D1	DF	44			STX	BUFPNT		
11D3	DF	40			STX	TEMP		SAVE POINTER
11D5	CE	12	41		LDX	#CHRTBL		POINT TO TABLE
11DB	7E	04	00		JMP	EDIT6		GO FIND NAME

## \* SET SPECIALS HERE

## \* TAB

11DB	CE	00	B2	STAB	LDX	#TABCH		POINT TO TAB CHAR
11DE	20	0D			BRA	SETC		

## \* FILL

11E0	CE	00	B3	SFILL	LDX	#FILL		POINT TO FILL
11E3	20	08			BRA	SETC		

## \* EOL

11E5	CE	00	B5	SEOL	LDX	#EOL		POINT TO EOL CHAR
11E8	20	03			BRA	SETC		

## \* LINO

11EA	CE	00	B4	SLINO	LDX	#LINO		POINT TO IT
------	----	----	----	-------	-----	-------	--	-------------

LOCN B1 B2 B3

## \* SET THE CHARACTER

11ED	DF	40	SETC	STX	TEMP	SAVE POINTER
11EF	DE	44		LDX	BUFNT	GO TO BUFFER
11F1	BD	04	92	JSR	SKIPSP	
11F4	81	3D		CMP	A #'=	IS IT =
11F6	26	3F		BNE	SETC8	ERROR
11F8	8D	40		BSR	CHFRQU	
11FA	26	3B		BNE	SETC8	ERROR
11FC	8D	3C		BSR	CHFRQU	
11FE	26	04		BNE	SETC2	
1200	4F			CLR	A	SET NULL CHAR.
1201	36			PSH	A	
1202	20	0F		BRA	SETC4	
1204	BD	07	3B	SETC2	JSR	CLASS
1207	5D			TST	B	
1208	26	2D		BNE	SETC8	ERROR?
120A	81	0D		CMP	A #CRGRET	
120C	27	29		REQ	SETC8	
120E	36			PSH	A	SAVE CHAR
120F	8D	29		BSR	CHFRQU	
1211	26	24		BNE	SETC8	ERROR
1213	08			SETC4	INX	
1214	DF	44		STX	BUFNT	SAVE POSITION
1216	BD	09	A4	JSR	TFORCR	TEST END
1219	32			PUL	A	GET CHAR
121A	DE	40		LDX	TEMP	RESTORE POINTER
121C	8C	00	B3	CPX	#FILL	IS IT FILL CHAR?
121F	26	07		BNE	SETC5	
1221	4D			TST	A	
1222	26	0E		BNE	SETC6	
1224	86	20		LDA	A #'	SETUP SPACE
1226	20	0A		BRA	SETC6	
1228	8C	00	B4	SETC5	CPX	#LINO
122B	26	05		BNE	SETC6	IS IT LINO?
122D	4D			TST	A	
122E	26	02		BNE	SETC6	
1230	86	23		LDA	A #'*	SET IT
1232	A7	00		SETC6	STA	A 0,X
1234	7E	09	30	JMP	NUMSE6	RETURN
1237	7E	04	71	SETC8	JMP	SYNERR
						REPORT ERROR

## \* CHECK FOR QUOTE

123A	08			CHFRQU	INX	BUMP POINTER
123B	BD	04	92	JSR	SKIPSP	SKIP SPACES
123E	81	27		CMP	A #'	
1240	39			RTS		

## \* SPECIAL CHARACTER TABLE

1241	54			CHRTBL	FCC	'TAB'
------	----	--	--	--------	-----	-------

LOCN	B1	B2	B3		
1242	41				
1243	42				
1244	00			FCB	0
1245	11	DB		FDB	STAB
1247	46			FCC	'FILL'
1248	49				
1249	4C				
124A	4C				
124B	00			FCB	0
124C	11	E0		FDB	SFILL
124E	45			FCC	'EOL'
124F	4F				
1250	4C				
1251	00			FCB	0
1252	11	E5		FDB	SEOL
1254	4C			FCC	'LINO'
1255	49				
1256	4E				
1257	4F				
1258	00			FCB	0
1259	11	EA		FDB	SLINO
125B	00			FCB	0

## \* EXPAND TABS COMMAND

125C	BD	08	AB	EXPAND	JSR	TSTEMP	
125F	DE	44			LDX	BUFPNT	GET POINTER
1261	BD	04	E9		JSR	FINDT	FIND TARGET
1264	DE	4A			LDX	NEWPOS	SAVE IT
1266	86	01			LDA A	#1	
1268	97	8A			STA A	PRNFLG	SET FLAG
126A	DF	48		EXPAN1	STX	CURPOS	SET CURRENT
126C	9C	93			CPX	TRGLIN	LAST LINE?
126E	26	03			BNE	EXPAN2	
1270	7F	00	8A		CLR	PRNFLG	CLEAR FLAG
1273	8D	10		EXPAN2	BSR	EXPLIN	GO DO LINE
1275	96	8A			LDA A	PRNFLG	DONE?
1277	27	09			BEQ	EXPAN5	
1279	DE	4A			LDX	NEWPOS	GET POINTER
127B	BD	06	C3		JSR	NXTLIN	FIND NEXT LINE
127E	DF	4A			STX	NEWPOS	SAVE
1280	20	E8			BRA	EXPAN1	
1282	7E	08	A2	EXPAN5	JMP	PRINT6	

## \* EXPAND TABS IN ONE LINE

1285	96	B2		EXPLIN	LDA A	TABCH	
1287	91	B3			CMP A	FILL	CHECK IF FILL=TAB
1289	27	51			BEQ	EXPLI7	
128B	CE	00	9D		LDX	#TABBUF	POINT TO TABS
128E	DF	9B			STX	TABPNT	
1290	E6	00			LDA B	0,X	GET COLUMN
1292	27	48			BEQ	EXPLI7	

LOCN	B1	B2	B3				
1294	5F				CLR B		CLEAR COUNT
1295	D7	8D			STA B	CHRCNT	
1297	DE	4A			LDX	NEWPOS	POINT TO LINE
1299	9C	99			CPX	FILEND	
129B	26	03			BNE	EXPLI1	
129D	7E	03	8A		JMP	EDIT	
12A0	08			EXPLI1	INX		BUMP 3 TIMES
12A1	08				INX		PAST LINE NO.
12A2	08				INX		
12A3	5C			EXPLI2	INC B		BUMP COUNTER
12A4	A6	00			LDA A	0,X	CHECK FOR TAB
12A6	81	0D			CMP A	#CRGRET	
12A8	27	32			BEQ	EXPLI7	
12AA	91	B2			CMP A	TABCH	IS IT TAB?
12AC	27	03			BEQ	EXPLI3	
12AE	08				INX		BUMP THE POINTER
12AF	20	F2			BRA	EXPLI2	
12B1	DF	40		EXPLI3	STX	TEMP	SAVE POSITION
12B3	DE	9B			LDX	TABPNT	
12B5	E1	00		EXPL35	CMP B	0,X	CHECK COLUMN
12B7	24	1E			BCC	EXPLI6	
12B9	86	FF			LDA A	#\$FF	SET COUNT
12BB	4C			EXPLI4	INC A		
12BC	5C				INC B		
12BD	E1	00			CMP B	0,X	TAB COL. YET?
12BF	26	FA			BNE	EXPLI4	
12C1	97	8E			STA A	CHRCNT+1	SAVE COUNT
12C3	DE	40			LDX	TEMP	
12C5	DF	58			STX	SPCPT1	SET SPACE POINTER
12C7	BD	0C	08		JSR	MAKSPC	GO MAKE ROOM
12CA	D6	8E			LDA B	CHRCNT+1	
12CC	5C				INC B		
12CD	96	B3			LDA A	FILL	GET FILL CHARACTER
12CF	A7	00		EXPLI5	STA A	0,X	PUT CHARACTER
12D1	08				INX		
12D2	5A				DEC B		DEC COUNT
12D3	26	FA			BNE	EXPLI5	
12D5	20	AE			BRA	EXPLIN	REPEAT
12D7	08			EXPLI6	INX		BUMP POINTER
12D8	A6	00			LDA A	0,X	
12DA	26	D9			BNE	EXPL35	
12DC	39			EXPLI7	RTS		RETURN

## \* APPEND COMMAND

12DD	BD	08	A8	APPEND	JSR	TSTEMP	
12E0	DE	44			LDX	BUFPNT	GET POINTER
12E2	BD	04	92		JSR	SKIPSP	
12E5	BD	06	63		JSR	TSTEND	ALL?
12E8	26	03			BNE	APPEN1	
12EA	7E	04	71	APPENO	JMP	SYNERR	
12ED	BD	07	3B	APPEN1	JSR	CLASS	GO CLASSIFY
12F0	5D				TST B		
12F1	26	F7			BNE	APPENO	

LOCN	B1	B2	B3				
12F3	BD	05	FA		JSR	SETDEL	SET DELIMITERS
12F6	BD	07	3B		JSR	CLASS	CLASSIFY CHARACTER
12F9	C1	01			CMF B	#1	IS IT NUMBER?
12FB	26	13			BNE	APPEN3	
12FD	BD	07	55		JSR	BCDCON	GET COLUMN NO.
1300	BD	08	38		JSR	TSTNUM	IS IT ZERO?
1303	27	0B			BEQ	APPEN3	
1305	4F				CLR A		
1306	4C			APPEN2	INCA		BUMP COUNTER
1307	36				PSH A		
1308	BD	08	2A		JSR	DECNUM	DEC NUMBER
130B	32				PUL A		RESTORE COUNT
130C	26	F8			BNE	APPEN2	
130E	97	7A			STA A	APPCOL	SAVE COUNT
1310	BD	0F	07	APPEN3	JSR	SVSTPT	SAVE DEL INFO
1313	DE	44			LDX	BUFPNT	GET POINTER
1315	BD	04	E9		JSR	FINDT	FIND TARGET
1318	BD	0F	14		JSR	RSTSPT	RESTORE DEL INFO
131B	7F	00	8D		CLR	CHRCNT	
131E	7C	00	8A		INC	PRNFLG	SET FLAG
1321	DE	4A			LDX	NEWPOS	SET POINTER
1323	9C	93		APPE35	CPX	TRGLIN	AT TARGET?
1325	26	03			BNE	APPEN4	
1327	7F	00	8A		CLR	PRNFLG	CLEAR FLAG
132A	08			APPEN4	INX		BUMP 3 TIMES
132B	08				INX		
132C	08				INX		
132D	96	7A			LDA A	APPCOL	GET COL. NUMBER
132F	26	06			BNE	APPEN5	
1331	09				DEX		
1332	BD	07	E6		JSR	FNDCRT	GET TO C.R.
1335	20	37			BRA	APPEN7	
1337	16			APPEN5	TAB		
1338	5A			APPE53	DEC B		DEC COUNT
1339	27	1C			BEQ	APPE65	
133B	A6	00			LDA A	0,X	CHECK CHARACTER
133D	81	0D			CMF A	#CRGRET	
133F	27	03			BEQ	APPEN6	
1341	08				INX		BUMP POINTER
1342	20	F4			BRA	APPE53	
1344	DF	58		APPEN6	STX	SPCPT1	SET POSITION
1346	D7	8E			STA B	CHRCNT+1	
1348	37				PSH B		
1349	BD	0C	08		JSR	MAKSPC	GO MAKE MORE ROOM
134C	33				PUL B		
134D	86	20			LDA A	#'	SET UP SPACE
134F	A7	00		APPE63	STA A	0,X	PUT IT
1351	08				INX		BUMP POINTER
1352	5A				DEC B		DEC THE COUNT
1353	26	FA			BNE	APPE63	
1355	20	17			BRA	APPEN7	
1357	DF	58		APPE65	STX	SPCPT1	SET POSITION
1359	DF	40			STX	TEMP	
135B	A6	00		APPE66	LDA A	0,X	GET CHAR.
135D	81	0D			CMF A	#CRGRET	IS IT C.R.?

LOCN	B1	B2	B3				
135F	27	04			BEQ	APPE67	
1361	08				INX		
1362	5C				INC	B	
1363	20	F6			BRA	APPE66	
1365	D7	8E		APPE67	STA	B	CHRCNT+1
1367	DF	5A			STX	SPCPT2	
1369	BD	0D	43		JSR	DELCHR	DELETE REST OF LINE
136C	DE	40			LDX	TEMP	GET POINTER
136E	DF	58		APPEN7	STX	SPCPT1	
1370	96	7B			LDA	A	STRCNT
1372	27	12			BEQ	APPE78	GET COUNT
1374	97	8E		APPE72	STA	A	CHRCNT+1
1376	BD	0C	08		JSR	MAKSPC	GO MAKE ROOM
1379	DE	50			LDX	STRNGE	POINT TO STRING
137B	DF	58			STX	SPCPT1	
137D	DE	4E			LDX	STRNGB	
137F	DF	40			STX	TEMP	SET END
1381	BD	0C	64		JSR	MAKS55	PUT IN STRING
1384	DE	5A			LDX	SPCPT2	GET POINTER
1386	5F			APPE78	CLR	B	
1387	BD	07	F6		JSR	BAKON2	
138A	BD	08	3F		JSR	VERLIN	
138D	96	8A			LDA	A	PRNFLG
138F	27	07			BEQ	APPEN8	DONE?
1391	BD	06	C3		JSR	NXTLIN	FIND NEXT LINE
1394	DF	4A			STX	NEWPOS	
1396	20	8B			BRA	APPE35	REPEAT
1398	DF	48		APPEN8	STX	CURPOS	
139A	7E	08	A2	APPEN9	JMP	PRINT6	

## \* SAVE CURRENT FILE ON TAPE

139D	BD	09	A4	SAVE	JSR	TFORCR	
13A0	DE	97			LDX	FILBEG	SET POINTER
13A2	DF	58			STX	SPCPT1	
13A4	DE	99			LDX	FILEND	
13A6	DF	5A			STX	SPCPT2	SET END
13A8	8D	29			BSR	RECORD	GO RECORD IT
13AA	7E	09	30	SAVE4	JMP	NUMSE6	

## \* WRITE PART OF FILE TO TAPE

13AD	BD	08	A8	WRITE	JSR	TSTEMP	
13B0	DE	44			LDX	BUFPNT	SET POINTER
13B2	BD	04	E9		JSR	FINDT	FIND TARGET
13B5	96	8C			LDA	A	DRCTN
13B7	26	0C			BNE	WRITE2	CHECK DIRECTION
13B9	BD	07	E6		JSR	FNDCRT	
13BC	08				INX		
13BD	DF	5A			STX	SPCPT2	SET POINTER
13BF	DE	4A			LDX	NEWPOS	
13C1	DF	58			STX	SPCPT1	SET BEGINNING
13C3	20	0A			BRA	WRITE4	

LOCN	B1	B2	B3				
13C5	DF	58		WRITE2	STX	SPCPT1	
13C7	DE	4A			LIX	NEWPOS	
13C9	BD	07	E6		JSR	FND CRT	
13CC	08				INX		
13CD	DF	5A			STX	SPCPT2	SET END
13CF	BD	02		WRITE4	BSR	RECORD	GO RECORD IT
13D1	20	D7		WRITES	BRA	SAVE4	

## \* RECORD RECORD

13D3	96	B9		RECORD	LDA A	RONCH	
13D5	BD	02	OF		JSR	TOUCH	
13D8	BD	2B			BSR	TDELAY	GO DELAY
13DA	DE	58			LIX	SPCPT1	SET POINTER
13DC	9C	5A		RECOR2	CFX	SPCPT2	DONE?
13DE	27	15			BEQ	RECOR4	
13E0	08				INX		GET PAST NUMBERS
13E1	08				INX		
13E2	08				INX		
13E3	A6	00		RECO25	LDA A	0,X	GET A CHARACTER
13E5	81	0D			CMP A	#CRGRET	
13E7	27	06			BEQ	RECOR3	
13E9	BD	02	OF		JSR	TOUCH	OUTPUT IT
13EC	08				INX		BUMP THE POINTER
13ED	20	F4			BRA	RECO25	
13EF	BD	02	OF	RECOR3	JSR	TOUCH	OUTPUT IT
13F2	08				INX		
13F3	20	E7			BRA	RECOR2	
13F5	86	1A		RECOR4	LDA A	#\$1A	SET CONTROL Z
13F7	BD	02	OF		JSR	TOUCH	OUTPUT IT
13FA	CE	FF	FF	RECOR5	LIX	#\$FFFF	SET COUNT
13FD	09			RECOR6	DEX		
13FE	26	FD			BNE	RECOR6	
1400	96	BA		RECOR7	LDA A	ROFCH	
1402	BD	02	OF		JSR	TOUCH	

## \* DELAY FOR TAPE

1405	96	B6		TDELAY	LDA A	DELAY	GET FACTOR
1407	27	09		DELAY1	BEQ	DELAY4	
1409	CE	FF	FF		LIX	#\$FFFF	SET COUNT
140C	09			DELAY2	DEX		DEC COUNT
140D	26	FD			BNE	DELAY2	
140F	4A				DEC A		DONE?
1410	20	F5			BRA	DELAY1	
1412	39			DELAY4	RTS		RETURN

## \* PUT A GAP ON TAPE (40 NULLS)

1413	BD	09	A4	GAP	JSR	TFORCR	
------	----	----	----	-----	-----	--------	--

LOCN B1 B2 B3			
1416 96 B9		LDA A	RONCH
1418 BD 02 OF		JSR	TOUCH
141B 8D E8		BSR	TDELAY
141D C6 28		LDA B	#40
141F 4F	GAP2	CLR A	
1420 BD 02 OF		JSR	TOUCH
1423 5A		DEC B	
1424 26 F9		BNE	GAP2
1426 8D D8		BSR	RECOR7
1428 20 A7		BRA	WRITE5

TURN ON TAPE  
GO DELAY  
SETUP COUNT  
SET NULL  
OUTPUT IT  
DEC COUNT

## \* READ TAPE ROUTINE

142A BD 09 A4	READ	JSR	TFORCR	
142D 96 B7		LDA A	TONCH	
142F BD 02 OF		JSR	TOUCH	
1432 8D D1		BSR	TDELAY	GO DELAY
1434 BD 07 A3		JSR	CLRNUM	
1437 DE 99		LDX	FILEND	GET END
1439 DF 40		STX	TEMP	
143B 9C 97		CPX	FILBEG	EMPTY?
143D 27 08		BEQ	READ1	
143F BD 07 F0		JSR	BAKONE	MOVE BACK ONE
1442 BD 06 98		JSR	GETNUM	GET NUMBER
1445 DE 99		LDX	FILEND	POINT TO END
1447 8D 35	READ1	BSR	RDCHKE	
1449 8D 33		BSR	RDCHKE	
144B 8D 31		BSR	RDCHKE	
144D BD 02 0C	READ2	JSR	TINCH	GET CHAR FROM TAPE
1450 81 0D		CMP A	#CRGRET	
1452 27 0C		BEQ	READ3	
1454 81 1A		CMP A	##1A	IS IS CNTRL Z?
1456 27 0C		BEQ	READ4	
1458 81 1F		CMP A	##1F	
145A 23 F1		BLS	READ2	
145C 8D 21		BSR	RDCHK2	
145E 20 ED		BRA	READ2	
1460 8D 1D	READ3	BSR	RDCHK2	
1462 20 E3		BRA	READ1	REPEAT
1464 5F	READ4	CLR B		
1465 BD 07 F6		JSR	BAKON2	FIND LAST C.R.
1468 DF 99	READ5	STX	FILEND	SET NEW END
146A 7C 00 83		INC	CHKFLG	
146D 96 B8		LDA A	TOFCH	
146F BD 02 OF		JSR	TOUCH	
1472 9C 40		CPX	TEMP	
1474 27 05		BEQ	READ6	
1476 DE 40		LDX	TEMP	
1478 BD 06 B0		JSR	RENUM2	GO NUMBER NEW LINES
147B 7E 09 90	READ6	JMP	BOTTO1	

\* READ AND CHECK END



```

LOCN B1 B2 B3
147E 4F          RDCHKE CLR A          CLEAR BYTE
147F BC 02 12   RDCHK2 CPX          MEMEND   END OF MEMORY?
1482 27 04          BEQ          RDCHK3
1484 A7 00          STA A    0,X          PUT CHAR
1486 08          INX          BUMP THE POINTER
1487 39          RTS          RETURN
1488 BD 02 0C   RDCHK3 JSR          TINCH   GET CHAR FROM TAPE
148B 81 1A          CMP A    ##1A      IS IT TERM?
148D 26 F9          BNE          RDCHK3
148F 20 D3          BRA          READ4

1491 0D          FCB          $0D          SET END !!

1492          BEGPNT EQU          *

          ORG          $A048

A048 02 00          FDB          START

          END
    
```

SYMBOL TABLE:

ALLFLG 0077	APPCOL 007A	APPEND 12DD	APPEN0 12EA	APPEN1 12ED
APPEN2 1306	APPEN3 1310	APPEN4 132A	APPEN5 1337	APPEN6 1344
APPEN7 136E	APPEN8 1398	APPEN9 139A	APPE35 1323	APPE53 1338
APPE63 134F	APPE65 1357	APPE66 135B	APPE67 1365	APPE72 1374
APPE78 1386	BACKSP 0008	BAKONE 07F0	BAKON2 07F6	BAKON4 0807
BAKON5 0808	BAKON6 080B	BCDCON 0755	BCDC01 0757	BCDC02 0764
BCDC04 0769	BCDC05 0778	BCDC06 077C	BCDC07 078B	BCDC08 079A
BCDC15 0761	BCDC65 0787	BCDC67 0789	BEGPNT 1492	BELL 0007
BFRSTR 0DB4	BMPFLG 007D	BMPNUM 066A	BMPNU4 0674	BOTTOM 098E
BOTTO1 0990	BOTTO2 0998	BUFFER 00BB	BUFLIM 04BB	BUFFNT 0044
BUFSAV 0046	CFIND 09CF	CFIND1 09E4	CFIND2 0A08	CFIND3 0A10
CFIND4 0A1B	CFIND5 0A25	CFIND6 0A28	CFIND9 0A2B	CFIN12 09E8
CFIN13 09FC	CFIN14 0A02	CFIN15 0A05	CFNTST 0A31	CHANGE 0DCB
CHANG1 0DD8	CHANG2 0DE5	CHANG3 0DF4	CHANG4 0E28	CHANG5 0E31
CHANG6 0E71	CHANG8 0EC8	CHANG9 0F04	CHAN12 0DD8	CHAN15 0DDE
CHAN35 0DDE	CHAN37 0E02	CHAN50 0E41	CHAN51 0E44	CHAN52 0E5F
CHAN55 0E6A	CHAN61 0E7C	CHAN62 0E8B	CHAN65 0E91	CHAN66 0E96
CHAN67 0EAA	CHAN80 0ED3	CHAN81 0EED	CHAN82 0EE6	CHAN84 0EF0
CHAN86 0EFC	CHA510 0E51	CHA675 0EBD	CHFRQU 123A	CHGEND 0066
CHGFLG 0085	CHGONF 0079	CHGPNT 0064	CHKFLG 0083	CHRCNT 008D
CHRTBL 1241	CLASS 073B	CLASS2 074A	CLASS4 0754	CLRNUM 07A3
CMFZN1 0644	CMFZN2 064F	CMPZ14 064E	CMPZ24 0659	CNRSTR 0982
COPY 0FF3	COPY0 101C	COPY02 1010	COPY05 1014	COPY1 101F
COPY15 103C	COPY18 1042	COPY2 104E	COPY25 1053	COPY3 1067
COPY4 1094	COPY45 10A6	COPY5 10A9	CPYDRC 008B	CRGRET 000D
CRLFST 0458	CURPOS 0048	DECCNT 0089	DECNUM 082A	DELAY 00B6

DELAY1	1407	DELAY2	140C	DELAY4	1412	DELCHR	0D43	DELCH2	0D5B
DELCH3	0D62	DELCH4	0D7C	DELCH5	0D7E	DELCOD	0018	DELC21	0D61
DELC31	0D64	DELC32	0D73	DELC34	0D77	DELETE	0C8A	DELETO	0CBB
DELET1	0CD6	DELET2	0CE5	DELET3	0CE9	DELET4	0CF4	DELET5	0D1B
DELET6	0D2E	DELET7	0D33	DELE02	0C94	DELE04	0C9D	DELE15	0CCA
DELE25	0CE7	DELE35	0CF1	DELE45	0D13	DELIM	0095	DRCTN	008C
EDIT	038A	EDIT1	0397	EDIT2	03AB	EDIT3	03BC	EDIT4	03C1
EDITS	03CC	EDIT55	03D1	EDIT56	03F1	EDIT58	03FB	EDIT6	0400
EDIT65	040D	EDIT7	0416	EDIT8	0429	EDIT85	0435	EDIT88	043F
EOL	00B5	EQUALS	0AA5	EQUFLG	007E	ERROR	0441	ERRSTR	044C
EXIT	0989	EXPAND	125C	EXPAN1	126A	EXPAN2	1273	EXPAN5	1282
EXPLIN	1285	EXPLI1	12A0	EXPLI2	12A3	EXPLI3	12B1	EXPLI4	12BB
EXPLI5	12CF	EXPLI6	12D7	EXPLI7	12DC	EXPL35	12B5	FILBEG	0097
FILEND	0099	FILL	00B3	FIND	04FD	FINDL	04D2	FINDL0	04E2
FINDL1	04E4	FINDL2	04E5	FINDT	04E9	FINDT0	04EE	FINDT1	04F8
FINDT2	04FB	FIND1	050A	FIND14	0521	FIND16	0526	FIND2	0532
FIND3	0541	FIND4	054D	FIND5	055A	FIND6	0565	FIND62	057A
FIND63	0584	FIND65	058C	FIND66	0594	FIND67	05AB	FIND7	05A9
FIND71	05B2	FIND72	05B8	FIND73	05C6	FIND74	05D0	FIND75	05DF
FIND77	05F4	FIND78	05F5	FIN702	05AB	FIN711	05B5	FIXZON	065A
FNDCRT	07E6	FNDCR2	07E9	FNDFLG	0070	FNDNUM	07AB	FNDNU1	07B1
FNDNU2	07B8	FNDNU4	07BA	FNDNU5	07DA	FNDN45	07DB	FNONFL	0087
GAP	1413	GAP2	141F	GETNUM	0698	HEADER	111B	HEADE2	112A
HEADE3	113C	HEADE4	1144	HEADE5	1158	HEADE7	117B	HEAD42	1146
HEAD45	1152	HEAD55	115C	HEAD57	1172	HEAD58	1177	HEDCNT	0096
INCAMT	007C	INCH	0206	INCHAR	0499	INCHR1	049C	INCHR3	04AB
INCHR4	04BA	INCH35	04B7	INCNUM	067C	INITLZ	0355	INLMFL	007F
INSERT	0AC8	INSER1	0AD7	INSER2	0ADE	INSER3	0AE6	INSER4	0AEA
INSER5	0B1D	INSER6	0B48	INSER7	0B7B	INSE42	0AF8	INSE43	0B0A
INSE45	0B13	INSE51	0B2C	INSE52	0B3F	INSE55	0B45	INSE60	0B4F
INSE61	0B53	INSE62	0B6B	INSE71	0B80	INSE72	0BC8	INSE75	0BD6
INS710	0B8F	INS711	0BB5	INS712	0BC2	INS713	0BC5	INZFLG	008F
LASTNO	005C	LINFLG	0075	LINO	00B4	LSTFLG	0088	MAKSPC	0C08
MAKSP1	0C16	MAKSP2	0C21	MAKSP3	0C4E	MAKSP4	0C5A	MAKSP5	0C62
MAKSP6	0C76	MAKS18	0C20	MAKS21	0C23	MAKS22	0C32	MAKS23	0C45
MAKS24	0C49	MAKS55	0C64	MAK222	0C3E	MEMEND	0212	MIKBUG	E0D0
MOVE	0FD4	MOVFLG	0080	MSLFLG	006C	NEWPOS	004A	NEXT	09CC
NLDSTR	0DA3	NOCURL	0074	NOFSTR	0464	NORMST	0C77	NOTFND	045F
NTRCHS	0D7F	NUMBER	0090	NUMFLG	006A	NUMSET	091D	NUMSE2	0928
NUMSE4	092D	NUMSE6	0930	NWFSTR	034B	NXTFLG	0076	NXTLIN	06C3
NXTLI2	06CA	NXTOCR	0A83	NXTOC0	0A87	NXTOC1	0A96	NXTOC2	0A9F
NXTOC3	0AA4	OCCURR	0A48	OCCUR3	0A67	OCCUR4	0A76	OCCUR5	0A79
OCRCNT	006E	OCRFLG	0078	OCRTMP	0068	OFF	0958	ON	0956
ONOFF	0937	ONOFTR	0946	OUTBCD	08D4	OUTBC2	08DD	OUTBC3	08E5
OUTBC4	08ED	OUTBC6	08F9	OUTBC7	0900	OUTBC8	090B	OUTB35	08EB
OUTB65	08FE	OUTB75	0906	OUTB78	0908	OUTCH	0209	OUTH	0913
OUTHR	0917	OUTLIN	08AF	OUTLI2	08BF	OUTLI4	08CB	OUTL15	08BC
OUTSPC	08CD	OVER	04C1	OVERLA	0F21	OVL PST	10B4	OVRBEG	0072
OVREND	0073	OVRLA0	0F3C	OVRLA1	0F45	OVRLA2	0F5C	OVRLA3	0F6C
OVRLA4	0F7C	OVRLA5	0F9D	OVRLA6	0FAE	OVRLA7	0FC2	OVRLA8	0FC7
OVRLST	0FCA	OVRL11	0F47	OVRL12	0F53	OVRL16	0F56	OVRL35	0F71
OVRL41	0F7E	OVRL43	0F96	OVRL45	0F98	OVRL55	0FA6	PCRLF	044E
PDATA1	0485	PEDIT	0383	PREROR	0444	PRINT	0877	PRINT0	087E
PRINT1	0885	PRINT5	089D	PRINT6	08A2	FRIN12	088C	PRNFLG	008A
PROMPT	0023	PSTRNG	0483	PSTZFL	006D	PUTNUM	068B	RDCHKE	147E
RDCHK2	147F	RDCHK3	1488	READ	142A	READ1	1447	READ2	144D
READ3	1460	READ4	1464	READ5	1468	READ6	147B	RECORD	13D3
RECOR2	13DC	RECOR3	13EF	RECOR4	13F5	RECOR5	13FA	RECOR6	13FD
RECOR7	1400	RECO25	13E3	RENSTR	0BF2	RENUMB	06A5	RENUM1	06AA

RENUM2 06B0	RENUM4 06C0	REPFLG 0081	REPLAC 0C87	RESTRT 0203
ROFCH 00BA	RONCH 00B9	RSTSPT 0F14	SAVE 139D	SAVE4 13AA
SAVOCR 0A7A	SEOL 11E5	SET 11CC	SETC 11ED	SETC2 1204
SETC4 1213	SETC5 1228	SETC6 1232	SETC8 1237	SETDEL 05FA
SETDE2 0600	SETDE4 060E	SETDE5 0617	SFILL 11E0	SKIPSA 0491
SKIPSP 0492	SKIPS2 0498	SKPCLS 0738	SLIND 11EA	SNGLIN 0084
SPCPT1 0058	SPCPT2 005A	SRCHPT 004C	STAB 11DB	STACK 01FF
START 0200	STRCNT 007B	STRCN1 0071	STRCN2 0086	STRGB1 0052
STRGE1 0054	STRING 06CD	STRIN1 06DA	STRIN2 06E2	STRIN3 06E8
STRIN4 0709	STRIN5 070D	STRIN6 071C	STRIN7 0729	STRIN8 072B
STRIN9 0735	STRNGB 004E	STRNGE 0050	STRPNT 0056	SVSTPT 0F07
SYNERR 0471	SYNSTR 0476	SZONE 117E	SZONE2 1192	SZONE3 1199
SZONE4 11A0	SZONE5 11A4	SZONE6 11B8	SZONE7 11BD	SZONE8 11C9
SZON75 11C4	TAB 10D0	TABBUF 009D	TABCH 00B2	TABEND 00B1
TABLE 0214	TABPNT 009B	TAB2 10D5	TAB4 10EF	TAB5 10FA
TAB6 1110	TAB8 1118	TDELAY 1405	TEMP 0040	TFORCR 09A4
TFORC2 09B1	TFORC3 09B2	TINCH 020C	TMPCHR 0082	TOFCH 00B8
TOGGLE 095B	TONCH 00B7	TOP 099D	TOUCH 020F	TRGLIN 0093
TSTEMP 08A8	TSTEND 0663	TSTEN2 0669	TSTMSL 09B5	TSTMS2 09BB
TSTMS4 09C6	TSTMS5 09CB	TSTNUM 0838	TSTNU2 083E	TSTOVR 0821
TSTOV2 0829	UPONE 080F	UPONE1 0813	UPONE2 0819	VERFLG 006B
VERLIN 083F	VERLI1 0849	VERLI2 0872	VERL12 084C	VERL15 085C
VERSET 0963	VERSE2 096E	VERSE4 0973	VERSE6 0976	WRITE 13AD
WRITE2 13C5	WRITE4 13CF	WRITE5 13D1	XCNTRL 0978	XSAVE 0042
ZOKSTR 0A3B	ZONBUF 0062	ZONE 061A	ZONE1 005E	ZONE2 0060
ZONE3 063B				

## OBJECT CODE:

S1 0D 00B1 00 00 20 23 00 06 00 00 00 00 F8
S1 13 0200 7E 03 55 7E 03 83 7E E1 AC 7E E1 D1 7E E1 AC 7E 4C
S1 13 0210 E1 D1 1F FF 41 50 50 45 4E 44 00 12 DD 41 00 12 10
S1 13 0220 DD 42 4F 54 54 4F 4D 00 09 8E 42 00 09 8E 43 48 1D
S1 13 0230 41 4E 47 45 00 0D CB 43 4F 50 59 00 0F F3 43 4F F8
S1 13 0240 00 0F F3 43 00 0D CB 44 45 4C 45 54 45 00 0C 8A 44
S1 13 0250 44 00 0C 8A 45 58 50 41 4E 44 00 12 5C 45 58 50 A5
S1 13 0260 00 12 5C 46 49 4E 44 00 09 CF 46 00 09 CF 47 41 7D
S1 13 0270 50 00 14 13 48 45 41 44 45 52 00 11 1B 48 00 11 D5
S1 13 0280 1B 49 4E 53 45 52 54 00 0A C8 49 00 0A C8 4C 4F F2
S1 13 0290 47 00 09 89 4D 4F 56 45 00 0F D4 4D 4F 00 0F D4 E8
S1 13 02A0 4E 45 58 54 00 09 CC 4E 55 4D 42 45 52 53 00 09 11
S1 13 02B0 1D 4E 55 00 09 1D 4E 00 09 CC 4F 56 45 52 4C 41 68
S1 13 02C0 59 00 0F 21 4F 00 0F 21 50 52 49 4E 54 00 08 77 16
S1 13 02D0 50 00 08 77 52 45 41 44 00 14 2A 52 45 4E 55 4D 6A
S1 13 02E0 42 45 52 00 06 A5 52 45 4E 00 06 A5 52 45 50 4C C3
S1 13 02F0 41 43 45 00 0C 87 52 00 0C 87 53 41 56 45 00 13 77
S1 13 0300 9D 53 45 54 00 11 CC 53 54 4F 50 00 09 89 53 00 58
S1 13 0310 09 89 54 41 42 00 10 D0 54 4F 50 00 09 9D 54 00 A3
S1 13 0320 09 9D 56 45 52 49 46 59 00 09 63 56 00 09 63 57 C9
S1 13 0330 52 49 54 45 00 13 AD 57 00 13 AD 58 00 09 78 5A 7B
S1 13 0340 4F 4E 45 00 11 7E 5A 00 11 7E 00 4E 45 57 20 46 FF
S1 13 0350 49 4C 45 3A 04 8E 01 FF CE 14 92 DF 97 DF 99 CE C3
S1 13 0360 02 03 FF A0 48 CE 00 01 DF 5E CE 01 36 DF 60 86 C7
S1 13 0370 46 97 96 4F 97 9D 4A 97 8F 97 6A 97 6B CE 03 4B F4
S1 13 0380 BD 04 83 DE 97 DF 48 7F 00 6C 8E 01 FF DF 40 DE 13
S1 13 0390 48 DF 4A CE 00 6D 4F A7 00 08 BC 00 8E 26 F8 DE 99
S1 13 03A0 40 96 8F 27 06 7F 00 8F 7E 0A EA 96 6C 26 22 97 56

4765  
+ more  
notes  
4754

S1 13 03B0 8E CE 00 BB BD 04 4E 86 23 BD 02 09 BD 04 99 27 21  
 S1 13 03C0 C9 A7 00 81 0D 27 05 BD 04 BB 20 F0 CE 00 BB DF 0B  
 S1 13 03D0 44 7F 00 6C BD 04 D2 4F 97 75 97 8C DF 4A DE 44 8E  
 S1 13 03E0 BD 04 92 DF 44 81 3D 26 08 08 DF 44 CE 0A A5 20 DF  
 S1 13 03F0 44 BD 06 63 26 05 CE 08 77 20 3A DF 40 CE 02 14 BA  
 S1 13 0400 DF 9B 6D 00 27 23 A1 00 26 0C DE 44 08 A6 00 DF 35  
 S1 13 0410 44 DE 9B 08 20 EA 08 6D 00 26 FB 08 08 08 6D 00 EE  
 S1 13 0420 27 1F 09 DF 9B DE 40 20 E4 08 EE 00 8C 0A C8 26 63  
 S1 13 0430 04 96 7F 26 0A BD 08 21 26 25 4F 97 72 97 73 6E 6E  
 S1 13 0440 00 CE 04 4C 8D 3D 7F 00 6C 7E 03 8A 3F 04 DF 42 66  
 S1 13 0450 CE 04 58 8D 30 DE 42 39 0D 0A 00 00 00 04 CE 6F  
 S1 13 0460 04 64 20 E0 4E 4F 20 53 55 43 48 20 4C 49 4E 45 E8  
 S1 13 0470 04 CE 04 76 20 CE 53 59 4E 54 41 58 20 45 52 52 4E  
 S1 13 0480 4F 52 04 8D C9 A6 00 81 04 27 0D BD 02 09 08 20 1E  
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 S1 13 04A0 8C 00 BB 27 15 09 7A 00 8E 20 EE 81 18 27 0B 81 5A  
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 S1 13 0540 0F 81 21 26 08 08 DF 44 DE 99 7E 07 F0 81 5E 26 AC  
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 S1 13 0560 26 47 7A 00 8C 08 BD 07 38 C1 01 27 0D 23 3A D6 E7  
 S1 13 0570 75 27 85 BD 07 A3 DE 4A 20 1A BD 07 55 DE 4A 7D CF  
 S1 13 0580 00 75 26 08 BD 08 38 27 1F BD 08 2A BD 08 38 27 6E  
 S1 13 0590 17 BD 08 2A BD 06 C3 BD 08 21 27 F0 96 73 26 08 97  
 S1 13 05A0 BD 08 38 26 03 7C 00 7F 39 8D 4F 8D 6D DE 4A BD 32  
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 S1 13 05C0 00 27 03 08 20 F2 96 85 26 DE 08 9C 99 27 06 09 51  
 S1 13 05D0 96 85 26 D4 09 BD 06 C3 BD 08 21 26 17 20 D3 BD A0  
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 S1 13 0610 D7 7B 8D 4F 27 01 08 DF 44 39 BD 07 3B 7F 00 6D 31  
 S1 13 0620 C1 01 26 17 BD 07 55 8D 1B 25 10 8D 22 22 0C 7C 78  
 S1 13 0630 00 6D 96 90 97 62 96 91 97 63 39 96 5E 97 62 96 4D  
 S1 13 0640 5F 97 63 39 D6 90 D1 5E 26 04 D6 91 D1 5F 39 D6 AF  
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 S1 13 0670 2A 02 86 10 9B 92 19 97 92 25 01 39 86 01 5F 9B 65  
 S1 13 0680 91 19 97 91 17 99 90 19 97 90 39 96 90 A7 00 96 78  
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 S1 13 06A0 A6 02 97 92 39 BD 09 A4 DE 97 7F 00 7C BD 07 A3 FB  
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 S1 13 06D0 D6 7B 26 06 7C 00 70 DF 5C 39 C6 0D DF 4C DF 5C 00  
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 S1 13 06F0 7D 00 6D 26 14 7D 00 70 26 22 08 DF 5C 36 37 BD 30  
 S1 13 0700 06 7C BD 06 4F 33 32 23 DF 7F 00 70 39 08 DF 4C 8F  
 S1 13 0710 7C 00 70 DE 56 08 9C 50 27 0F 20 C6 DE 5C 08 BD A6  
 S1 13 0720 06 7C BD 06 4F 23 A6 20 E0 D6 7B 27 08 37 BD 06 EE  
 S1 13 0730 7C 33 5A 26 F6 DE 5C 39 BD 04 92 DF 44 A6 00 5F A2  
 S1 13 0740 81 2F 23 10 81 39 22 02 5C 39 81 40 23 06 81 5A 8A  
 S1 13 0750 22 02 C6 02 39 8D 4C 8D E2 C1 01 27 07 81 2E 27 62

S1 13 0760 17 DF 44 39 08 84 0F C6 04 78 00 91 79 00 90 5A 41  
 S1 13 0770 26 F7 9B 91 97 91 20 DF C6 02 D7 89 08 8D BC C1 CB  
 S1 13 0780 01 27 04 4F 09 20 02 84 0F C6 04 78 00 92 5A 26 D8  
 S1 13 0790 FA 9B 92 97 92 7A 00 89 26 E2 08 8D 9E C1 01 27 DE  
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 S1 13 07B0 97 9C 99 26 05 7C 00 73 5C 39 E1 00 22 1C 26 F8 7D  
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 S1 13 07D0 84 26 05 7D 00 83 26 E0 5F 39 7D 00 83 26 F9 8D 1C  
 S1 13 07E0 05 D6 90 08 20 CB 36 86 0D 08 A1 00 26 FB 32 39 A9  
 S1 13 07F0 9C 97 27 17 C6 01 09 9C 97 27 0D A6 00 81 0D 26 F3  
 S1 13 0800 F5 5A 2A F2 08 C6 01 39 5D 27 FC 7C 00 72 39 9C 2E  
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 S1 13 0820 39 7D 00 72 26 03 7D 00 73 39 86 99 16 9B 91 19 D0  
 S1 13 0830 97 91 17 99 90 19 97 90 96 90 26 02 96 91 39 DF 7F  
 S1 13 0840 4A 8D 07 E6 DF 5A 4F 97 8D 09 09 09 09 E6 00 C1 39  
 S1 13 0850 0D 27 09 E6 03 C1 20 26 03 4C 20 F0 97 8E 08 08 D3  
 S1 13 0860 08 08 DF 58 8D 0D 43 DE 4A 96 6B 27 05 8D 40 8D 51  
 S1 13 0870 07 F0 DF 48 DF 4A 39 8D 2F DE 44 8D 04 E9 DE 4A 44  
 S1 13 0880 7C 00 8A DF 48 9C 93 26 03 7F 00 8A 8D 21 96 8A 08  
 S1 13 0890 27 0B 96 8C 27 EF 09 09 8D 07 F0 20 E8 8D 07 F0 68  
 S1 13 08A0 DF 48 8D 09 B5 7E 03 8A DE 97 9C 99 27 F4 39 8D DC  
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 S1 13 08C0 A6 00 81 0D 27 05 8D 02 09 20 F4 08 39 86 20 8D 44  
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 S1 13 0A30 B3 4E 4F 54 20 46 4F 55 4E 44 04 2E 2E 2E 5A 4F 3B  
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 S1 13 0A50 00 78 8D 04 E9 DE 44 8D 07 38 C1 01 27 09 81 2A B5  
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 S1 13 0A70 08 2A 27 05 8D 04 7C 00 78 39 96 90 97 6E 96 91 04  
 S1 13 0A80 97 6F 39 96 77 26 0F 96 6E 97 90 96 6F 97 91 8D CC  
 S1 13 0A90 08 2A 27 0B 8D E4 96 85 26 0A DE 46 7E 04 E9 7F 24  
 S1 13 0AA0 00 78 20 F2 39 8D 08 AB DE 44 7F 00 7D 7C 00 84 F4  
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 S1 13 0AF0 27 06 96 72 27 14 20 25 8D 06 98 96 7F 27 0B 9C FF  
 S1 13 0B00 99 27 07 5F D7 90 D7 91 20 13 8D 08 0F E6 02 96 67



S1 13 OB10 73 27 0A 5F DE 99 9C 97 26 03 BD 07 A3 DF 58 96 C7  
 S1 13 OB20 7E 26 2C 96 73 27 05 7F 00 92 20 1C 96 7D 26 18 1E  
 S1 13 OB30 96 92 D7 82 9A 82 27 0D 96 7F 27 03 7F 00 92 86 0A  
 S1 13 OB40 01 97 7C 20 03 7A 00 7C BD 06 6A 96 84 27 04 DE 24  
 S1 13 OB50 44 20 2D 7F 00 7F BD 04 4E CE 00 90 BD 08 D4 7F 7D  
 S1 13 OB60 00 8D 86 03 97 8E 97 7D CE 00 BB BD 04 99 27 E3 45  
 S1 13 OB70 81 0D 27 07 A7 00 BD 04 BB 20 F0 A7 00 CE 00 BB 52  
 S1 13 OB80 DF 44 A6 00 91 B4 26 40 96 BE 80 03 97 8E 08 DF 3A  
 S1 13 OB90 40 DE 4A BD 08 0F 7D 00 73 26 1A 7C 00 83 D6 90 80  
 S1 13 OBA0 96 91 BD 07 BA 26 0E 4F 97 7C 97 92 BD 06 B0 CE 9C  
 S1 13 OBB0 0B F2 BD 04 83 DE 40 7D 00 84 27 06 DE 4A DF 48 55  
 S1 13 OBC0 20 03 7C 00 6C 7E 03 8A 8D 3E DE 40 DF 4A BD 06 36  
 S1 13 OBD0 8B 08 08 08 DF 40 DE 44 A6 00 08 DF 44 DE 40 A7 97  
 S1 13 OBE0 00 08 DF 40 81 0D 26 EE BD 12 85 96 84 26 A0 7E 86  
 S1 13 OBF0 0A EA 53 4F 4D 45 20 4C 49 4E 45 53 20 52 45 4E 29  
 S1 13 OC00 55 4D 42 45 52 45 44 04 7F 00 89 DE 58 DF 40 9C DF  
 S1 13 OC10 99 26 03 7C 00 89 DE 99 DF 58 D6 8D 96 8E 26 03 AB  
 S1 13 OC20 5D 27 37 BC 02 12 27 26 08 7D 00 8C 26 04 DF 42 8C  
 S1 13 OC30 20 0C 7D 00 8B 27 0E DF 42 DE 4A 08 DF 4A DE 93 5C  
 S1 13 OC40 08 DF 93 DE 42 4D 26 01 5A 4A 26 D7 20 D2 CE 0C 25  
 S1 13 OC50 77 BD 04 83 7F 00 6C 7E 03 8A DF 99 DF 5A 96 89 0F  
 S1 13 OC60 26 14 DF 5A DE 58 9C 40 27 0C 09 A6 00 DF 58 DE 04  
 S1 13 OC70 5A 09 A7 00 20 EC 39 4E 4F 54 20 45 4E 4F 55 47 92  
 S1 13 OC80 48 20 52 4F 4F 4D 04 7C 00 81 DE 44 BD 04 E9 BD 31  
 S1 13 OC90 08 21 27 27 CE 0D 7F BD 04 83 CE 00 BB BD 04 99 58  
 S1 13 OCA0 27 F2 A7 00 08 81 0D 26 F4 CE 00 BB BD 04 92 81 73  
 S1 13 OCB0 59 27 08 CE 0D A3 BD 04 83 20 60 DE 4A 96 8C 27 F5  
 S1 13 OCC0 15 BD 08 0F 96 73 27 02 DE 99 DF 5A DE 93 DF 48 BD  
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