

fig-FORTH 6502
ASSEMBLY SOURCE LISTING

RELEASE 1.1
WITH COMPILER SECURITY
AND
VARIABLE LENGTH NAMES

September 1980

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of Forth Interest Group, P.O. Box 1105, San Carlos, CA 94070.

Further distribution must include this notice.

LINE #	LOC	CODE	LINE
0002	0000		;
0003	0000		;
0004	0000		;
0005	0000		;
0006	0000		;
0007	0000		;
0008	0000		;
0009	0000		;
0010	0000		;
0011	0000		;
0012	0000		;
0013	0000		;
0014	0000		;
0015	0000		;
0016	0000		;
0017	0000		;
0018	0000		;
0019	0000		;
0020	0000		;
0021	0000		;
0022	0000		;
0023	0000		;

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FORTH INTEREST GROUP
P. O. Box 1105
San Carlos, CA 94070
Release 1.1
With compiler security
and
variable length names
Further distribution must include the above notice
The FIG Installation Manual is required as it
contains the model of FORTH and glossary of the system.
Available from FIG at the above address for \$10.00 postpai
Translated from the FIG Model by W. F. Ragsdale
with input-output given for the Rockwell System-65.
Transportation to other systems only requires
alteration of: XEMIT, XKEY, XQTER, XCR, and RSLW.

```

LINE # LOC      CODE      LINE
0025 0000      ;
0026 0000      ; Equates giving memory assignments, machine
0027 0000      ; registers, and disk parameters.
0028 0000      ;
0029 0000      ;
0030 0000      SSIZE =128   sector size in bytes
0031 0000      NBUF  =8     ; number of buffers desired in ram
0032 0000      ;         (SSIZE*NBUF >= 1024 bytes)
0033 0000      SECTR =800   sectors per drive
0034 0000      ;         forcing hi drive to Screen #100
0035 0000      SECTL =1600  sector limit for 2 drives
0036 0000      ;         of 800 sectors per drive
0037 0000      BMAG  =1056  total buffer magnitude, in bytes
0038 0000      ;         expressed by SSIZE+4*NBUF
0039 0000      ;
0040 0000      BOS   =$20   bottom of data stack, in z-page.
0041 0000      TOS   =$9E   top of data stack, in z-page.
0042 0000      N     =TOS+8  xXXXXXXXXX  scratch workspace
0043 0000      IP    =N+8   Xx         interpretive pointer
0044 0000      W     =IP+3  xXx       code field pointer
0045 0000      UP    =W+2   Xx         user area pointer
0046 0000      XSAVE =UP+2   X         temporary for X register
0047 0000      ;
0048 0000      TIBX =$0100  terminal input buffer of 84 bytes.
0049 0000      ORIG =$0200  origin of FORTH's dictionary.
0050 0000      MEM  =$4000  top of assigned memory+1 byte.
0051 0000      UAREA =MEM-128 128 bytes of user area
0052 0000      DAREA =UAREA-BMAG disk buffer area
0053 0000      ;
0054 0000      ; Monitor calls for terminal support
0055 0000      ;
0056 0000      OUTCH =$D2C1 ; output one ASCII character to termina
0057 0000      INCH  =$D1DC ; input one ASCII character from termina
0058 0000      TCR   =$DOF1 ; terminal return and line feed
0059 0000      ;
0060 0000      ;
0061 0000      ; From DAREA downward to the top of the dictionary is free
0062 0000      ; space where the user's applications are compiled.
0063 0000      ;

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LINE # LOC      CODE      LINE
0065 0000          ;
0066 0000          ;   Boot up parameters.  This area provide jump vectors
0067 0000          ;   to bootup code, and parameters describing the system.
0068 0000          ;
0069 0000          ;   *=ORIG
0070 0200 EA      ENTER  NOP      User cold entry point
0071 0201 4C 47 12      JMP COLD+2      vector to COLD entry
0072 0204 EA      REENTR  NOP      ; User warm entry point
0073 0205 4C 57 12      JMP WARM        vector to WARM entry
0074 0208 04 00      .WORD $0004     6502 encoded in radix-36
0075 020A D2 5E      .WORD $5ED2
0076 020C 64 1A      .WORD NTOP      Name address of MON
0077 020E 7F 00      .WORD $7F       Backspace character
0078 0210 80 3F      .WORD UAREA     Initial user area
0079 0212 9E 00      .WORD TOS       Initial top of stack
0080 0214 FF 01      .WORD $1FF      Initial top of return stack
0081 0216 00 01      .WORD TIBX      Initial terminal input buffer
0082 0218 1F 00      .WORD 31        Initial name field width
0083 021A 00 00      .WORD 0         0=no disk 1=disk
0084 021C 74 1A      .WORD TOP       Initial fence address
0085 021E 74 1A      .WORD TOP       Initial top of dictionary
0086 0220 BE 11      .WORD VLO       Initial vocabulary link pointer
0087 0222          ;
0088 0222          ;   The following offset adjusts all code fields
0089 0222          ;   to avoid an address ending $xxFF.  This must
0090 0222          ;   be checked and altered on any alteration, for
0091 0222          ;   the indirect jump at W-1 to operate!!!
0092 0222          ;
0093 0222          ;
0094 0222          ;   **+2
0095 0224          ;

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LINE # LOC      CODE      LINE
0097 0224          ;
0098 0224          ;                LIT
0099 0224          ;
0100 0224          ;                SCREEN 13 LINE 1
0101 0224          ;
0102 0224 83      L22      .BYTE $83,'LI',$D4    <--- name field
0102 0225 4C 49
0102 0227 D4
0103 0228          ; <--- link field
0104 0228 00 00          .WORD 00                Last link is marked by zero
0105 022A 2C 02      LIT      .WORD *+2    <--- code address field
0106 022C B1 AE          LDA (IP),Y    <--- start of parameter field
0107 022E 48          PHA
0108 022F E6 AE          INC IP
0109 0231 D0 02          BNE L30
0110 0233 E6 AF          INC IP+1
0111 0235 B1 AE          L30      LDA (IP),Y
0112 0237 E6 AE          L31      INC IP
0113 0239 D0 02          BNE PUSH
0114 023B E6 AF          INC IP+1
0115 023D          ;
0116 023D CA          PUSH     DEX
0117 023E CA          DEX
0118 023F          ;
0119 023F 95 01      PUT      STA 1,X
0120 0241 68          PLA
0121 0242 95 00      STA 0,X
0122 0244          ;
0123 0244          ;      NEXT is the address interpreter that moves from
0124 0244          ;      machine level word to word.
0125 0244          ;
0126 0244 A0 01      NEXT     LDY #1
0127 0246 B1 AE          LDA (IP),Y    Fetch code field address pointed
0128 0248 85 B2          STA W+1      to by IP
0129 024A 88          DEY
0130 024B B1 AE          LDA (IP),Y
0131 024D 85 B1          STA W
0132 024F 20 6F 02     JSR TRACE    Remove this when all is well
0133 0252 18          CLC          Increment IP by two
0134 0253 A5 AE          LDA IP
0135 0255 69 02          ADC #2
0136 0257 85 AE          STA IP
0137 0259 90 02          BCC L54
0138 025B E6 AF          INC IP+1
0139 025D 4C B0 00     L54      JMP W-1      Jump to an indirect jump (W)
0140 0260          ;                which vectors to code pointed by a code fiel
0141 0260          ;
0142 0260          ;      CLIT pushes next inline byte to data stack
0143 0260          ;
0144 0260 84          L35      .BYTE $84,'CLI',$D4
0144 0261 43 4C 49
0144 0264 D4
0145 0265 24 02          .WORD L22      LINK TO LIT
0146 0267 69 02      CLIT     .WORD *+2
0147 0269 B1 AE          LDA (IP),Y

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LINE #	LOC	CODE	LINE
0148	026B	48	PHA
0149	026C	98	TYA
0150	026D	F0 C8	BEQ L31 a forced branch into LIT
0151	026F		;
0152	026F		;
0153	026F		;
0154	026F		;
0155	026F		;
0156	026F		;
0157	026F		;
0158	026F		;
0159	026F		;
0160	026F		;
0161	026F		;
0162	026F		;
0163	026F		;
0164	026F		;
0165	026F		;
0166	026F		;
0167	026F		;
0168	026F		;
0169	026F		;
0170	026F		;
0171	026F		;
0172	026F	86 B5	TRACE STX XSAVE
0173	0271	20 D2 D0	JSR CRLF
0174	0274	A5 AF	LDA IP+1
0175	0276	20 CE D2	JSR HEX2
0176	0279	A5 AE	LDA IP
0177	027B	20 CE D2	JSR HEX2 Print IP, the interpretive pointer
0178	027E	20 AF D0	JSR XBLANK
0179	0281		;
0180	0281	A0 00	LDY #0
0181	0283	B1 AE	LDA (IP),Y
0182	0285	85 12	STA XW
0183	0287	85 14	STA NP Fetch the next code field pointer
0184	0289	C8	INY
0185	028A	B1 AE	LDA (IP),Y
0186	028C	85 13	STA XW+1
0187	028E	85 15	STA NP+1
0188	0290	20 D9 02	JSR PRNAM Print dictionary name
0189	0293		;
0190	0293	A5 13	LDA XW+1
0191	0295	20 CE D2	JSR HEX2 Print code field address
0192	0298	A5 12	LDA XW
0193	029A	20 CE D2	JSR HEX2
0194	029D	20 AF D0	JSR XBLANK
0195	02A0		;
0196	02A0	A5 B5	LDA XSAVE Print stack location in z-page
0197	02A2	20 CE D2	JSR HEX2
0198	02A5	20 AF D0	JSR XBLANK
0199	02A8		;
0200	02A8	A9 01	LDA #1 Print return stack bottom in Page 1
0201	02AA	20 CE D2	JSR HEX2
0202	02AD	BA	TSX

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LINE # LOC      CODE      LINE
0203 02AE  E8              INX
0204 02AF  8A              TXA
0205 02B0  20 CE D2          JSR HEX2
0206 02B3  20 AF D0          JSR XBLANK
0207 02B6                      ;
0208 02B6  20 DC D1          JSR ONEKEY      Wait for operator keystroke
0209 02B9  A6 B5              LDX XSAVE      just to pinpoint early problems.
0210 02BB  A0 00              LDY #0
0211 02BD  60              RTS
0212 02BE                      ;
0213 02BE                      ;   TCOLON is called from DOCOLON to label each
0214 02BE                      ;   point where FORTH 'nests' one level.
0215 02BE                      ;
0216 02BE  86 B5          TCOLON STX XSAVE
0217 02C0  A5 B1              LDA W
0218 02C2  85 14              STA NP      Locate the name of the called word.
0219 02C4  A5 B2              LDA W+1
0220 02C6  85 15              STA NP+1
0221 02C8  20 D2 D0          JSR CRLF
0222 02CB  A9 3A              LDA #' :
0223 02CD  20 C1 D2          JSR LETTER
0224 02D0  20 AF D0          JSR XBLANK
0225 02D3  20 D9 02          JSR PRNAM
0226 02D6  A6 B5              LDX XSAVE
0227 02D8  60              RTS
0228 02D9                      ;
0229 02D9                      ;   Print name by its code field address in NP
0230 02D9                      ;
0231 02D9  20 FB 02          PRNAM JSR DECNP
0232 02DC  20 FB 02          JSR DECNP
0233 02DF  20 FB 02          JSR DECNP
0234 02E2  A0 00              LDY #0
0235 02E4  20 FB 02          PN1 JSR DECNP
0236 02E7  B1 14              LDA (NP),Y    loop till D7 in name set
0237 02E9  10 F9              BPL PN1
0238 02EB  C8              PN2 INY
0239 02EC  B1 14              LDA (NP),Y
0240 02EE  20 C1 D2          JSR LETTER    print letters of name field
0241 02F1  B1 14              LDA (NP),Y
0242 02F3  10 F6              BPL PN2
0243 02F5  20 AF D0          JSR XBLANK
0244 02F8  A0 00              LDY #0
0245 02FA  60              RTS
0246 02FB                      ;
0247 02FB                      ;   Decrement name field pointer
0248 02FB                      ;
0249 02FB  A5 14          DECNP LDA NP
0250 02FD  D0 02          BNE DECNP1
0251 02FF  C6 15          DEC NP+1
0252 0301  C6 14          DECNP1 DEC NP
0253 0303  60              RTS
0254 0304                      ;
0255 0304                      ;
0256 0304  0A          SETUP ASL A
0257 0305  85 A5          STA N-1

```

LINE #	LOC	CODE	LINE	
0258	0307	B5 00	L63	LDA 0,X
0259	0309	99 A6 00		STA N,Y
0260	030C	E8		INX
0261	030D	C8		INX
0262	030E	C4 A5		CPY N-1
0263	0310	D0 F5		BNE L63
0264	0312	A0 00		LDY #0
0265	0314	60		RTS
0266	0315			;
0267	0315			;
0268	0315			EXECUTE
0269	0315			SCREEN 14 LINE 11
0270	0315	87	L75	.BYTE \$87,'EXECUT', \$C5
0270	0316	45 58		
0270	031C	C5		
0271	031D	60 02		.WORD L35 ; LINK TO CLIT
0272	031F	21 03	EXEC	.WORD *+2
0273	0321	B5 00		LDA 0,X
0274	0323	85 B1		STA W
0275	0325	B5 01		LDA 1,X
0276	0327	85 B2		STA W+1
0277	0329	E8		INX
0278	032A	E8		INX
0279	032B	4C B0 00		JMP W-1 To JMP (W) in z-page
0280	032E			;
0281	032E			;
0282	032E			BRANCH
0283	032E			SCREEN 15 LINE 1
0284	032E	86	L89	.BYTE \$86,'BRANC', \$C8
0284	032F	42 52		
0284	0334	C8		
0285	0335	15 03		.WORD L75 ; LINK TO EXECUTE
0286	0337	39 03	BRAN	.WORD *+2
0287	0339	18		CLC
0288	033A	B1 AE		LDA (IP),Y
0289	033C	65 AE		ADC IP
0290	033E	48		PHA
0291	033F	C8		INX
0292	0340	B1 AE		LDA (IP),Y
0293	0342	65 AF		ADC IP+1
0294	0344	85 AF		STA IP+1
0295	0346	68		PLA
0296	0347	85 AE		STA IP
0297	0349	4C 46 02		JMP NEXT+2
0298	034C			;
0299	034C			;
0300	034C			OBRANCH
0301	034C			SCREEN 15 LINE 6
0302	034C	87	L107	.BYTE \$87,'OBRANC', \$C8
0302	034D	30 42		
0302	0353	C8		
0303	0354	2E 03		.WORD L89 ; LINK TO BRANCH
0304	0356	58 03	ZBRAN	.WORD *+2
0305	0358	E8		INX
0306	0359	E8		INX


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LINE # LOC      CODE      LINE
0307 035A B5 FE          LDA $FE,X
0308 035C 15 FF          ORA $FF,X
0309 035E F0 D9          BEQ BRAN+2
0310 0360
0311 0360 18          ;
          BUMP      CLC
0312 0361 A5 AE          LDA IP
0313 0363 69 02          ADC #2
0314 0365 85 AE          STA IP
0315 0367 90 02          BCC L122
0316 0369 E6 AF          INC IP+1
0317 036B 4C 44 02      L122      JMP NEXT
0318 036E
0319 036E
0320 036E
0321 036E
0322 036E 86          L127      .BYTE $86,'(LOOP', $A9
0322 036F 28 4C
0322 0374 A9
0323 0375 4C 03          .WORD L107          ; LINK TO OBRANCH
0324 0377 79 03          PLOOP      .WORD L130
0325 0379 86 B5          L130      STX XSAVE
0326 037B BA          TSX
0327 037C FE 01 01          INC $101,X
0328 037F D0 03          BNE PL1
0329 0381 FE 02 01          INC $102,X
0330 0384
0331 0384 18          ;
          PL1      CLC
0332 0385 BD 03 01          LDA $103,X
0333 0388 FD 01 01          SBC $101,X
0334 038B BD 04 01          LDA $104,X
0335 038E FD 02 01          SBC $102,X
0336 0391
0337 0391 A6 B5          ;
          PL2      LDX XSAVE
0338 0393 0A          ASL A
0339 0394 90 A3          BCC BRAN+2
0340 0396 68          PLA
0341 0397 68          PLA
0342 0398 68          PLA
0343 0399 68          PLA
0344 039A 4C 60 03          JMP BUMP
0345 039D
0346 039D
0347 039D
0348 039D
0349 039D 87          ;
          L154     .BYTE $87,'(+LOOP', $A9
0349 039E 28 2B
0349 03A4 A9
0350 03A5 6E 03          .WORD L127          LINK TO (LOOP)
0351 03A7 A9 03          PPLOOP     .WORD *+2
0352 03A9 E8          INX
0353 03AA E8          INX
0354 03AB 86 B5          STX XSAVE
0355 03AD B5 FF          LDA $FF,X
0356 03AF 48          PHA
0357 03B0 48          PHA

```

LINE #	LOC	CODE	LINE	
0358	03B1	B5 FE		LDA \$FE,X
0359	03B3	BA		TSX
0360	03B4	E8		INX
0361	03B5	E8		INX
0362	03B6	18		CLC
0363	03B7	7D 01 01		ADC \$101,X
0364	03BA	9D 01 01		STA \$101,X
0365	03BD	68		PLA
0366	03BE	7D 02 01		ADC \$102,X
0367	03C1	9D 02 01		STA \$102,X
0368	03C4	68		PLA
0369	03C5	10 BD		BPL PL1
0370	03C7	18		CLC
0371	03C8	BD 01 01		LDA \$101,X
0372	03CB	FD 03 01		SBC \$103,X
0373	03CE	BD 02 01		LDA \$102,X
0374	03D1	FD 04 01		SBC \$104,X
0375	03D4	4C 91 03		JMP PL2
0376	03D7			;
0377	03D7			;
0378	03D7			;
0379	03D7			;
0380	03D7	84	L185	.BYTE \$84,'(DO',\$A9
0380	03D8	28 44 4F		
0380	03DB	A9		
0381	03DC	9D 03		.WORD L154 ; LINK TO (+LOOP)
0382	03DE	E0 03	PDO	.WORD *+2
0383	03E0	B5 03		LDA 3,X
0384	03E2	48		PHA
0385	03E3	B5 02		LDA 2,X
0386	03E5	48		PHA
0387	03E6	B5 01		LDA 1,X
0388	03E8	48		PHA
0389	03E9	B5 00		LDA 0,X
0390	03EB	48		PHA
0391	03EC			;
0392	03EC	E8	POPTWO	INX
0393	03ED	E8		INX
0394	03EE			;
0395	03EE	E8	POP	INX
0396	03EF	E8		INX
0397	03F0	4C 44 02		JMP NEXT
0398	03F3			;
0399	03F3			;
0400	03F3			;
0401	03F3			;
0402	03F3	81	L207	.BYTE \$81,\$C9
0402	03F4	C9		
0403	03F5	D7 03		.WORD L185 ; LINK TO (DO)
0404	03F7	5F 06	I	.WORD R+2 Share the code for R
0405	03F9			;
0406	03F9			;
0407	03F9			;
0408	03F9			;
0409	03F9	85	L214	.BYTE \$85,'DIGI',\$D4

LINE #	LOC	CODE	LINE	
0409	03FA	44 49		
0409	03FE	D4		
0410	03FF	F3 03		.WORD L207 ; LINK TO I
0411	0401	03 04	DIGIT	.WORD *+2
0412	0403	38		SEC
0413	0404	B5 02		LDA 2,X
0414	0406	E9 30		SBC #30
0415	0408	30 18		BMI L234
0416	040A	C9 0A		CMP #A
0417	040C	30 07		BMI L227
0418	040E	38		SEC
0419	040F	E9 07		SBC #7
0420	0411	C9 0A		CMP #A
0421	0413	30 0D		BMI L234
0422	0415	D5 00	L227	CMP 0,X
0423	0417	10 09		BPL L234
0424	0419	95 02		STA 2,X
0425	041B	A9 01		LDA #1
0426	041D	48		PHA
0427	041E	98		TYA
0428	041F	4C 3F 02		JMP PUT ; exit true with converted value
0429	0422	98	L234	TYA
0430	0423	48		PHA
0431	0424	E8		INX
0432	0425	E8		INX
0433	0426	4C 3F 02		JMP PUT ; exit false for bad conversion
0434	0429			;
0435	0429			;
0436	0429			;
0437	0429			;
0438	0429	86	L243	.BYTE \$86,'(FIND',A9
0438	042A	28 46		
0438	042F	A9		
0439	0430	F9 03		.WORD L214 ; LINK TO DIGIT
0440	0432	34 04	PFIND	.WORD *+2
0441	0434	A9 02		LDA #2
0442	0436	20 04 03		JSR SETUP
0443	0439	86 B5		STX XSAVE
0444	043B	A0 00	L249	LDY #0
0445	043D	B1 A6		LDA (N),Y
0446	043F	51 A8		EOR (N+2),Y
0447	0441	29 3F		AND #3F
0448	0443	D0 2D		BNE L281
0449	0445	C8	L254	INY
0450	0446	B1 A6		LDA (N),Y
0451	0448	51 A8		EOR (N+2),Y
0452	044A	0A		ASL A
0453	044B	D0 23		BNE L280
0454	044D	90 F6		BCC L254
0455	044F	A6 B5		LDX XSAVE
0456	0451	CA		DEX
0457	0452	CA		DEX
0458	0453	CA		DEX
0459	0454	CA		DEX
0460	0455	18		CLC

LINE #	LOC	CODE	LINE	
0461	0456	98		TYA
0462	0457	69 05		ADC #5
0463	0459	65 A6		ADC N
0464	045B	95 02		STA 2,X
0465	045D	A0 00		LDY #0
0466	045F	98		TYA
0467	0460	65 A7		ADC N+1
0468	0462	95 03		STA 3,X
0469	0464	94 01		STY 1,X
0470	0466	B1 A6		LDA (N),Y
0471	0468	95 00		STA 0,X
0472	046A	A9 01		LDA #1
0473	046C	48		PHA
0474	046D	4C 3D 02		JMP PUSH
0475	0470	B0 05	L280	BCS L284
0476	0472	C8	L281	INY
0477	0473	B1 A6		LDA (N),Y
0478	0475	10 FB		BPL L281
0479	0477	C8	L284	INY
0480	0478	B1 A6		LDA (N),Y
0481	047A	AA		TAX
0482	047B	C8		INY
0483	047C	B1 A6		LDA (N),Y
0484	047E	85 A7		STA N+1
0485	0480	86 A6		STX N
0486	0482	05 A6		ORA N
0487	0484	D0 B5		BNE L249
0488	0486	A6 B5		LDX XSAVE
0489	0488	A9 00		LDA #0
0490	048A	48		PHA
0491	048B	4C 3D 02		JMP PUSH exit false upon reading null link
0492	048E			;
0493	048E			;
0494	048E			;
0495	048E			;
0496	048E	87	L301	.BYTE \$87,'ENCLOS', \$C5
0496	048F	45 4E		
0496	0495	C5		
0497	0496	29 04		.WORD L243 ; LINK TO (FIND)
0498	0498	9A 04	ENCL	.WORD *+2
0499	049A	A9 02		LDA #2
0500	049C	20 04 03		JSR SETUP
0501	049F	8A		TXA
0502	04A0	38		SEC
0503	04A1	E9 08		SBC #8
0504	04A3	AA		TAX
0505	04A4	94 03		STY 3,X
0506	04A6	94 01		STY 1,X
0507	04A8	88		DEY
0508	04A9	C8	L313	INY
0509	04AA	B1 A8		LDA (N+2),Y
0510	04AC	C5 A6		CMP N
0511	04AE	F0 F9		BEQ L313
0512	04B0	94 04		STY 4,X
0513	04B2	B1 A8	L318	LDA (N+2),Y

```

LINE # LOC      CODE      LINE
0514 04B4 DO OE          BNE L327
0515 04B6 94 02          STY 2,X
0516 04B8 94 00          STY 0,X
0517 04BA 98            TYA
0518 04BB D5 04          CMP 4,X
0519 04BD DO 02          BNE L326
0520 04BF F6 02          INC 2,X
0521 04C1 4C 44 02      L326  JMP NEXT
0522 04C4 94 02          L327  STY 2,X
0523 04C6 C8            INY
0524 04C7 C5 A6          CMP N
0525 04C9 DO E7          BNE L318
0526 04CB 94 00          STY 0,X
0527 04CD 4C 44 02      JMP NEXT
0528 04D0                ;
0529 04D0                ;          EMIT
0530 04D0                ;          SCREEN 21 LINE 5
0531 04D0                ;
0532 04D0 84            L337  .BYTE $84,'EMI',$D4
0532 04D1 45 4D 49
0532 04D4 D4
0533 04D5 8E 04          .WORD L301          ; LINK TO ENCLOSE
0534 04D7 F1 15          EMIT  .WORD XEMIT   Vector to code for EMIT
0535 04D9                ;
0536 04D9                ;          KEY
0537 04D9                ;          SCREEN 21 LINE 7
0538 04D9                ;
0539 04D9 83            L344  .BYTE $83,'KE',$D9
0539 04DA 4B 45
0539 04DC D9
0540 04DD DO 04          .WORD L337          ; LINK TO EMIT
0541 04DF 0C 16          KEY  .WORD XKEY     Vector to code for KEY
0542 04E1                ;
0543 04E1                ;          ?TERMINAL
0544 04E1                ;          SCREEN 21 LINE 9
0545 04E1                ;
0546 04E1 89            L351  .BYTE $89,'?TERMINA',$CC
0546 04E2 3F 54
0546 04EA CC
0547 04EB D9 04          .WORD L344          ; LINK TO KEY
0548 04ED 16 16          QTERM .WORD XQTER   Vector to code for ?TERMINA
0549 04EF                ;
0550 04EF                ;          CR
0551 04EF                ;          SCREEN 21 LINE 11
0552 04EF                ;
0553 04EF 82            L358  .BYTE $82,'C',$D2
0553 04F0 43
0553 04F1 D2
0554 04F2 E1 04          .WORD L351          ; LINK TO ?TERMINAL
0555 04F4 21 16          CR  .WORD XCR     Vector to code for CR
0556 04F6                ;
0557 04F6                ;          CMOVE
0558 04F6                ;          SCREEN 22 LINE 1
0559 04F6                ;
0560 04F6 85            L365  .BYTE $85,'CMOV',$C5

```

LINE #	LOC	CODE	LINE	
0560	04F7	43 4D		
0560	04FB	C5		
0561	04FC	EF 04		.WORD L358 ; LINK TO CR
0562	04FE	00 05	CMOVE	.WORD *+2
0563	0500	A9 03		LDA #3
0564	0502	20 04 03		JSR SETUP
0565	0505	C4 A6	L370	CPY N
0566	0507	D0 07		BNE L375
0567	0509	C6 A7		DEC N+1
0568	050B	10 03		BPL L375
0569	050D	4C 44 02		JMP NEXT
0570	0510	B1 AA	L375	LDA (N+4),Y
0571	0512	91 A8		STA (N+2),Y
0572	0514	C8		INY
0573	0515	D0 EE		BNE L370
0574	0517	E6 AB		INC N+5
0575	0519	E6 A9		INC N+3
0576	051B	4C 05 05		JMP L370
0577	051E			;
0578	051E			;
0579	051E			;
0580	051E			;
0581	051E	82	L386	.BYTE \$82,'U',\$AA
0581	051F	55		
0581	0520	AA		
0582	0521	F6 04		.WORD L365 ; LINK TO CMOVE
0583	0523	25 05	USTAR	.WORD *+2
0584	0525	B5 02		LDA 2,X
0585	0527	85 A6		STA N
0586	0529	94 02		STY 2,X
0587	052B	B5 03		LDA 3,X
0588	052D	85 A7		STA N+1
0589	052F	94 03		STY 3,X
0590	0531	A0 10		LDY #16 for 16 bits
0591	0533	16 02	L396	ASL 2,X
0592	0535	36 03		ROL 3,X
0593	0537	36 00		ROL 0,X
0594	0539	36 01		ROL 1,X
0595	053B	90 13		BCC L411
0596	053D	18		CLC
0597	053E	A5 A6		LDA N
0598	0540	75 02		ADC 2,X
0599	0542	95 02		STA 2,X
0600	0544	A5 A7		LDA N+1
0601	0546	75 03		ADC 3,X
0602	0548	95 03		STA 3,X
0603	054A	A9 00		LDA #0
0604	054C	75 00		ADC 0,X
0605	054E	95 00		STA 0,X
0606	0550	88	L411	DEY
0607	0551	D0 E0		BNE L396
0608	0553	4C 44 02		JMP NEXT
0609	0556			;
0610	0556			;
0611	0556			;

U/
SCREEN 24 LINE 1

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LINE # LOC      CODE      LINE
0612 0556                ;
0613 0556 82          L418  .BYTE $82,'U', $AF
0613 0557 55
0613 0558 AF
0614 0559 1E 05                .WORD L386          ; LINK TO U*
0615 055B 5D 05          USLAS  .WORD *+2
0616 055D B5 04          LDA 4,X
0617 055F B4 02          LDY 2,X
0618 0561 94 04          STY 4,X
0619 0563 0A          ASL A
0620 0564 95 02          STA 2,X
0621 0566 B5 05          LDA 5,X
0622 0568 B4 03          LDY 3,X
0623 056A 94 05          STY 5,X
0624 056C 2A          ROL A
0625 056D 95 03          STA 3,X
0626 056F A9 10          LDA #16          for 16 bits
0627 0571 85 A6          STA N
0628 0573 36 04          L433  ROL 4,X
0629 0575 36 05          ROL 5,X
0630 0577 38          SEC
0631 0578 B5 04          LDA 4,X
0632 057A F5 00          SBC 0,X
0633 057C A8          TAY
0634 057D B5 05          LDA 5,X
0635 057F F5 01          SBC 1,X
0636 0581 90 04          BCC L444
0637 0583 94 04          STY 4,X
0638 0585 95 05          STA 5,X
0639 0587 36 02          L444  ROL 2,X
0640 0589 36 03          ROL 3,X
0641 058B C6 A6          DEC N
0642 058D D0 E4          BNE L433
0643 058F 4C EE 03        JMP POP
0644 0592                ;
0645 0592                ; AND
0646 0592                ; SCREEN 25 LINE 2
0647 0592                ;
0648 0592 83          L453  .BYTE $83,'AN', $C4
0648 0593 41 4E
0648 0595 C4
0649 0596 56 05                .WORD L418          ; LINK TO U/
0650 0598 9A 05          ANDD  .WORD *+2
0651 059A B5 00          LDA 0,X
0652 059C 35 02          AND 2,X
0653 059E 48          PHA
0654 059F B5 01          LDA 1,X
0655 05A1 35 03          AND 3,X
0656 05A3                ;
0657 05A3 E8          BINARY INX
0658 05A4 E8          INX
0659 05A5 4C 3F 02        JMP PUT
0660 05A8                ;
0661 05A8                ; OR
0662 05A8                ; SCREEN 25 LINE 7

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LINE #	LOC	CODE	LINE	
0663	05A8		;	
0664	05A8	82	L469	.BYTE \$82,'O',\$D2
0664	05A9	4F		
0664	05AA	D2		
0665	05AB	92 05		.WORD L453 ; LINK TO AND
0666	05AD	AF 05	OR	.WORD *+2
0667	05AF	B5 00		LDA 0,X
0668	05B1	15 02		ORA 2,X
0669	05B3	48		PHA
0670	05B4	B5 01		LDA 1,X
0671	05B6	15 03		ORA 3,X
0672	05B8	E8		INX
0673	05B9	E8		INX
0674	05BA	4C 3F 02		JMP PUT
0675	05BD		;	
0676	05BD		;	XOR
0677	05BD		;	SCREEN 25 LINE 11
0678	05BD		;	
0679	05BD	83	L484	.BYTE \$83,'XO',\$D2
0679	05BE	58 4F		
0679	05C0	D2		
0680	05C1	A8 05		.WORD L469 ; LINK TO OR
0681	05C3	C5 05	XOR	.WORD *+2
0682	05C5	B5 00		LDA 0,X
0683	05C7	55 02		EOR 2,X
0684	05C9	48		PHA
0685	05CA	B5 01		LDA 1,X
0686	05CC	55 03		EOR 3,X
0687	05CE	E8		INX
0688	05CF	E8		INX
0689	05D0	4C 3F 02		JMP PUT
0690	05D3		;	
0691	05D3		;	SP@
0692	05D3		;	SCREEN 26 LINE 1
0693	05D3		;	
0694	05D3	83	L499	.BYTE \$83,'SP',\$C0
0694	05D4	53 50		
0694	05D6	C0		
0695	05D7	BD 05		.WORD L484 ; LINK TO XOR
0696	05D9	DB 05	SPAT	.WORD *+2
0697	05DB	8A		TXA
0698	05DC		;	
0699	05DC	48	PUSHOA	PHA
0700	05DD	A9 00		LDA #0
0701	05DF	4C 3D 02		JMP PUSH
0702	05E2		;	
0703	05E2		;	SP!
0704	05E2		;	SCREEN 26 LINE 5
0705	05E2		;	
0706	05E2	83	L511	.BYTE \$83,'SP',\$A1
0706	05E3	53 50		
0706	05E5	A1		
0707	05E6	D3 05		.WORD L499 ; LINK TO SP@
0708	05E8	EA 05	SPSTO	.WORD *+2
0709	05EA	A0 06		LDY #6


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LINE # LOC      CODE      LINE
0710 05EC B1 B3          LDA (UP),Y   load data stack pointer (X-reg) from
0711 05EE AA           TAX          silent user variable S0.
0712 05EF 4C 44 02    JMP NEXT
0713 05F2           ;
0714 05F2           ;                      RP!
0715 05F2           ;                      SCREEN 26 LINE 8
0716 05F2           ;
0717 05F2 83          L522  .BYTE $83,'RP',$A1
0717 05F3 52 50
0717 05F5 A1
0718 05F6 E2 05          .WORD L511          ; LINK TO SP!
0719 05F8 FA 05    RPSTO  .WORD *+2
0720 05FA 86 B5          STX XSAVE   load return stack pointer
0721 05FC A0 08          LDY #8      (machine stack pointer) from
0722 05FE B1 B3          LDA (UP),Y   silent user variable R0.
0723 0600 AA           TAX
0724 0601 9A          TXS
0725 0602 A6 B5          LDX XSAVE
0726 0604 4C 44 02    JMP NEXT
0727 0607           ;
0728 0607           ;                      ;S
0729 0607           ;                      SCREEN 26 LINE 12
0730 0607           ;
0731 0607 82          L536  .BYTE $82,';',',$D3
0731 0608 3B
0731 0609 D3
0732 060A F2 05          .WORD L522          ; LINK TO RP!
0733 060C 0E 06    SEMIS  .WORD *+2
0734 060E 68          PLA
0735 060F 85 AE          STA IP
0736 0611 68          PLA
0737 0612 85 AF          STA IP+1
0738 0614 4C 44 02    JMP NEXT
0739 0617           ;
0740 0617           ;                      LEAVE
0741 0617           ;                      SCREEN 27 LINE 1
0742 0617           ;
0743 0617 85          L548  .BYTE $85,'LEAV',$C5
0743 0618 4C 45
0743 061C C5
0744 061D 07 06          .WORD L536          ; LINK TO ;S
0745 061F 21 06    LEAVE  .WORD *+2
0746 0621 86 B5          STX XSAVE
0747 0623 BA          TSX
0748 0624 BD 01 01          LDA $101,X
0749 0627 9D 03 01          STA $103,X
0750 062A BD 02 01          LDA $102,X
0751 062D 9D 04 01          STA $104,X
0752 0630 A6 B5          LDX XSAVE
0753 0632 4C 44 02    JMP NEXT
0754 0635           ;
0755 0635           ;                      >R
0756 0635           ;                      SCREEN 27 LINE 5
0757 0635           ;
0758 0635 82          L563  .BYTE $82,'>',$D2

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LINE # LOC      CODE      LINE
0758 0636 3E
0758 0637 D2
0759 0638 17 06      .WORD L548          ; LINK TO LEAVE
0760 063A 3C 06      TOR  .WORD *+2
0761 063C B5 01      LDA 1,X          move high byte
0762 063E 48          PHA
0763 063F B5 00      LDA 0,X          then low byte
0764 0641 48          PHA              to return stack
0765 0642 E8          INX
0766 0643 E8          INX              popping off data stack
0767 0644 4C 44 02      JMP NEXT
0768 0647          ;
0769 0647          ;                      R>
0770 0647          ;                      SCREEN 27 LINE 8
0771 0647          ;
0772 0647 82          L577  .BYTE $82,'R',$BE
0772 0648 52
0772 0649 BE
0773 064A 35 06      .WORD L563          ; LINK TO >R
0774 064C 4E 06      RFROM .WORD *+2
0775 064E CA          DEX              make room on data stack
0776 064F CA          DEX
0777 0650 68          PLA              high byte
0778 0651 95 00      STA 0,X
0779 0653 68          PLA              then low byte
0780 0654 95 01      STA 1,X          restored to data stack
0781 0656 4C 44 02      JMP NEXT
0782 0659          ;
0783 0659          ;                      R
0784 0659          ;                      SCREEN 27 LINE 11
0785 0659          ;
0786 0659 81          L591  .BYTE $81,$D2
0786 065A D2
0787 065B 47 06      .WORD L577          ; LINK TO R>
0788 065D 5F 06      R  .WORD *+2
0789 065F 86 B5      STX XSAVE
0790 0661 BA          TSX              address return stack.
0791 0662 BD 01 01      LDA $101,X        copy bottom value
0792 0665 48          PHA              to data stack.
0793 0666 BD 02 01      LDA $102,X
0794 0669 A6 B5      LDX XSAVE
0795 066B 4C 3D 02      JMP PUSH
0796 066E          ;
0797 066E          ;                      0=
0798 066E          ;                      SCREEN 28 LINE 2
0799 066E          ;
0800 066E 82          L605  .BYTE $82,'0',$BD
0800 066F 30
0800 0670 BD
0801 0671 59 06      .WORD L591          ; LINK TO R
0802 0673 75 06      ZEQU .WORD *+2
0803 0675 B5 00      LDA 0,X
0804 0677 15 01      ORA 1,X
0805 0679 94 01      STY 1,X
0806 067B D0 01      BNE L613

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LINE #	LOC	CODE	LINE	
0807	067D	C8		INY
0808	067E	94 00	L613	STY 0,X
0809	0680	4C 44 02		JMP NEXT
0810	0683			;
0811	0683			;
0812	0683			;
0813	0683			;
0814	0683	82	L619	.BYTE \$82,'0',\$BC
0814	0684	30		
0814	0685	BC		
0815	0686	6E 06		.WORD L605 ; LINK TO 0=
0816	0688	8A 06	ZLESS	.WORD *+2
0817	068A	16 01		ASL 1,X
0818	068C	98		TYA
0819	068D	2A		ROL A
0820	068E	94 01		STY 1,X
0821	0690	95 00		STA 0,X
0822	0692	4C 44 02		JMP NEXT
0823	0695			;
0824	0695			;
0825	0695			;
0826	0695			;
0827	0695			;
0828	0695	81	L632	.BYTE \$81,\$AB
0828	0696	AB		
0829	0697	83 06		.WORD L619 ; LINK TO V-ADJ
0830	0699	9B 06	PLUS	.WORD *+2
0831	069B	18		CLC
0832	069C	B5 00		LDA 0,X
0833	069E	75 02		ADC 2,X
0834	06A0	95 02		STA 2,X
0835	06A2	B5 01		LDA 1,X
0836	06A4	75 03		ADC 3,X
0837	06A6	95 03		STA 3,X
0838	06A8	E8		INX
0839	06A9	E8		INX
0840	06AA	4C 44 02		JMP NEXT
0841	06AD			;
0842	06AD			;
0843	06AD			;
0844	06AD			;
0845	06AD	82	L649	.BYTE \$82,'D',\$AB
0845	06AE	44		
0845	06AF	AB		
0846	06B0	95 06		.WORD L632 ; LINK TO +
0847	06B2	B4 06	DPLUS	.WORD *+2
0848	06B4	18		CLC
0849	06B5	B5 02		LDA 2,X
0850	06B7	75 06		ADC 6,X
0851	06B9	95 06		STA 6,X
0852	06BB	B5 03		LDA 3,X
0853	06BD	75 07		ADC 7,X
0854	06BF	95 07		STA 7,X
0855	06C1	B5 00		LDA 0,X
0856	06C3	75 04		ADC 4,X

LINE #	LOC	CODE	LINE
0857	06C5	95 04	STA 4,X
0858	06C7	B5 01	LDA 1,X
0859	06C9	75 05	ADC 5,X
0860	06CB	95 05	STA 5,X
0861	06CD	4C EC 03	JMP POPTWO
0862	06D0		;
0863	06D0		;
0864	06D0		;
0865	06D0		;
0866	06D0	85	L670 .BYTE \$85,'MINU',\$D3
0866	06D1	4D 49	
0866	06D5	D3	
0867	06D6	AD 06	.WORD L649 ; LINK TO D+
0868	06D8	DA 06	MINUS .WORD *+2
0869	06DA	38	SEC
0870	06DB	98	TYA
0871	06DC	F5 00	SBC 0,X
0872	06DE	95 00	STA 0,X
0873	06E0	98	TYA
0874	06E1	F5 01	SBC 1,X
0875	06E3	95 01	STA 1,X
0876	06E5	4C 44 02	JMP NEXT
0877	06E8		;
0878	06E8		;
0879	06E8		;
0880	06E8		;
0881	06E8	86	L685 .BYTE \$86,'DMINU',\$D3
0881	06E9	44 4D	
0881	06EE	D3	
0882	06EF	D0 06	.WORD L670 ; LINK TO MINUS
0883	06F1	F3 06	DMINU .WORD *+2
0884	06F3	38	SEC
0885	06F4	98	TYA
0886	06F5	F5 02	SBC 2,X
0887	06F7	95 02	STA 2,X
0888	06F9	98	TYA
0889	06FA	F5 03	SBC 3,X
0890	06FC	95 03	STA 3,X
0891	06FE	4C DB 06	JMP MINUS+3
0892	0701		;
0893	0701		;
0894	0701		;
0895	0701		;
0896	0701	84	L700 .BYTE \$84,'OVE',\$D2
0896	0702	4F 56 45	
0896	0705	D2	
0897	0706	E8 06	.WORD L685 ; LINK TO DMINUS
0898	0708	0A 07	OVER .WORD *+2
0899	070A	B5 02	LDA 2,X
0900	070C	48	PHA
0901	070D	B5 03	LDA 3,X
0902	070F	4C 3D 02	JMP PUSH
0903	0712		;
0904	0712		;
0905	0712		;

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LINE # LOC      CODE      LINE
0906 0712          ;
0907 0712 84      L711  .BYTE $84,'DRO',$D0
0907 0713 44 52 4F
0907 0716 D0
0908 0717 01 07          .WORD L700          ; LINK TO OVER
0909 0719 EE 03      DROP  .WORD POP
0910 071B          ;
0911 071B          ;          SWAP
0912 071B          ;          SCREEN 30 LINE 8
0913 071B          ;
0914 071B 84      L718  .BYTE $84,'SWA',$D0
0914 071C 53 57 41
0914 071F D0
0915 0720 12 07          .WORD L711          ; LINK TO DROP
0916 0722 24 07      SWAP  .WORD *+2
0917 0724 B5 02          LDA 2,X
0918 0726 48          PHA
0919 0727 B5 00          LDA 0,X
0920 0729 95 02          STA 2,X
0921 072B B5 03          LDA 3,X
0922 072D B4 01          LDY 1,X
0923 072F 94 03          STY 3,X
0924 0731 4C 3F 02      JMP PUT
0925 0734          ;
0926 0734          ;          DUP
0927 0734          ;          SCREEN 30 LINE 12
0928 0734          ;
0929 0734 83      L733  .BYTE $83,'DU',$D0
0929 0735 44 55
0929 0737 D0
0930 0738 1B 07          .WORD L718          ; LINK TO SWAP
0931 073A 3C 07      DUP  .WORD *+2
0932 073C B5 00          LDA 0,X
0933 073E 48          PHA
0934 073F B5 01          LDA 1,X
0935 0741 4C 3D 02      JMP PUSH
0936 0744          ;
0937 0744          ;          +!
0938 0744          ;          SCREEN 31 LINE 2
0939 0744          ;
0940 0744 82      L744  .BYTE $82,'+', $A1
0940 0745 2B
0940 0746 A1
0941 0747 34 07          .WORD L733          ; LINK TO DUP
0942 0749 4B 07      PSTOR .WORD *+2
0943 074B 18          CLC
0944 074C A1 00          LDA (0,X)          fetch 16-bit value addressed
0945 074E 75 02          ADC 2,X          by bottom of stack, adding to
0946 0750 81 00          STA (0,X)          second item on stack, and
0947 0752 F6 00          INC 0,X          return to memory.
0948 0754 D0 02          BNE L754
0949 0756 F6 01          INC 1,X
0950 0758 A1 00      L754  LDA (0,X)
0951 075A 75 03          ADC 3,X
0952 075C 81 00          STA (0,X)

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LINE # LOC      CODE      LINE
0953 075E 4C EC 03          JMP POPTWO
0954 0761          ;
0955 0761          ;          TOGGLE
0956 0761          ;          SCREEN 31 LINE 7
0957 0761          ;
0958 0761 86          L762  .BYTE $86,'TOGGL',5
0958 0762 54 4F
0958 0767 C5
0959 0768 44 07          .WORD L744          ; LINK TO +!
0960 076A 6C 07          TOGGL .WORD *+2
0961 076C A1 02          LDA (2,X)          complement bits in memory address
0962 076E 55 00          EOR 0,X           second on stack, by pattern
0963 0770 81 02          STA (2,X)         on bottom of stack.
0964 0772 4C EC 03          JMP POPTWO
0965 0775          ;
0966 0775          ;          @
0967 0775          ;          SCREEN 32 LINE 1
0968 0775          ;
0969 0775 81          L773  .BYTE $81,$C0
0969 0776 C0
0970 0777 61 07          .WORD L762          ; LINK TO TOGGLE
0971 0779 7B 07          AT   .WORD *+2
0972 077B A1 00          LDA (0,X)
0973 077D 48          PHA
0974 077E F6 00          INC 0,X
0975 0780 D0 02          BNE L781
0976 0782 F6 01          INC 1,X
0977 0784 A1 00          L781 LDA (0,X)
0978 0786 4C 3F 02          JMP PUT
0979 0789          ;
0980 0789          ;          C@
0981 0789          ;          SCREEN 32 LINE 5
0982 0789          ;
0983 0789 82          L787  .BYTE $82,'C',$C0
0983 078A 43
0983 078B C0
0984 078C 75 07          .WORD L773          ; LINK TO @
0985 078E 90 07          CAT  .WORD *+2
0986 0790 A1 00          LDA (0,X)          fetch byte addressed by bottom
0987 0792 95 00          STA 0,X           of stack to stack, zeroing
0988 0794 94 01          STY 1,X           the high byte.
0989 0796 4C 44 02          JMP NEXT
0990 0799          ;
0991 0799          ;          !
0992 0799          ;          SCREEN 32 LINE 8
0993 0799          ;
0994 0799 81          L798  .BYTE $81,$A1
0994 079A A1
0995 079B 89 07          .WORD L787          ; LINK TO C@
0996 079D 9F 07          STORE .WORD *+2
0997 079F B5 02          LDA 2,X
0998 07A1 81 00          STA (0,X)         store second 16-bit value on stack
0999 07A3 F6 00          INC 0,X           to memory as addresses by
1000 07A5 D0 02          BNE L806
1001 07A7 F6 01          INC 1,X           bottom of stack.

```

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LINE # LOC      CODE      LINE
1002 07A9 B5 03      L806  LDA 3,X
1003 07AB 81 00              STA (0,X)
1004 07AD 4C EC 03          JMP POPTWO
1005 07B0              ;
1006 07B0              ;
1007 07B0              ;
1008 07B0              ;
1009 07B0 82          L813  .BYTE $82,'C',$A1
1009 07B1 43
1009 07B2 A1
1010 07B3 99 07          .WORD L798      ; LINK TO !
1011 07B5 B7 07          CSTOR .WORD *+2
1012 07B7 B5 02          LDA 2,X
1013 07B9 81 00          STA (0,X)
1014 07BB 4C EC 03          JMP POPTWO
1015 07BE              ;
1016 07BE              ;
1017 07BE              ;
1018 07BE              ;
1019 07BE C1          L823  .BYTE $C1,$BA
1019 07BF BA
1020 07C0 B0 07          .WORD L813      ; LINK TO C!
1021 07C2 D6 07          COLON .WORD DOCOL
1022 07C4 42 0B          .WORD QEXEC
1023 07C6 FE 0A          .WORD SCSP
1024 07C8 58 09          .WORD CURR
1025 07CA 79 07          .WORD AT
1026 07CC 4B 09          .WORD CON
1027 07CE 9D 07          .WORD STORE
1028 07D0 36 10          .WORD CREAT
1029 07D2 C3 0B          .WORD RBRAC
1030 07D4 12 0C          .WORD PSCOD
1031 07D6              ;
1032 07D6 A5 AF          DOCOL LDA IP+1
1033 07D8 48              PHA
1034 07D9 A5 AE          LDA IP
1035 07DB 48              PHA
1036 07DC 20 BE 02          JSR TCOLON      Mark the start of a traced ; def.
1037 07DF 18              CLC
1038 07E0 A5 B1          LDA W
1039 07E2 69 02          ADC #2
1040 07E4 85 AE          STA IP
1041 07E6 98              TYA
1042 07E7 65 B2          ADC W+1
1043 07E9 85 AF          STA IP+1
1044 07EB 4C 44 02          JMP NEXT
1045 07EE              ;
1046 07EE              ;
1047 07EE              ;
1048 07EE              ;
1049 07EE              ;
1050 07EE C1          L853  .BYTE $C1,$BB
1050 07EF BB
1051 07F0 BE 07          .WORD L823      ; LINK TO :
1052 07F2 D6 07          .WORD DOCOL

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LINE # LOC      CODE      LINE
1053 07F4 6A 0B          .WORD QCSP
1054 07F6 9F 0B          .WORD COMP
1055 07F8 0C 06          .WORD SEMIS
1056 07FA D7 0B          .WORD SMUDG
1057 07FC B5 0B          .WORD LBRAC
1058 07FE 0C 06          .WORD SEMIS
1059 0800          ;
1060 0800          ;
1061 0800          ;          CONSTANT
1062 0800          ;          SCREEN 34 LINE 1
1063 0800          ;
1064 0800 88          L867  .BYTE $88,'CONSTAN', $D4
1064 0801 43 4F
1064 0808 D4
1065 0809 EE 07          .WORD L853          ; LINK TO ;
1066 080B D6 07          CONST .WORD DOCOL
1067 080D 36 10          .WORD CREAT
1068 080F D7 0B          .WORD SMUDG
1069 0811 D9 09          .WORD COMMA
1070 0813 12 0C          .WORD PSCOD
1071 0815          ;
1072 0815 A0 02          DOCON LDY #2
1073 0817 B1 B1          LDA (W),Y
1074 0819 48          PHA
1075 081A C8          INY
1076 081B B1 B1          LDA (W),Y
1077 081D 4C 3D 02          JMP PUSH
1078 0820          ;
1079 0820          ;          VARIABLE
1080 0820          ;          SCREEN 34 LINE 5
1081 0820          ;
1082 0820 88          L885  .BYTE $88,'VARIABL', $C5
1082 0821 56 41
1082 0828 C5
1083 0829 00 08          .WORD L867          ; LINK TO CONSTANT
1084 082B D6 07          VAR  .WORD DOCOL
1085 082D 0B 08          .WORD CONST
1086 082F 12 0C          .WORD PSCOD
1087 0831          ;
1088 0831 18          DOVAR CLC
1089 0832 A5 B1          LDA W
1090 0834 69 02          ADC #2
1091 0836 48          PHA
1092 0837 98          TYA
1093 0838 65 B2          ADC W+1
1094 083A 4C 3D 02          JMP PUSH
1095 083D          ;
1096 083D          ;
1097 083D          ;
1098 083D          .FILE FOR2/1          ; LINK TO NEXT FILE
1099 083D          ;
1100 083D          ;          USER
1101 083D          ;          SCREEN 34 LINE 10
1102 083D          ;
1103 083D 84          L902  .BYTE $84,'USE', $D2

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LINE # LOC      CODE      LINE
1103 083E 55 53 45
1103 0841 D2
1104 0842 20 08          .WORD L885          ; LINK TO VARIABLE
1105 0844 D6 07      USER .WORD DOCOL
1106 0846 0B 08          .WORD CONST
1107 0848 12 0C          .WORD PSCOD
1108 084A
1109 084A A0 02      DOUSE LDY #2
1110 084C 18          CLC
1111 084D B1 B1          LDA (W),Y
1112 084F 65 B3          ADC UP
1113 0851 48          PHA
1114 0852 A9 00          LDA #0
1115 0854 65 B4          ADC UP+1
1116 0856 4C 3D 02      JMP PUSH
1117 0859          ;
1118 0859          ; 0
1119 0859          ; SCREEN 35 LINE 2
1120 0859          ;
1121 0859 81          L920 .BYTE $81,$B0
1121 085A B0
1122 085B 3D 08          .WORD L902          ; LINK TO USER
1123 085D 15 08      ZERO .WORD DOCON
1124 085F 00 00          .WORD 0
1125 0861          ;
1126 0861          ; 1
1127 0861          ; SCREEN 35 LINE 2
1128 0861          ;
1129 0861 81          L928 .BYTE $81,$B1
1129 0862 B1
1130 0863 59 08          .WORD L920          ; LINK TO 0
1131 0865 15 08      ONE .WORD DOCON
1132 0867 01 00          .WORD 1
1133 0869          ;
1134 0869          ; 2
1135 0869          ; SCREEN 35 LINE 3
1136 0869          ;
1137 0869 81          L936 .BYTE $81,$B2
1137 086A B2
1138 086B 61 08          .WORD L928          ; LINK TO 1
1139 086D 15 08      TWO .WORD DOCON
1140 086F 02 00          .WORD 2
1141 0871          ;
1142 0871          ; 3
1143 0871          ; SCREEN 35 LINE 3
1144 0871          ;
1145 0871 81          L944 .BYTE $81,$B3
1145 0872 B3
1146 0873 69 08          .WORD L936          ; LINK TO 2
1147 0875 15 08      THREE .WORD DOCON
1148 0877 03 00          .WORD 3
1149 0879          ;
1150 0879          ; BL
1151 0879          ; SCREEN 35 LINE 4
1152 0879          ;

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LINE #	LOC	CODE	LINE	
1153	0879	82	L952	.BYTE \$82,'B', \$CC
1153	087A	42		
1153	087B	CC		
1154	087C	71 08		.WORD L944 ; LINK TO 3
1155	087E	15 08	BL	.WORD DOCON
1156	0880	20 00		.WORD \$20
1157	0882			;
1158	0882			;
1159	0882			;
1160	0882			;
1161	0882	83	L960	.BYTE \$83,'C/',\$CC
1161	0883	43 2F		
1161	0885	CC		
1162	0886	79 08		.WORD L952 ; LINK TO BL
1163	0888	15 08	CSLL	.WORD DOCON
1164	088A	40 00		.WORD 64
1165	088C			;
1166	088C			;
1167	088C			;
1168	088C			;
1169	088C	85	L968	.BYTE \$85,'FIRS',\$D4
1169	088D	46 49		
1169	0891	D4		
1170	0892	82 08		.WORD L960 ; LINK TO C/L
1171	0894	15 08	FIRST	.WORD DOCON
1172	0896	60 3B		.WORD DAREA bottom of disk buffer area
1173	0898			;
1174	0898			;
1175	0898			;
1176	0898			;
1177	0898	85	L976	.BYTE \$85,'LIMI',\$D4
1177	0899	4C 49		
1177	089D	D4		
1178	089E	8C 08		.WORD L968 ; LINK TO FIRST
1179	08A0	15 08	LIMIT	.WORD DOCON
1180	08A2	80 3F		.WORD UAREA buffers end at user area
1181	08A4			;
1182	08A4			;
1183	08A4			;
1184	08A4			;
1185	08A4	85	L984	.BYTE \$85,'B/BU',\$C6
1185	08A5	42 2F		
1185	08A9	C6		
1186	08AA	98 08		.WORD L976 ; LINK TO LIMIT
1187	08AC	15 08	BBUF	.WORD DOCON
1188	08AE	80 00		.WORD SSIZE sector size
1189	08B0			;
1190	08B0			;
1191	08B0			;
1192	08B0			;
1193	08B0	85	L992	.BYTE \$85,'B/SC',\$D2
1193	08B1	42 2F		
1193	08B5	D2		
1194	08B6	A4 08		.WORD L984 ; LINK TO B/BUF
1195	08B8	15 08	BSCR	.WORD DOCON

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LINE # LOC      CODE      LINE
1196 08BA 08 00          .WORD 8      blocks to make one screen.
1197 08BC          ;
1198 08BC          ;                      +ORIGIN
1199 08BC          ;                      SCREEN 35 LINE 12
1200 08BC          ;
1201 08BC 87      L1000 .BYTE $87,'+ORIGI', $CE
1201 08BD 2B 4F
1201 08C3 CE
1202 08C4 B0 08          .WORD L992          ; LINK TO B/SCR
1203 08C6 D6 07      PORIG .WORD DOCOL
1204 08C8 2A 02          .WORD LIT,ORIG
1204 08CA 00 02
1205 08CC 99 06          .WORD PLUS
1206 08CE 0C 06          .WORD SEMIS
1207 08D0          ;
1208 08D0          ;                      TIB
1209 08D0          ;                      SCREEN 36 LINE 4
1210 08D0          ;
1211 08D0 83      L1010 .BYTE $83,'TI', $C2
1211 08D1 54 49
1211 08D3 C2
1212 08D4 BC 08          .WORD L1000          ; LINK TO +ORIGIN
1213 08D6 4A 08      TIB .WORD DOUSE
1214 08D8 0A          .BYTE $A
1215 08D9          ;
1216 08D9          ;                      WIDTH
1217 08D9          ;                      SCREEN 36 LINE 5
1218 08D9          ;
1219 08D9 85      L1018 .BYTE $85,'WIDT', $C8
1219 08DA 57 49
1219 08DE C8
1220 08DF D0 08          .WORD L1010          ; LINK TO TIB
1221 08E1 4A 08      WIDTH .WORD DOUSE
1222 08E3 0C          .BYTE $C
1223 08E4          ;
1224 08E4          ;                      WARNING
1225 08E4          ;                      SCREEN 36 LINE 6
1226 08E4          ;
1227 08E4 87      L1026 .BYTE $87,'WARNIN', $C7
1227 08E5 57 41
1227 08EB C7
1228 08EC D9 08          .WORD L1018          ; LINK TO WIDTH
1229 08EE 4A 08      WARN .WORD DOUSE
1230 08F0 0E          .BYTE $E
1231 08F1          ;
1232 08F1          ;                      FENCE
1233 08F1          ;                      SCREEN 36 LINE 7
1234 08F1          ;
1235 08F1 85      L1034 .BYTE $85,'FENC', $C5
1235 08F2 46 45
1235 08F6 C5
1236 08F7 E4 08          .WORD L1026          ; LINK TO WARNING
1237 08F9 4A 08      FENCE .WORD DOUSE
1238 08FB 10          .BYTE $10
1239 08FC          ;

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LINE #	LOC	CODE	LINE	
1240	08FC		;	DP
1241	08FC		;	SCREEN 36 LINE 8
1242	08FC		;	
1243	08FC	82	L1042 .BYTE \$82,'D',\$D0	
1243	08FD	44		
1243	08FE	D0		
1244	08FF	F1 08	.WORD L1034	; LINK TO FENCE
1245	0901	4A 08	DP .WORD DOUSE	
1246	0903	12	.BYTE \$12	
1247	0904		;	
1248	0904		;	VOC-LINK
1249	0904		;	SCREEN 36 LINE 9
1250	0904		;	
1251	0904	88	L1050 .BYTE \$88,'VOC-LIN',\$CB	
1251	0905	56 4F		
1251	090C	CB		
1252	090D	FC 08	.WORD L1042	; LINK TO DP
1253	090F	4A 08	VOCL .WORD DOUSE	
1254	0911	14	.BYTE \$14	
1255	0912		;	
1256	0912		;	BLK
1257	0912		;	SCREEN 36 LINE 10
1258	0912		;	
1259	0912	83	L1058 .BYTE \$83,'BL',\$CB	
1259	0913	42 4C		
1259	0915	CB		
1260	0916	04 09	.WORD L1050	; LINK TO VOC-LINK
1261	0918	4A 08	BLK .WORD DOUSE	
1262	091A	16	.BYTE \$16	
1263	091B		;	
1264	091B		;	IN
1265	091B		;	SCREEN 36 LINE 11
1266	091B		;	
1267	091B	82	L1066 .BYTE \$82,'I',\$CE	
1267	091C	49		
1267	091D	CE		
1268	091E	12 09	.WORD L1058	; LINK TO BLK
1269	0920	4A 08	IN .WORD DOUSE	
1270	0922	18	.BYTE \$18	
1271	0923		;	
1272	0923		;	OUT
1273	0923		;	SCREEN 36 LINE 12
1274	0923		;	
1275	0923	83	L1074 .BYTE \$83,'OU',\$D4	
1275	0924	4F 55		
1275	0926	D4		
1276	0927	1B 09	.WORD L1066	; LINK TO IN
1277	0929	4A 08	OUT .WORD DOUSE	
1278	092B	1A	.BYTE \$1A	
1279	092C		;	
1280	092C		;	SCR
1281	092C		;	SCREEN 36 LINE 13
1282	092C		;	
1283	092C	83	L1082 .BYTE \$83,'SC',\$D2	
1283	092D	53 43		

LINE #	LOC	CODE	LINE	
1283	092F	D2		
1284	0930	23 09		.WORD L1074 ; LINK TO OUT
1285	0932	4A 08	SCR	.WORD DOUSE
1286	0934	1C		.BYTE \$1C
1287	0935			;
1288	0935			;
1289	0935			OFFSET
1290	0935			SCREEN 37 LINE 1
1291	0935	86	L1090	.BYTE \$86,'OFFSE',\$D4
1291	0936	4F 46		
1291	093B	D4		
1292	093C	2C 09		.WORD L1082 ; LINK TO SCR
1293	093E	4A 08	OFSET	.WORD DOUSE
1294	0940	1E		.BYTE \$1E
1295	0941			;
1296	0941			;
1297	0941			CONTEXT
1298	0941			SCREEN 37 LINE 2
1298	0941			;
1299	0941	87	L1098	.BYTE \$87,'CONTEX',\$D4
1299	0942	43 4F		
1299	0948	D4		
1300	0949	35 09		.WORD L1090 ; LINK TO OFFSET
1301	094B	4A 08	CON	.WORD DOUSE
1302	094D	20		.BYTE \$20
1303	094E			;
1304	094E			;
1305	094E			CURRENT
1306	094E			SCREEN 37 LINE 3
1306	094E			;
1307	094E	87	L1106	.BYTE \$87,'CURREN',\$D4
1307	094F	43 55		
1307	0955	D4		
1308	0956	41 09		.WORD L1098 ; LINK TO CONTEXT
1309	0958	4A 08	CURR	.WORD DOUSE
1310	095A	22		.BYTE \$22
1311	095B			;
1312	095B			;
1313	095B			STATE
1314	095B			SCREEN 37 LINE 4
1314	095B			;
1315	095B	85	L1114	.BYTE \$85,'STAT',\$C5
1315	095C	53 54		
1315	0960	C5		
1316	0961	4E 09		.WORD L1106 ; LINK TO CURRENT
1317	0963	4A 08	STATE	.WORD DOUSE
1318	0965	24		.BYTE \$24
1319	0966			;
1320	0966			;
1321	0966			BASE
1322	0966			SCREEN 37 LINE 5
1322	0966			;
1323	0966	84	L1122	.BYTE \$84,'BAS',\$C5
1323	0967	42 41 53		
1323	096A	C5		
1324	096B	5B 09		.WORD L1114 ; LINK TO STATE
1325	096D	4A 08	BASE	.WORD DOUSE
1326	096F	26		.BYTE \$26
1327	0970			;

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LINE # LOC      CODE      LINE
1328 0970          ;                DPL
1329 0970          ;                SCREEN 37 LINE 6
1330 0970          ;
1331 0970 83      L1130  .BYTE $83,'DP',$CC
1331 0971 44 50
1331 0973 CC
1332 0974 66 09          .WORD L1122          ; LINK TO BASE
1333 0976 4A 08      DPL  .WORD DOUSE
1334 0978 28          .BYTE $28
1335 0979          ;
1336 0979          ;                FLD
1337 0979          ;                SCREEN 37 LINE 7
1338 0979          ;
1339 0979 83      L1138  .BYTE $83,'FL',$C4
1339 097A 46 4C
1339 097C C4
1340 097D 70 09          .WORD L1130          ; LINK TO DPL
1341 097F 4A 08      FLD  .WORD DOUSE
1342 0981 2A          .BYTE $2A
1343 0982          ;
1344 0982          ;                CSP
1345 0982          ;                SCREEN 37 LINE 8
1346 0982          ;
1347 0982 83      L1146  .BYTE $83,'CS',$D0
1347 0983 43 53
1347 0985 D0
1348 0986 79 09          .WORD L1138          ; LINK TO FLD
1349 0988 4A 08      CSP  .WORD DOUSE
1350 098A 2C          .BYTE $2C
1351 098B          ;
1352 098B          ;                R#
1353 098B          ;                SCREEN 37 LINE 9
1354 098B          ;
1355 098B 82      L1154  .BYTE $82,'R',$A3
1355 098C 52
1355 098D A3
1356 098E 82 09          .WORD L1146          ; LINK TO CSP
1357 0990 4A 08      RNUM .WORD DOUSE
1358 0992 2E          .BYTE $2E
1359 0993          ;
1360 0993          ;                HLD
1361 0993          ;                SCREEN 37 LINE 10
1362 0993          ;
1363 0993 83      L1162  .BYTE $83,'HL',$C4
1363 0994 48 4C
1363 0996 C4
1364 0997 8B 09          .WORD L1154          ; LINK TO R#
1365 0999 4A 08      HLD  .WORD DOUSE
1366 099B 30          .BYTE $30
1367 099C          ;
1368 099C          ;                1+
1369 099C          ;                SCREEN 38 LINE 1
1370 099C          ;
1371 099C 82      L1170  .BYTE $82,'1',$AB
1371 099D 31

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LINE # LOC      CODE      LINE
1371 099E AB
1372 099F 93 09          .WORD L1162          ; LINK TO HLD
1373 09A1 D6 07      ONEP  .WORD DOCOL
1374 09A3 65 08          .WORD ONE
1375 09A5 99 06          .WORD PLUS
1376 09A7 0C 06          .WORD SEMIS
1377 09A9          ;
1378 09A9          ;                2+
1379 09A9          ;                SCREEN 38 LINE 2
1380 09A9          ;
1381 09A9 82          L1180 .BYTE $82,'2',$AB
1381 09AA 32
1381 09AB AB
1382 09AC 9C 09          .WORD L1170          ; LINK TO 1+
1383 09AE D6 07      TWOP  .WORD DOCOL
1384 09B0 6D 08          .WORD TWO
1385 09B2 99 06          .WORD PLUS
1386 09B4 0C 06          .WORD SEMIS
1387 09B6          ;
1388 09B6          ;                HERE
1389 09B6          ;                SCREEN 38 LINE 3
1390 09B6          ;
1391 09B6 84          L1190 .BYTE $84,'HER',$C5
1391 09B7 48 45 52
1391 09BA C5
1392 09BB A9 09          .WORD L1180          ; LINK TO 2+
1393 09BD D6 07      HERE  .WORD DOCOL
1394 09BF 01 09          .WORD DP
1395 09C1 79 07          .WORD AT
1396 09C3 0C 06          .WORD SEMIS
1397 09C5          ;
1398 09C5          ;                ALLOT
1399 09C5          ;                SCREEN 38 LINE 4
1400 09C5          ;
1401 09C5 85          L1200 .BYTE $85,'ALLO',$D4
1401 09C6 41 4C
1401 09CA D4
1402 09CB B6 09          .WORD L1190          ; LINK TO HERE
1403 09CD D6 07      ALLOT .WORD DOCOL
1404 09CF 01 09          .WORD DP
1405 09D1 49 07          .WORD PSTOR
1406 09D3 0C 06          .WORD SEMIS
1407 09D5          ;
1408 09D5          ;                ,
1409 09D5          ;                SCREEN 38 LINE 5
1410 09D5          ;
1411 09D5 81          L1210 .BYTE $81,$AC
1411 09D6 AC
1412 09D7 C5 09          .WORD L1200          ; LINK TO ALLOT
1413 09D9 D6 07      COMMA .WORD DOCOL
1414 09DB BD 09          .WORD HERE
1415 09DD 9D 07          .WORD STORE
1416 09DF 6D 08          .WORD TWO
1417 09E1 CD 09          .WORD ALLOT
1418 09E3 0C 06          .WORD SEMIS

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LINE # LOC      CODE      LINE
1419 09E5          ;
1420 09E5          ;
1421 09E5          ;
1422 09E5          ;
1423 09E5 82      L1222 .BYTE $82,'C',$AC
1423 09E6 43
1423 09E7 AC
1424 09E8 D5 09          .WORD L1210      ; LINK TO ,
1425 09EA D6 07      CCOMM .WORD DOCOL
1426 09EC BD 09          .WORD HERE
1427 09EE B5 07          .WORD CSTOR
1428 09F0 65 08          .WORD ONE
1429 09F2 CD 09          .WORD ALLOT
1430 09F4 0C 06          .WORD SEMIS
1431 09F6          ;
1432 09F6          ;
1433 09F6          ;
1434 09F6          ;
1435 09F6 81      L1234 .BYTE $81,$AD
1435 09F7 AD
1436 09F8 E5 09          .WORD L1222      ; LINK TO C,
1437 09FA D6 07      SUB .WORD DOCOL
1438 09FC D8 06          .WORD MINUS
1439 09FE 99 06          .WORD PLUS
1440 0A00 0C 06          .WORD SEMIS
1441 0A02          ;
1442 0A02          ;
1443 0A02          ;
1444 0A02          ;
1445 0A02 81      L1244 .BYTE $81,$BD
1445 0A03 BD
1446 0A04 F6 09          .WORD L1234      ; LINK TO -
1447 0A06 D6 07      EQUAL .WORD DOCOL
1448 0A08 FA 09          .WORD SUB
1449 0A0A 73 06          .WORD ZEQU
1450 0A0C 0C 06          .WORD SEMIS
1451 0A0E          ;
1452 0A0E          ;
1453 0A0E          ;
1454 0A0E          ;
1455 0A0E 82      L1246 .BYTE $82,'U',$BC
1455 0A0F 55
1455 0A10 BC
1456 0A11 02 0A          .WORD L1244
1457 0A13 D6 07      ULESS .WORD DOCOL
1458 0A15 FA 09          .WORD SUB      subtract two values
1459 0A17 88 06          .WORD ZLESS    test sign
1460 0A19 0C 06          .WORD SEMIS
1461 0A1B          ;
1462 0A1B          ;
1463 0A1B          ;
1464 0A1B          ;
1465 0A1B          ;
1466 0A1B 81      L1254 .BYTE $81,$BC
1466 0A1C BC

```

C,
SCREEN 38 LINE 6

-
SCREEN 38 LINE 7

=
SCREEN 38 LINE 8

U<
Unsigned less than

<
Altered from model
SCREEN 38 LINE 9


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LINE # LOC      CODE      LINE
1467 OA1D 0E 0A          .WORD L1246      LINK TO U<
1468 OA1F 21 0A      LESS  .WORD  *+2
1469 OA21 38          SEC
1470 OA22 B5 02          LDA 2,X
1471 OA24 F5 00          SBC 0,X      subtract
1472 OA26 B5 03          LDA 3,X
1473 OA28 F5 01          SBC 1,X
1474 OA2A 94 03          STY 3,X      zero hi byte
1475 OA2C 50 02          BVC L1258
1476 OA2E 49 80          EOR #$80      correct overflow
1477 OA30 10 01      L1258 BPL L1260
1478 OA32 C8          INY          invert boolean
1479 OA33 94 02      L1260 STY 2,X      leave boolean
1480 OA35 4C EE 03    JMP POP
1481 OA38          ;
1482 OA38          ;
1483 OA38          ;          >
1484 OA38          ;          SCREEN 38 LINE 10
1485 OA38 81      L1264 .BYTE $81,$BE
1485 OA39 BE
1486 OA3A 1B 0A          .WORD L1254      ; LINK TO <
1487 OA3C D6 07      GREAT .WORD DOCOL
1488 OA3E 22 07          .WORD SWAP
1489 OA40 1F 0A          .WORD LESS
1490 OA42 0C 06          .WORD SEMIS
1491 OA44          ;
1492 OA44          ;          ROT
1493 OA44          ;          SCREEN 38 LINE 11
1494 OA44          ;
1495 OA44 83      L1274 .BYTE $83,'RO',$D4
1495 OA45 52 4F
1495 OA47 D4
1496 OA48 38 0A          .WORD L1264      ; LINK TO >
1497 OA4A D6 07      ROT  .WORD DOCOL
1498 OA4C 3A 06          .WORD TOR
1499 OA4E 22 07          .WORD SWAP
1500 OA50 4C 06          .WORD RFROM
1501 OA52 22 07          .WORD SWAP
1502 OA54 0C 06          .WORD SEMIS
1503 OA56          ;
1504 OA56          ;          SPACE
1505 OA56          ;          SCREEN 38 LINE 12
1506 OA56          ;
1507 OA56 85      L1286 .BYTE $85,'SPAC',$C5
1507 OA57 53 50
1507 OA5B C5
1508 OA5C 44 0A          .WORD L1274      ; LINK TO ROT
1509 OA5E D6 07      SPACE .WORD DOCOL
1510 OA60 7E 08          .WORD BL
1511 OA62 D7 04          .WORD EMIT
1512 OA64 0C 06          .WORD SEMIS
1513 OA66          ;
1514 OA66          ;          -DUP
1515 OA66          ;          SCREEN 38 LINE 13
1516 OA66          ;

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LINE #	LOC	CODE	LINE	
1517	0A66	84	L1296	.BYTE \$84, '-DU', \$D0
1517	0A67	2D 44 55		
1517	0A6A	D0		
1518	0A6B	56 0A		.WORD L1286 ; LINK TO SPACE
1519	0A6D	D6 07	DDUP	.WORD DOCOL
1520	0A6F	3A 07		.WORD DUP
1521	0A71	56 03		.WORD ZBRAN
1522	0A73	04 00	L1301	.WORD \$4 L1303-L1301
1523	0A75	3A 07		.WORD DUP
1524	0A77	0C 06	L1303	.WORD SEMIS
1525	0A79			;
1526	0A79			;
1527	0A79			;
1528	0A79			;
1529	0A79	88	L1308	.BYTE \$88, 'TRAVERS', \$C5
1529	0A7A	54 52		
1529	0A81	C5		
1530	0A82	66 0A		.WORD L1296 ; LINK TO -DUP
1531	0A84	D6 07	TRAV	.WORD DOCOL
1532	0A86	22 07		.WORD SWAP
1533	0A88	08 07	L1312	.WORD OVER
1534	0A8A	99 06		.WORD PLUS
1535	0A8C	67 02		.WORD CLIT
1536	0A8E	7F		.BYTE \$7F
1537	0A8F	08 07		.WORD OVER
1538	0A91	8E 07		.WORD CAT
1539	0A93	1F 0A		.WORD LESS
1540	0A95	56 03		.WORD ZBRAN
1541	0A97	F1 FF	L1320	.WORD \$FFF1 L1312-L1320
1542	0A99	22 07		.WORD SWAP
1543	0A9B	19 07		.WORD DROP
1544	0A9D	0C 06		.WORD SEMIS
1545	0A9F			;
1546	0A9F			;
1547	0A9F			;
1548	0A9F			;
1549	0A9F	86	L1328	.BYTE \$86, 'LATES', \$D4
1549	0AA0	4C 41		
1549	0AA5	D4		
1550	0AA6	79 0A		.WORD L1308 ; LINK TO TRAVERSE
1551	0AA8	D6 07	LATES	.WORD DOCOL
1552	0AAA	58 09		.WORD CURR
1553	0AAC	79 07		.WORD AT
1554	0AAE	79 07		.WORD AT
1555	0AB0	0C 06		.WORD SEMIS
1556	0AB2			;
1557	0AB2			;
1558	0AB2			;
1559	0AB2			;
1560	0AB2	83	L1339	.BYTE \$83, 'LF', \$C1
1560	0AB3	4C 46		
1560	0AB5	C1		
1561	0AB6	9F 0A		.WORD L1328 ; LINK TO LATEST
1562	0AB8	D6 07	LFA	.WORD DOCOL
1563	0ABA	67 02		.WORD CLIT

LINE #	LOC	CODE	LINE	
1564	OABC	04		.BYTE 4
1565	OABD	FA 09		.WORD SUB
1566	OABF	0C 06		.WORD SEMIS
1567	OAC1			;
1568	OAC1			;
1569	OAC1			;
1570	OAC1			;
1571	OAC1	83	L1350	.BYTE \$83,'CF',\$C1
1571	OAC2	43 46		
1571	OAC4	C1		
1572	OAC5	B2 0A		.WORD L1339 ; LINK TO LFA
1573	OAC7	D6 07	CFA	.WORD DOCOL
1574	OAC9	6D 08		.WORD TWO
1575	OACB	FA 09		.WORD SUB
1576	OACD	0C 06		.WORD SEMIS
1577	OACF			;
1578	OACF			;
1579	OACF			;
1580	OACF			;
1581	OACF	83	L1360	.BYTE \$83,'NF',\$C1
1581	OAD0	4E 46		
1581	OAD2	C1		
1582	OAD3	C1 0A		.WORD L1350 ; LINK TO CFA
1583	OAD5	D6 07	NFA	.WORD DOCOL
1584	OAD7	67 02		.WORD CLIT
1585	OAD9	05		.BYTE \$5
1586	OADA	FA 09		.WORD SUB
1587	OADC	2A 02		.WORD LIT,\$FFFF
1587	OADE	FF FF		
1588	OAE0	84 0A		.WORD TRAV
1589	OAE2	0C 06		.WORD SEMIS
1590	OAE4			;
1591	OAE4			;
1592	OAE4			;
1593	OAE4			;
1594	OAE4	83	L1373	.BYTE \$83,'PF',\$C1
1594	OAE5	50 46		
1594	OAE7	C1		
1595	OAE8	CF 0A		.WORD L1360 ; LINK TO NFA
1596	OAEA	D6 07	PFA	.WORD DOCOL
1597	OAEC	65 08		.WORD ONE
1598	OAEE	84 0A		.WORD TRAV
1599	OAF0	67 02		.WORD CLIT
1600	OAF2	05		.BYTE 5
1601	OAF3	99 06		.WORD PLUS
1602	OAF5	0C 06		.WORD SEMIS
1603	OAF7			;
1604	OAF7			;
1605	OAF7			;
1606	OAF7			;
1607	OAF7	84	L1386	.BYTE \$84,'!CS',\$D0
1607	OAF8	21 43 53		
1607	OAFB	D0		
1608	O AFC	E4 0A		.WORD L1373 ; LINK TO PFA
1609	OAFE	D6 07	SCSP	.WORD DOCOL

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LINE # LOC      CODE      LINE
1610 OB00 D9 05          .WORD SPAT
1611 OB02 88 09          .WORD CSP
1612 OB04 9D 07          .WORD STORE
1613 OB06 0C 06          .WORD SEMIS
1614 OB08                ;
1615 OB08                ;                ?ERROR
1616 OB08                ;                SCREEN 40 LINE 3
1617 OB08                ;
1618 OB08 86          L1397 .BYTE $86,'?ERRO', $D2
1618 OB09 3F 45
1618 OBOE D2
1619 OB0F F7 0A          .WORD L1386          ; LINK TO !CSP
1620 OB11 D6 07          QERR .WORD DOCOL
1621 OB13 22 07          .WORD SWAP
1622 OB15 56 03          .WORD ZBRAN
1623 OB17 08 00          L1402 .WORD 8          L1406-L1402
1624 OB19 CD 0F          .WORD ERROR
1625 OB1B 37 03          .WORD BRAN
1626 OB1D 04 00          L1405 .WORD 4          L1407-L1405
1627 OB1F 19 07          L1406 .WORD DROP
1628 OB21 0C 06          L1407 .WORD SEMIS
1629 OB23                ;
1630 OB23                ;                ?COMP
1631 OB23                ;                SCREEN 40 LINE 6
1632 OB23                ;
1633 OB23 85          L1412 .BYTE $85,'?COM', $D0
1633 OB24 3F 43
1633 OB28 D0
1634 OB29 08 0B          .WORD L1397          ; LINK TO ?ERROR
1635 OB2B D6 07          QCOMP .WORD DOCOL
1636 OB2D 63 09          .WORD STATE
1637 OB2F 79 07          .WORD AT
1638 OB31 73 06          .WORD ZEQU
1639 OB33 67 02          .WORD CLIT
1640 OB35 11            .BYTE $11
1641 OB36 11 0B          .WORD QERR
1642 OB38 0C 06          .WORD SEMIS
1643 OB3A                ;
1644 OB3A                ;                ?EXEC
1645 OB3A                ;                SCREEN 40 LINE 8
1646 OB3A                ;
1647 OB3A 85          L1426 .BYTE $85,'?EXE', $C3
1647 OB3B 3F 45
1647 OB3F C3
1648 OB40 23 0B          .WORD L1412          ; LINK TO ?COMP
1649 OB42 D6 07          QEXEC .WORD DOCOL
1650 OB44 63 09          .WORD STATE
1651 OB46 79 07          .WORD AT
1652 OB48 67 02          .WORD CLIT
1653 OB4A 12            .BYTE $12
1654 OB4B 11 0B          .WORD QERR
1655 OB4D 0C 06          .WORD SEMIS
1656 OB4F                ;
1657 OB4F                ;                ?PAIRS
1658 OB4F                ;                SCREEN 40 LINE 10

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LINE # LOC      CODE      LINE
1659 OB4F
1660 OB4F 86          L1439 .BYTE $86,'?PAIR',$D3
1660 OB50 3F 50
1660 OB55 D3
1661 OB56 3A 0B          .WORD L1426          ; LINK TO ?EXEC
1662 OB58 D6 07          QPAIR .WORD DOCOL
1663 OB5A FA 09          .WORD SUB
1664 OB5C 67 02          .WORD CLIT
1665 OB5E 13            .BYTE $13
1666 OB5F 11 0B          .WORD QERR
1667 OB61 0C 06          .WORD SEMIS
1668 OB63
1669 OB63          ;
1670 OB63          ;          ?CSP
1671 OB63          ;          SCREEN 40 LINE 12
1672 OB63 84          L1451 .BYTE $84,'?CS',$D0
1672 OB64 3F 43 53
1672 OB67 D0
1673 OB68 4F 0B          .WORD L1439          ; LINK TO ?PAIRS
1674 OB6A D6 07          QCSP .WORD DOCOL
1675 OB6C D9 05          .WORD SPAT
1676 OB6E 88 09          .WORD CSP
1677 OB70 79 07          .WORD AT
1678 OB72 FA 09          .WORD SUB
1679 OB74 67 02          .WORD CLIT
1680 OB76 14            .BYTE $14
1681 OB77 11 0B          .WORD QERR
1682 OB79 0C 06          .WORD SEMIS
1683 OB7B
1684 OB7B          ;
1685 OB7B          ;          ?LOADING
1686 OB7B          ;          SCREEN 40 LINE 14
1687 OB7B 88          L1466 .BYTE $88,'?LOADIN',$C7
1687 OB7C 3F 4C
1687 OB83 C7
1688 OB84 63 0B          .WORD L1451          ; LINK TO ?CSP
1689 OB86 D6 07          QLOAD .WORD DOCOL
1690 OB88 18 09          .WORD BLK
1691 OB8A 79 07          .WORD AT
1692 OB8C 73 06          .WORD ZEQU
1693 OB8E 67 02          .WORD CLIT
1694 OB90 16            .BYTE $16
1695 OB91 11 0B          .WORD QERR
1696 OB93 0C 06          .WORD SEMIS
1697 OB95
1698 OB95          ;
1699 OB95          ;          COMPILE
1700 OB95          ;          SCREEN 41 LINE 2
1701 OB95 87          L1480 .BYTE $87,'COMPIL',$C5
1701 OB96 43 4F
1701 OB9C C5
1702 OB9D 7B 0B          .WORD L1466          ; LINK TO ?LOADING
1703 OB9F D6 07          COMP .WORD DOCOL
1704 OBA1 2B 0B          .WORD QCOMP
1705 OBA3 4C 06          .WORD RFROM

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LINE #	LOC	CODE	LINE	
1706	OBA5	3A 07		.WORD DUP
1707	OBA7	AE 09		.WORD TWOP
1708	OBA9	3A 06		.WORD TOR
1709	OBAB	79 07		.WORD AT
1710	OBAD	D9 09		.WORD COMMA
1711	OBAF	0C 06		.WORD SEMIS
1712	OBB1		;	
1713	OBB1		;	[
1714	OBB1		;	SCREEN 41 LINE 5
1715	OBB1		;	
1716	OBB1	C1	L1495	.BYTE \$C1,\$DB
1716	OBB2	DB		
1717	OBB3	95 0B		.WORD L1480 ; LINK TO COMPILE
1718	OBB5	D6 07	LBRAC	.WORD DOCOL
1719	OBB7	5D 08		.WORD ZERO
1720	OBB9	63 09		.WORD STATE
1721	OBBB	9D 07		.WORD STORE
1722	OBBD	0C 06		.WORD SEMIS
1723	OBBF		;	
1724	OBBF		;	
1725	OBBF		;]
1726	OBBF		;	SCREEN 41 LINE 7
1727	OBBF		;	
1728	OBBF	81	L1507	.BYTE \$81,\$DD
1728	OBC0	DD		
1729	OBC1	B1 0B		.WORD L1495 ; LINK TO [
1730	OBC3	D6 07	RBRAC	.WORD DOCOL
1731	OBC5	67 02		.WORD CLIT
1732	OBC7	C0		.BYTE \$C0
1733	OBC8	63 09		.WORD STATE
1734	OBCA	9D 07		.WORD STORE
1735	OBCC	0C 06		.WORD SEMIS
1736	OBCE		;	
1737	OBCE		;	SMUDGE
1738	OBCE		;	SCREEN 41 LINE 9
1739	OBCE		;	
1740	OBCE	86	L1519	.BYTE \$86,'SMUDG',\$C5
1740	OBCF	53 4D		
1740	OBD4	C5		
1741	OBD5	BF 0B		.WORD L1507 ; LINK TO]
1742	OBD7	D6 07	SMUDG	.WORD DOCOL
1743	OBD9	A8 0A		.WORD LATES
1744	OBDB	67 02		.WORD CLIT
1745	OBDD	20		.BYTE \$20
1746	OBDE	6A 07		.WORD TOGGL
1747	OBE0	0C 06		.WORD SEMIS
1748	OBE2		;	
1749	OBE2		;	HEX
1750	OBE2		;	SCREEN 41 LINE 11
1751	OBE2		;	
1752	OBE2	83	L1531	.BYTE \$83,'HE',\$D8
1752	OBE3	48 45		
1752	OBE5	D8		
1753	OBE6	CE 0B		.WORD L1519 ; LINK TO SMUDGE
1754	OBE8	D6 07	HEX	.WORD DOCOL

LINE #	LOC	CODE	LINE	
1755	OBEA	67 02		.WORD CLIT
1756	OBEC	10		.BYTE 16
1757	OBED	6D 09		.WORD BASE
1758	OBEF	9D 07		.WORD STORE
1759	OBF1	0C 06		.WORD SEMIS
1760	OBF3			;
1761	OBF3			;
1762	OBF3			DECIMAL
1763	OBF3			SCREEN 41 LINE 13
1764	OBF3	87	L1543	.BYTE \$87,'DECIMA', \$CC
1764	OBF4	44 45		
1764	OBFA	CC		
1765	OBFB	E2 0B		.WORD L1531 ; LINK TO HEX
1766	OBFD	D6 07	DECIM	.WORD DOCOL
1767	OBFF	67 02		.WORD CLIT
1768	OC01	0A		.BYTE 10
1769	OC02	6D 09		.WORD BASE
1770	OC04	9D 07		.WORD STORE
1771	OC06	0C 06		.WORD SEMIS
1772	OC08			;
1773	OC08			;
1774	OC08			(;CODE)
1775	OC08			SCREEN 42 LINE 2
1776	OC08	87	L1555	.BYTE \$87,'(;CODE', \$A9
1776	OC09	28 3B		
1776	OC0F	A9		
1777	OC10	F3 0B		.WORD L1543 ; LINK TO DECIMAL
1778	OC12	D6 07	PSCOD	.WORD DOCOL
1779	OC14	4C 06		.WORD RFROM
1780	OC16	A8 0A		.WORD LATES
1781	OC18	EA 0A		.WORD PFA
1782	OC1A	C7 0A		.WORD CFA
1783	OC1C	9D 07		.WORD STORE
1784	OC1E	0C 06		.WORD SEMIS
1785	OC20			;
1786	OC20			;
1787	OC20			;CODE
1788	OC20			SCREEN 42 LINE 6
1789	OC20	C5	L1568	.BYTE \$C5,';COD', \$C5
1789	OC21	3B 43		
1789	OC25	C5		
1790	OC26	08 0C		.WORD L1555 ; LINK TO (;CODE)
1791	OC28	D6 07		.WORD DOCOL
1792	OC2A	6A 0B		.WORD QCSP
1793	OC2C	9F 0B		.WORD COMP
1794	OC2E	12 0C		.WORD PSCOD
1795	OC30	B5 0B		.WORD LBRAC
1796	OC32	D7 0B		.WORD SMUDG
1797	OC34	0C 06		.WORD SEMIS
1798	OC36			;
1799	OC36			;
1800	OC36			<BUILDS
1801	OC36			SCREEN 43 LINE 2
1802	OC36			;
1803	OC36	87	L1582	.BYTE \$87,'<BUILD', \$D3

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LINE # LOC      CODE      LINE
1803 0C37 3C 42
1803 0C3D D3
1804 0C3E 20 0C          .WORD L1568          ; LINK TO ;CODE
1805 0C40 D6 07      BUILD .WORD DOCOL
1806 0C42 5D 08          .WORD ZERO
1807 0C44 0B 08          .WORD CONST
1808 0C46 0C 06          .WORD SEMIS
1809 0C48          ;
1810 0C48          ;          DOES>
1811 0C48          ;          SCREEN 43 LINE 4
1812 0C48          ;
1813 0C48 85          L1592 .BYTE $85,'DOES',$BE
1813 0C49 44 4F
1813 0C4D BE
1814 0C4E 36 0C          .WORD L1582          ; LINK TO <BUILDS
1815 0C50 D6 07      DOES .WORD DOCOL
1816 0C52 4C 06          .WORD RFROM
1817 0C54 A8 0A          .WORD LATES
1818 0C56 EA 0A          .WORD PFA
1819 0C58 9D 07          .WORD STORE
1820 0C5A 12 0C          .WORD PSCOD
1821 0C5C          ;
1822 0C5C A5 AF      DODOE LDA IP+1
1823 0C5E 48          PHA
1824 0C5F A5 AE          LDA IP
1825 0C61 48          PHA
1826 0C62 A0 02          LDY #2
1827 0C64 B1 B1          LDA (W),Y
1828 0C66 85 AE          STA IP
1829 0C68 C8          INY
1830 0C69 B1 B1          LDA (W),Y
1831 0C6B 85 AF          STA IP+1
1832 0C6D 18          CLC
1833 0C6E A5 B1          LDA W
1834 0C70 69 04          ADC #4
1835 0C72 48          PHA
1836 0C73 A5 B2          LDA W+1
1837 0C75 69 00          ADC #0
1838 0C77 4C 3D 02      JMP PUSH
1839 0C7A          ;
1840 0C7A          ;          COUNT
1841 0C7A          ;          SCREEN 44 LINE 1
1842 0C7A          ;
1843 0C7A 85          L1622 .BYTE $85,'COUN',$D4
1843 0C7B 43 4F
1843 0C7F D4
1844 0C80 48 0C          .WORD L1592          ; LINK TO DOES>
1845 0C82 D6 07      COUNT .WORD DOCOL
1846 0C84 3A 07          .WORD DUP
1847 0C86 A1 09          .WORD ONEP
1848 0C88 22 07          .WORD SWAP
1849 0C8A 8E 07          .WORD CAT
1850 0C8C 0C 06          .WORD SEMIS
1851 0C8E          ;
1852 0C8E          ;          TYPE

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LINE # LOC      CODE      LINE
1853 OC8E          ;                SCREEN 44 LINE 2
1854 OC8E          ;
1855 OC8E 84      L1634 .BYTE $84,'TYP',5
1855 OC8F 54 59 50
1855 OC92 C5
1856 OC93 7A 0C          .WORD L1622          ; LINK TO COUNT
1857 OC95 D6 07      TYPE .WORD DOCOL
1858 OC97 6D 0A          .WORD DDUP
1859 OC99 56 03          .WORD ZBRAN
1860 OC9B 18 00      L1639 .WORD $18          L1651-L1639
1861 OC9D 08 07          .WORD OVER
1862 OC9F 99 06          .WORD PLUS
1863 OCA1 22 07          .WORD SWAP
1864 OCA3 DE 03          .WORD PDO
1865 OCA5 F7 03      L1644 .WORD I
1866 OCA7 8E 07          .WORD CAT
1867 OCA9 D7 04          .WORD EMIT
1868 OCAB 77 03          .WORD PLOOP
1869 OCAD F8 FF      L1648 .WORD $FFF8          L1644-L1648
1870 OCAF 37 03          .WORD BRAN
1871 OCB1 04 00      L1650 .WORD $4          L1652-L1650
1872 OCB3 19 07      L1651 .WORD DROP
1873 OCB5 0C 06      L1652 .WORD SEMIS
1874 OCB7          ;
1875 OCB7          ;                -TRAILING
1876 OCB7          ;                SCREEN 44 LINE 5
1877 OCB7          ;
1878 OCB7 89      L1657 .BYTE $89,'-TRAILIN',7
1878 OCB8 2D 54
1878 OCC0 C7
1879 OCC1 8E 0C          .WORD L1634          ; LINK TO TYPE
1880 OCC3 D6 07      DTRAI .WORD DOCOL
1881 OCC5 3A 07          .WORD DUP
1882 OCC7 5D 08          .WORD ZERO
1883 OCC9 DE 03          .WORD PDO
1884 OCCB 08 07      L1663 .WORD OVER
1885 OCCD 08 07          .WORD OVER
1886 OCCF 99 06          .WORD PLUS
1887 OCD1 65 08          .WORD ONE
1888 OCD3 FA 09          .WORD SUB
1889 OCD5 8E 07          .WORD CAT
1890 OCD7 7E 08          .WORD BL
1891 OCD9 FA 09          .WORD SUB
1892 OCDB 56 03          .WORD ZBRAN
1893 OCDD 08 00      L1672 .WORD 8          L1676-L1672
1894 OCDF 1F 06          .WORD LEAVE
1895 OCE1 37 03          .WORD BRAN
1896 OCE3 06 00      L1675 .WORD 6          L1678-L1675
1897 OCE5 65 08      L1676 .WORD ONE
1898 OCE7 FA 09          .WORD SUB
1899 OCE9 77 03      L1678 .WORD PLOOP
1900 OCEB E0 FF      L1679 .WORD $FFE0          L1663-L1679
1901 OCED 0C 06          .WORD SEMIS
1902 OCEF          ;
1903 OCEF          ;                (." )

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LINE # LOC      CODE      LINE
1904 OCEF                ;                SCREEN 44 LINE 8
1905 OCEF                ;
1906 OCEF 84          L1685 .BYTE $84, '(."', $A9
1906 OCF0 28 2E 22
1906 OCF3 A9
1907 OCF4 B7 0C          .WORD L1657          ; LINK TO -TRAILING
1908 OCF6 D6 07          PDOTQ .WORD DOCOL
1909 OCF8 5D 06          .WORD R
1910 OCFA 82 0C          .WORD COUNT
1911 OCFC 3A 07          .WORD DUP
1912 OCFE A1 09          .WORD ONEP
1913 OD00 4C 06          .WORD RFROM
1914 OD02 99 06          .WORD PLUS
1915 OD04 3A 06          .WORD TOR
1916 OD06 95 0C          .WORD TYPE
1917 OD08 0C 06          .WORD SEMIS
1918 ODOA                ;
1919 ODOA                ;                ."
1920 ODOA                ;                SCREEN 44 LINE 12
1921 ODOA                ;
1922 ODOA C2          L1701 .BYTE $C2, '. ', $A2
1922 ODOB 2E
1922 ODOC A2
1923 OD0D EF 0C          .WORD L1685          ; LINK TO PDOTQ
1924 ODOF D6 07          .WORD DOCOL
1925 OD11 67 02          .WORD CLIT
1926 OD13 22            .BYTE $22
1927 OD14 63 09          .WORD STATE
1928 OD16 79 07          .WORD AT
1929 OD18 56 03          .WORD ZBRAN
1930 OD1A 14 00          L1709 .WORD $14          L1719-L1709
1931 OD1C 9F 0B          .WORD COMP
1932 OD1E F6 0C          .WORD PDOTQ
1933 OD20 70 0E          .WORD WORD
1934 OD22 BD 09          .WORD HERE
1935 OD24 8E 07          .WORD CAT
1936 OD26 A1 09          .WORD ONEP
1937 OD28 CD 09          .WORD ALLOT
1938 OD2A 37 03          .WORD BRAN
1939 OD2C 0A 00          L1718 .WORD $A          L1723-L1718
1940 OD2E 70 0E          L1719 .WORD WORD
1941 OD30 BD 09          .WORD HERE
1942 OD32 82 0C          .WORD COUNT
1943 OD34 95 0C          .WORD TYPE
1944 OD36 0C 06          L1723 .WORD SEMIS
1945 OD38                ;
1946 OD38                ;
1947 OD38                ;                EXPECT
1948 OD38                ;                SCREEN 45 LINE 2
1949 OD38                ;
1950 OD38 86          L1729 .BYTE $86, 'EXPEC', $D4
1950 OD39 45 58
1950 OD3E D4
1951 OD3F 0A 0D          .WORD L1701          ; LINK TO ."
1952 OD41 D6 07          EXPEC .WORD DOCOL

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LINE #	LOC	CODE	LINE	
1953	OD43	08 07		.WORD OVER
1954	OD45	99 06		.WORD PLUS
1955	OD47	08 07		.WORD OVER
1956	OD49	DE 03		.WORD PDO
1957	OD4B	DF 04	L1736	.WORD KEY
1958	OD4D	3A 07		.WORD DUP
1959	OD4F	67 02		.WORD CLIT
1960	OD51	0E		.BYTE \$E
1961	OD52	C6 08		.WORD PORIG
1962	OD54	79 07		.WORD AT
1963	OD56	06 0A		.WORD EQUAL
1964	OD58	56 03		.WORD ZBRAN
1965	OD5A	1F 00	L1744	.WORD \$1F
1966	OD5C	19 07		.WORD DROP
1967	OD5E	67 02		.WORD CLIT
1968	OD60	08		.BYTE 08
1969	OD61	08 07		.WORD OVER
1970	OD63	F7 03		.WORD I
1971	OD65	06 0A		.WORD EQUAL
1972	OD67	3A 07		.WORD DUP
1973	OD69	4C 06		.WORD RFROM
1974	OD6B	6D 08		.WORD TWO
1975	OD6D	FA 09		.WORD SUB
1976	OD6F	99 06		.WORD PLUS
1977	OD71	3A 06		.WORD TOR
1978	OD73	FA 09		.WORD SUB
1979	OD75	37 03		.WORD BRAN
1980	OD77	27 00	L1759	.WORD \$27
1981	OD79	3A 07	L1760	.WORD DUP
1982	OD7B	67 02		.WORD CLIT
1983	OD7D	0D		.BYTE \$0D
1984	OD7E	06 0A		.WORD EQUAL
1985	OD80	56 03		.WORD ZBRAN
1986	OD82	0E 00	L1765	.WORD \$0E
1987	OD84	1F 06		.WORD LEAVE
1988	OD86	19 07		.WORD DROP
1989	OD88	7E 08		.WORD BL
1990	OD8A	5D 08		.WORD ZERO
1991	OD8C	37 03		.WORD BRAN
1992	OD8E	04 00	L1771	.WORD 04
1993	OD90	3A 07	L1772	.WORD DUP
1994	OD92	F7 03	L1773	.WORD I
1995	OD94	B5 07		.WORD CSTOR
1996	OD96	5D 08		.WORD ZERO
1997	OD98	F7 03		.WORD I
1998	OD9A	A1 09		.WORD ONEP
1999	OD9C	9D 07		.WORD STORE
2000	OD9E	D7 04	L1779	.WORD EMIT
2001	ODA0	77 03		.WORD PLOOP
2002	ODA2	A9 FF	L1781	.WORD \$FFA9
2003	ODA4	19 07		.WORD DROP
2004	ODA6	0C 06		.WORD SEMIS
2005	ODA8		;	
2006	ODA8		;	QUERY
2007	ODA8		;	SCREEN 45 LINE 9

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LINE # LOC      CODE      LINE
2008 ODA8
2009 ODA8 85          L1788 .BYTE $85,'QUER',$D9
2009 ODA9 51 55
2009 ODAD D9
2010 ODAE 38 OD          .WORD L1729          ; LINK TO EXPECT
2011 ODB0 D6 07          QUERY .WORD DOCOL
2012 ODB2 D6 08          .WORD TIB
2013 ODB4 79 07          .WORD AT
2014 ODB6 67 02          .WORD CLIT
2015 ODB8 50          .BYTE 80          80 characters from terminal
2016 ODB9 41 OD          .WORD EXPECT
2017 ODBB 5D 08          .WORD ZERO
2018 ODBD 20 09          .WORD IN
2019 ODBF 9D 07          .WORD STORE
2020 ODC1 0C 06          .WORD SEMIS
2021 ODC3
2022 ODC3
2023 ODC3
2024 ODC3
2025 ODC3 C1          L1804 .BYTE $C1,$80
2025 ODC4 80
2026 ODC5 A8 OD          .WORD L1788          ; LINK TO QUERY
2027 ODC7 D6 07          .WORD DOCOL
2028 ODC9 18 09          .WORD BLK
2029 ODCB 79 07          .WORD AT
2030 ODCD 56 03          .WORD ZBRAN
2031 ODCF 2A 00          L1810 .WORD $2A          L1830-L1810
2032 ODD1 65 08          .WORD ONE
2033 ODD3 18 09          .WORD BLK
2034 ODD5 49 07          .WORD PSTOR
2035 ODD7 5D 08          .WORD ZERO
2036 ODD9 20 09          .WORD IN
2037 ODDB 9D 07          .WORD STORE
2038 ODDD 18 09          .WORD BLK
2039 ODDF 79 07          .WORD AT
2040 ODE1 5D 08          .WORD ZERO,BSCR
2040 ODE3 B8 08
2041 ODE5 5B 05          .WORD USLAS
2042 ODE7 19 07          .WORD DROP          fixed from model
2043 ODE9 73 06          .WORD ZEQU
2044 ODEB 56 03          .WORD ZBRAN
2045 ODED 08 00          L1824 .WORD 8          L1828-L1824
2046 ODEF 42 0B          .WORD QEXEC
2047 ODF1 4C 06          .WORD RFROM
2048 ODF3 19 07          .WORD DROP
2049 ODF5 37 03          L1828 .WORD BRAN
2050 ODF7 06 00          L1829 .WORD 6          L1832-L1829
2051 ODF9 4C 06          L1830 .WORD RFROM
2052 ODFB 19 07          .WORD DROP
2053 ODFD 0C 06          L1832 .WORD SEMIS
2054 ODFF
2055 ODFF
2056 ODFF
2057 ODFF
2058 ODFF

```

FILL
SCREEN 46 LINE 1

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LINE # LOC      CODE      LINE
2059 ODFD 84          L1838 .BYTE $84,'FIL',$CC
2059 OE00 46 49 4C
2059 OE03 CC
2060 OE04 C3 OD          .WORD L1804          ; LINK TO X
2061 OE06 D6 07          FILL  .WORD DOCOL
2062 OE08 22 07          .WORD SWAP
2063 OE0A 3A 06          .WORD TOR
2064 OE0C 08 07          .WORD OVER
2065 OE0E B5 07          .WORD CSTOR
2066 OE10 3A 07          .WORD DUP
2067 OE12 A1 09          .WORD ONEP
2068 OE14 4C 06          .WORD RFROM
2069 OE16 65 08          .WORD ONE
2070 OE18 FA 09          .WORD SUB
2071 OE1A FE 04          .WORD CMOVE
2072 OE1C 0C 06          .WORD SEMIS
2073 OE1E          ;
2074 OE1E          ; ERASE
2075 OE1E          ; SCREEN 46 LINE 4
2076 OE1E          ;
2077 OE1E 85          L1856 .BYTE $85,'ERAS',$C5
2077 OE1F 45 52
2077 OE23 C5
2078 OE24 FF OD          .WORD L1838          ; LINK TO FILL
2079 OE26 D6 07          ERASE .WORD DOCOL
2080 OE28 5D 08          .WORD ZERO
2081 OE2A 06 0E          .WORD FILL
2082 OE2C 0C 06          .WORD SEMIS
2083 OE2E          ;
2084 OE2E          ; BLANKS
2085 OE2E          ; SCREEN 46 LINE 7
2086 OE2E          ;
2087 OE2E 86          L1866 .BYTE $86,'BLANK',$D3
2087 OE2F 42 4C
2087 OE34 D3
2088 OE35 1E 0E          .WORD L1856          ; LINK TO ERASE
2089 OE37 D6 07          BLANK .WORD DOCOL
2090 OE39 7E 08          .WORD BL
2091 OE3B 06 0E          .WORD FILL
2092 OE3D 0C 06          .WORD SEMIS
2093 OE3F          ;
2094 OE3F          ;
2095 OE3F          .FILE FOR3/1
2096 OE3F          ;
2097 OE3F          ; HOLD
2098 OE3F          ; SCREEN 46 LINE 10
2099 OE3F          ;
2100 OE3F 84          L1876 .BYTE $84,'HOL',$C4
2100 OE40 48 4F 4C
2100 OE43 C4
2101 OE44 2E 0E          .WORD L1866          ; LINK TO BLANKS
2102 OE46 D6 07          HOLD  .WORD DOCOL
2103 OE48 2A 02          .WORD LIT,$FFFF
2103 OE4A FF FF
2104 OE4C 99 09          .WORD HLD

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LINE #	LOC	CODE	LINE	
2105	OE4E	49 07		.WORD PSTOR
2106	OE50	99 09		.WORD HLD
2107	OE52	79 07		.WORD AT
2108	OE54	B5 07		.WORD CSTOR
2109	OE56	0C 06		.WORD SEMIS
2110	OE58		;	
2111	OE58		;	PAD
2112	OE58		;	SCREEN 46 LINE 13
2113	OE58		;	
2114	OE58	83	L1890	.BYTE \$83,'PA',\$C4
2114	OE59	50 41		
2114	OE5B	C4		
2115	OE5C	3F 0E		.WORD L1876 ; LINK TO HOLD
2116	OE5E	D6 07	PAD	.WORD DOCOL
2117	OE60	BD 09		.WORD HERE
2118	OE62	67 02		.WORD CLIT
2119	OE64	44		.BYTE 68 PAD is 68 bytes above here.
2120	OE65	99 06		.WORD PLUS
2121	OE67	0C 06		.WORD SEMIS
2122	OE69		;	
2123	OE69		;	WORD
2124	OE69		;	SCREEN 47 LINE 1
2125	OE69		;	
2126	OE69	84	L1902	.BYTE \$84,'WOR',\$C4
2126	OE6A	57 4F 52		
2126	OE6D	C4		
2127	OE6E	58 0E		.WORD L1890 ; LINK TO PAD
2128	OE70	D6 07	WORD	.WORD DOCOL
2129	OE72	18 09		.WORD BLK
2130	OE74	79 07		.WORD AT
2131	OE76	56 03		.WORD ZBRAN
2132	OE78	0C 00	L1908	.WORD \$C L1914-L1908
2133	OE7A	18 09		.WORD BLK
2134	OE7C	79 07		.WORD AT
2135	OE7E	D5 14		.WORD BLOCK
2136	OE80	37 03		.WORD BRAN
2137	OE82	06 00	L1913	.WORD \$6 L1916-L1913
2138	OE84	D6 08	L1914	.WORD TIB
2139	OE86	79 07		.WORD AT
2140	OE88	20 09	L1916	.WORD IN
2141	OE8A	79 07		.WORD AT
2142	OE8C	99 06		.WORD PLUS
2143	OE8E	22 07		.WORD SWAP
2144	OE90	98 04		.WORD ENCL
2145	OE92	BD 09		.WORD HERE
2146	OE94	67 02		.WORD CLIT
2147	OE96	22		.BYTE \$22
2148	OE97	37 0E		.WORD BLANK
2149	OE99	20 09		.WORD IN
2150	OE9B	49 07		.WORD PSTOR
2151	OE9D	08 07		.WORD OVER
2152	OE9F	FA 09		.WORD SUB
2153	OEA1	3A 06		.WORD TOR
2154	OEA3	5D 06		.WORD R
2155	OEA5	BD 09		.WORD HERE

LINE #	LOC	CODE	LINE	
2156	OEA7	B5 07		.WORD CSTOR
2157	OEA9	99 06		.WORD PLUS
2158	OEAB	BD 09		.WORD HERE
2159	OEAD	A1 09		.WORD ONEP
2160	OEAF	4C 06		.WORD RFROM
2161	OEB1	FE 04		.WORD CMOVE
2162	OEB3	0C 06		.WORD SEMIS
2163	OEB5			;
2164	OEB5			;
2165	OEB5			UPPER
2166	OEB5			SCREEN 47 LINE 12
2167	OEB5	85	L1943	.BYTE \$85,'UPPE',\$D2
2167	OEB6	55 50		
2167	OEBA	D2		
2168	OEBA	D2		
2168	OEBB	69 0E		.WORD L1902 ; LINK TO WORD
2169	OEBD	D6 07	UPPER	.WORD DOCOL
2170	OEBF	08 07		.WORD OVER
2171	OEC1	99 06		.WORD PLUS
2172	OEC3	22 07		.WORD SWAP
2173	OEC5	DE 03		.WORD PDO
2174	OEC7	F7 03	L1950	.WORD I
2175	OEC9	8E 07		.WORD CAT
2176	OECB	67 02		.WORD CLIT
2177	OECD	5F		.BYTE \$5F
2178	OECE	3C 0A		.WORD GREAT
2179	OEDO	56 03		.WORD ZBRAN
2180	OED2	09 00	L1956	.WORD 09 L1961-L1956
2181	OED4	F7 03		.WORD I
2182	OED6	67 02		.WORD CLIT
2183	OED8	20		.BYTE \$20
2184	OED9	6A 07		.WORD TOGGL
2185	OEDB	77 03	L1961	.WORD PLOOP
2186	OEDD	EA FF	L1962	.WORD \$FFEA L1950-L1962
2187	OEDF	0C 06		.WORD SEMIS
2188	OEE1			;
2189	OEE1			;
2190	OEE1			(NUMBER)
2191	OEE1			SCREEN 48 LINE 1
2192	OEE1	88	L1968	.BYTE \$88,'(NUMBER',\$A9
2192	OEE2	28 4E		
2192	OEE9	A9		
2193	OEEA	B5 0E		.WORD L1943 ; LINK TO UPPER
2194	OEEC	D6 07	PNUMB	.WORD DOCOL
2195	OEED	A1 09	L1971	.WORD ONEP
2196	OEEF	3A 07		.WORD DUP
2197	OEF0	3A 06		.WORD TOR
2198	OEF2	8E 07		.WORD CAT
2199	OEF4	6D 09		.WORD BASE
2200	OEF6	79 07		.WORD AT
2201	OEF8	01 04		.WORD DIGIT
2202	OEFB	56 03		.WORD ZBRAN
2203	OEFE	2C 00	L1979	.WORD \$2C L2001-L1979
2204	OF00	22 07		.WORD SWAP
2205	OF02	6D 09		.WORD BASE
2206	OF04	79 07		.WORD AT

LINE #	LOC	CODE	LINE	
2207	OF06	23 05		.WORD USTAR
2208	OF08	19 07		.WORD DROP
2209	OFOA	4A 0A		.WORD ROT
2210	OFOC	6D 09		.WORD BASE
2211	OFOE	79 07		.WORD AT
2212	OF10	23 05		.WORD USTAR
2213	OF12	B2 06		.WORD DPLUS
2214	OF14	76 09		.WORD DPL
2215	OF16	79 07		.WORD AT
2216	OF18	A1 09		.WORD ONEP
2217	OF1A	56 03		.WORD ZBRAN
2218	OF1C	08 00	L1994	.WORD 8
2219	OF1E	65 08		.WORD ONE
2220	OF20	76 09		.WORD DPL
2221	OF22	49 07		.WORD PSTOR
2222	OF24	4C 06	L1998	.WORD RFROM
2223	OF26	37 03		.WORD BRAN
2224	OF28	C6 FF	L2000	.WORD \$FFC6
2225	OF2A	4C 06	L2001	.WORD RFROM
2226	OF2C	0C 06		.WORD SEMIS
2227	OF2E		;	
2228	OF2E		;	NUMBER
2229	OF2E		;	SCREEN 48 LINE 6
2230	OF2E		;	
2231	OF2E	86	L2007	.BYTE \$86, 'NUMBE', \$D2
2231	OF2F	4E 55		
2231	OF34	D2		
2232	OF35	E1 0E		.WORD L1968
2233	OF37	D6 07	NUMBER	.WORD DOCOL
2234	OF39	5D 08		.WORD ZERO
2235	OF3B	5D 08		.WORD ZERO
2236	OF3D	4A 0A		.WORD ROT
2237	OF3F	3A 07		.WORD DUP
2238	OF41	A1 09		.WORD ONEP
2239	OF43	8E 07		.WORD CAT
2240	OF45	67 02		.WORD CLIT
2241	OF47	2D		.BYTE \$2D
2242	OF48	06 0A		.WORD EQUAL
2243	OF4A	3A 07		.WORD DUP
2244	OF4C	3A 06		.WORD TOR
2245	OF4E	99 06		.WORD PLUS
2246	OF50	2A 02		.WORD LIT, \$FFFF
2246	OF52	FF FF		
2247	OF54	76 09	L2023	.WORD DPL
2248	OF56	9D 07		.WORD STORE
2249	OF58	EC 0E		.WORD PNUMB
2250	OF5A	3A 07		.WORD DUP
2251	OF5C	8E 07		.WORD CAT
2252	OF5E	7E 08		.WORD BL
2253	OF60	FA 09		.WORD SUB
2254	OF62	56 03		.WORD ZBRAN
2255	OF64	15 00	L2031	.WORD \$15
2256	OF66	3A 07		.WORD DUP
2257	OF68	8E 07		.WORD CAT
2258	OF6A	67 02		.WORD CLIT


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LINE # LOC      CODE      LINE
2259 OF6C 2E          .BYTE $2E
2260 OF6D FA 09      .WORD SUB
2261 OF6F 5D 08      .WORD ZERO
2262 OF71 11 0B      .WORD QERR
2263 OF73 5D 08      .WORD ZERO
2264 OF75 37 03      .WORD BRAN
2265 OF77 DD FF      L2041 .WORD $FFDD      L2023-L2041
2266 OF79 19 07      L2042 .WORD DROP
2267 OF7B 4C 06      .WORD RFROM
2268 OF7D 56 03      .WORD ZBRAN
2269 OF7F 04 00      L2045 .WORD 4          L2047-L2045
2270 OF81 F1 06      .WORD DMINU
2271 OF83 0C 06      L2047 .WORD SEMIS
2272 OF85          ;
2273 OF85          ;          -FIND
2274 OF85          ;          SCREEN 48 LINE 12
2275 OF85          ;
2276 OF85 85      L2052 .BYTE $85,'-FIN', $C4
2276 OF86 2D 46
2276 OF8A C4
2277 OF8B 2E 0F      .WORD L2007      ; LINK TO NUMBER
2278 OF8D D6 07      DFIND .WORD DOCOL
2279 OF8F 7E 08      .WORD BL
2280 OF91 70 0E      .WORD WORD
2281 OF93 BD 09      .WORD HERE      ) Optional allowing free use of low
2282 OF95 82 0C      .WORD COUNT      | case from terminal.
2283 OF97 BD 0E      .WORD UPPER      )
2284 OF99 BD 09      .WORD HERE
2285 OF9B 4B 09      .WORD CON
2286 OF9D 79 07      .WORD AT
2287 OF9F 79 07      .WORD AT
2288 OFA1 32 04      .WORD PFIND
2289 OFA3 3A 07      .WORD DUP
2290 OFA5 73 06      .WORD ZEQU
2291 OFA7 56 03      .WORD ZBRAN
2292 OFA9 0A 00      L2068 .WORD $A          L2073-L2068
2293 OFAB 19 07      .WORD DROP
2294 OFAD BD 09      .WORD HERE
2295 OFAF A8 0A      .WORD LATES
2296 OFB1 32 04      .WORD PFIND
2297 OFB3 0C 06      L2073 .WORD SEMIS
2298 OFB5          ;
2299 OFB5          ;          (ABORT)
2300 OFB5          ;          SCREEN 49 LINE 2
2301 OFB5          ;
2302 OFB5 87      L2078 .BYTE $87,'(ABORT', $A9
2302 OFB6 28 41
2302 OFBC A9
2303 OFBD 85 0F      .WORD L2052      ; LINK TO -FIND
2304 OFBF D6 07      PABOR .WORD DOCOL
2305 OFC1 1D 12      .WORD ABORT
2306 OFC3 0C 06      .WORD SEMIS
2307 OFC5          ;
2308 OFC5          ;          ERROR
2309 OFC5          ;          SCREEN 49 LINE 4

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LINE # LOC      CODE      LINE
2310 OFC5                ;
2311 OFC5 85          L2087 .BYTE $85,'ERRO',$D2
2311 OFC6 45 52
2311 OFCA D2
2312 OFCB B5 OF          .WORD L2078          ; LINK TO (ABORT)
2313 OFCD D6 07          ERROR .WORD DOCOL
2314 OFCF EE 08          .WORD WARN
2315 OFD1 79 07          .WORD AT
2316 OFD3 88 06          .WORD ZLESS
2317 OFD5 56 03          .WORD ZBRAN
2318 OFD7 04 00          L2094 .WORD $4          L2096-L2094
2319 OFD9 BF 0F          .WORD PABOR
2320 OFDB BD 09          L2096 .WORD HERE
2321 OFDD 82 0C          .WORD COUNT
2322 OFDF 95 0C          .WORD TYPE
2323 OFE1 F6 0C          .WORD PDOTQ
2324 OFE3 04          .BYTE 4,' ? '
2324 OFE4 20 20
2325 OFE8 6C 15          .WORD MESS
2326 OFEA E8 05          .WORD SPSTO
2327 OFEC 19 07          .WORD DROP,DROP      ; make room for 2 error values
2327 OFEE 19 07
2328 OFF0 20 09          .WORD IN
2329 OFF2 79 07          .WORD AT
2330 OFF4 18 09          .WORD BLK
2331 OFF6 79 07          .WORD AT
2332 OFF8 EE 11          .WORD QUIT
2333 OFFA 0C 06          .WORD SEMIS
2334 OFFC                ;
2335 OFFC                ; ID.
2336 OFFC                ; SCREEN 49 LINE 9
2337 OFFC                ;
2338 OFFC 83          L2113 .BYTE $83,'ID',$AE
2338 OFFD 49 44
2338 OFFF AE
2339 1000 C5 0F          .WORD L2087          ; LINK TO ERROR
2340 1002 D6 07          IDDOT .WORD DOCOL
2341 1004 5E 0E          .WORD PAD
2342 1006 67 02          .WORD CLIT
2343 1008 20          .BYTE $20
2344 1009 67 02          .WORD CLIT
2345 100B 5F          .BYTE $5F
2346 100C 06 0E          .WORD FILL
2347 100E 3A 07          .WORD DUP
2348 1010 EA 0A          .WORD PFA
2349 1012 B8 0A          .WORD LFA
2350 1014 08 07          .WORD OVER
2351 1016 FA 09          .WORD SUB
2352 1018 5E 0E          .WORD PAD
2353 101A 22 07          .WORD SWAP
2354 101C FE 04          .WORD CMOVE
2355 101E 5E 0E          .WORD PAD
2356 1020 82 0C          .WORD COUNT
2357 1022 67 02          .WORD CLIT
2358 1024 1F          .BYTE $1F

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LINE # LOC      CODE      LINE
2359 1025 98 05          .WORD ANDD
2360 1027 95 0C          .WORD TYPE
2361 1029 5E 0A          .WORD SPACE
2362 102B 0C 06          .WORD SEMIS
2363 102D                ;
2364 102D                ;
2365 102D                ;
2366 102D                ;
2367 102D 86          L2142 .BYTE $86,'CREAT',5
2367 102E 43 52
2367 1033 C5
2368 1034 FC 0F          .WORD L2113          ; LINK TO ID.
2369 1036 D6 07          CREAT .WORD DOCOL
2370 1038 D6 08          .WORD TIB          )
2371 103A BD 09          .WORD HERE          | 6502 only, assures room exists
2372 103C 67 02          .WORD CLIT          | in dictionary.
2373 103E A0            .BYTE $A0          |
2374 103F 99 06          .WORD PLUS          |
2375 1041 13 0A          .WORD ULESS          |
2376 1043 6D 08          .WORD TWO           |
2377 1045 11 0B          .WORD QERR          )
2378 1047 8D 0F          .WORD DFIND
2379 1049 56 03          .WORD ZBRAN
2380 104B 0F 00          L2155 .WORD $OF          L2163-L2155
2381 104D 19 07          .WORD DROP
2382 104F D5 0A          .WORD NFA
2383 1051 02 10          .WORD IDDOT
2384 1053 67 02          .WORD CLIT
2385 1055 04            .BYTE 4
2386 1056 6C 15          .WORD MESS
2387 1058 5E 0A          .WORD SPACE
2388 105A BD 09          L2163 .WORD HERE
2389 105C 3A 07          .WORD DUP
2390 105E 8E 07          .WORD CAT
2391 1060 E1 08          .WORD WIDTH
2392 1062 79 07          .WORD AT
2393 1064 D2 12          .WORD MIN
2394 1066 A1 09          .WORD ONEP
2395 1068 CD 09          .WORD ALLOT
2396 106A 01 09          .WORD DP          ) 6502 only. The code field musn'
2397 106C 8E 07          .WORD CAT          | straddle page boundaries.
2398 106E 67 02          .WORD CLIT          |
2399 1070 FD            .BYTE $FD          |
2400 1071 06 0A          .WORD EQUAL          |
2401 1073 CD 09          .WORD ALLOT          )
2402 1075 3A 07          .WORD DUP
2403 1077 67 02          .WORD CLIT
2404 1079 A0            .BYTE $A0
2405 107A 6A 07          .WORD TOGGL
2406 107C BD 09          .WORD HERE
2407 107E 65 08          .WORD ONE
2408 1080 FA 09          .WORD SUB
2409 1082 67 02          .WORD CLIT
2410 1084 80            .BYTE $80
2411 1085 6A 07          .WORD TOGGL

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LINE #	LOC	CODE	LINE
2412	1087	A8 0A	.WORD LATES
2413	1089	D9 09	.WORD COMMA
2414	108B	58 09	.WORD CURR
2415	108D	79 07	.WORD AT
2416	108F	9D 07	.WORD STORE
2417	1091	BD 09	.WORD HERE
2418	1093	AE 09	.WORD TWOP
2419	1095	D9 09	.WORD COMMA
2420	1097	0C 06	.WORD SEMIS
2421	1099		;
2422	1099		;
2423	1099		;
2424	1099		;
2425	1099	C9	L2200 .BYTE \$C9,'[COMPILE'],\$DD
2425	109A	5B 43	
2425	10A2	DD	
2426	10A3	2D 10	.WORD L2142 ; LINK TO CREATE
2427	10A5	D6 07	.WORD DOCOL
2428	10A7	8D 0F	.WORD DFIND
2429	10A9	73 06	.WORD ZEQU
2430	10AB	5D 08	.WORD ZERO
2431	10AD	11 0B	.WORD QERR
2432	10AF	19 07	.WORD DROP
2433	10B1	C7 0A	.WORD CFA
2434	10B3	D9 09	.WORD COMMA
2435	10B5	0C 06	.WORD SEMIS
2436	10B7		;
2437	10B7		;
2438	10B7		;
2439	10B7		;
2440	10B7		;
2441	10B7	C7	L2216 .BYTE \$C7,'LITERA',\$CC
2441	10B8	4C 49	
2441	10BE	CC	
2442	10BF	99 10	.WORD L2200 ; LINK TO [COMPILE]
2443	10C1	D6 07	LITER .WORD DOCOL
2444	10C3	63 09	.WORD STATE
2445	10C5	79 07	.WORD AT
2446	10C7	56 03	.WORD ZBRAN
2447	10C9	08 00	L2222 .WORD 8 L2226-L2222
2448	10CB	9F 0B	.WORD COMP
2449	10CD	2A 02	.WORD LIT
2450	10CF	D9 09	.WORD COMMA
2451	10D1	0C 06	L2226 .WORD SEMIS
2452	10D3		;
2453	10D3		;
2454	10D3		;
2455	10D3		;
2456	10D3		;
2457	10D3	C8	L2232 .BYTE \$C8,'DLITERA',\$CC
2457	10D4	44 4C	
2457	10DB	CC	
2458	10DC	B7 10	.WORD L2216 ; LINK TO LITERAL
2459	10DE	D6 07	DLIT .WORD DOCOL
2460	10E0	63 09	.WORD STATE

LINE #	LOC	CODE	LINE	
2461	10E2	79 07		.WORD AT
2462	10E4	56 03		.WORD ZBRAN
2463	10E6	08 00	L2238	.WORD 8
2464	10E8	22 07		.WORD SWAP
2465	10EA	C1 10		.WORD LITER
2466	10EC	C1 10		.WORD LITER
2467	10EE	0C 06	L2242	.WORD SEMIS
2468	10F0		;	
2469	10F0		;	
2470	10F0		;	?STACK
2471	10F0		;	SCREEN 51 LINE 13
2472	10F0		;	
2473	10F0	86	L2248	.BYTE \$86,'?STAC',\$CB
2473	10F1	3F 53		
2473	10F6	CB		
2474	10F7	D3 10		.WORD L2232 ; LINK TO DLITERAL
2475	10F9	D6 07	QSTAC	.WORD DOCOL
2476	10FB	67 02		.WORD CLIT
2477	10FD	9E		.BYTE TOS
2478	10FE	D9 05		.WORD SPAT
2479	1100	13 0A		.WORD ULESS
2480	1102	65 08		.WORD ONE
2481	1104	11 0B		.WORD QERR
2482	1106	D9 05		.WORD SPAT
2483	1108	67 02		.WORD CLIT
2484	110A	20		.BYTE BOS
2485	110B	13 0A		.WORD ULESS
2486	110D	67 02		.WORD CLIT
2487	110F	07		.BYTE 7
2488	1110	11 0B		.WORD QERR
2489	1112	0C 06		.WORD SEMIS
2490	1114		;	
2491	1114		;	INTERPRET
2492	1114		;	SCREEN 52 LINE 2
2493	1114		;	
2494	1114	89	L2269	.BYTE \$89,'INTERPRE',\$D4
2494	1115	49 4E		
2494	111D	D4		
2495	111E	F0 10		.WORD L2248 ; LINK TO ?STACK
2496	1120	D6 07	INTER	.WORD DOCOL
2497	1122	8D 0F	L2272	.WORD DFIND
2498	1124	56 03		.WORD ZBRAN
2499	1126	1E 00	L2274	.WORD \$1E
2500	1128	63 09		.WORD STATE
2501	112A	79 07		.WORD AT
2502	112C	1F 0A		.WORD LESS
2503	112E	56 03		.WORD ZBRAN
2504	1130	0A 00	L2279	.WORD \$A
2505	1132	C7 0A		.WORD CFA
2506	1134	D9 09		.WORD COMMA
2507	1136	37 03		.WORD BRAN
2508	1138	06 00	L2283	.WORD \$6
2509	113A	C7 0A	L2284	.WORD CFA
2510	113C	1F 03		.WORD EXEC
2511	113E	F9 10	L2286	.WORD QSTAC

LINE #	LOC	CODE	LINE	
2512	1140	37 03		.WORD BRAN
2513	1142	1C 00	L2288	.WORD \$1C
2514	1144	BD 09	L2289	.WORD HERE
2515	1146	37 0F		.WORD NUMBER
2516	1148	76 09		.WORD DPL
2517	114A	79 07		.WORD AT
2518	114C	A1 09		.WORD ONEP
2519	114E	56 03		.WORD ZBRAN
2520	1150	08 00	L2295	.WORD 8
2521	1152	DE 10		.WORD DLIT
2522	1154	37 03		.WORD BRAN
2523	1156	06 00	L2298	.WORD \$6
2524	1158	19 07	L2299	.WORD DROP
2525	115A	C1 10		.WORD LITER
2526	115C	F9 10	L2301	.WORD QSTAC
2527	115E	37 03	L2302	.WORD BRAN
2528	1160	C2 FF	L2303	.WORD \$FFC2
2529	1162			;
2530	1162			;
2531	1162			;
2532	1162			;
2533	1162			;
2534	1162	89	L2309	.BYTE \$89, 'IMMEDIAT', \$C5
2534	1163	49 4D		
2534	116B	C5		
2535	116C	14 11		.WORD L2269 ; LINK TO INTERPRET
2536	116E	D6 07		.WORD DOCOL
2537	1170	A8 0A		.WORD LATES
2538	1172	67 02		.WORD CLIT
2539	1174	40		.BYTE \$40
2540	1175	6A 07		.WORD TOGGL
2541	1177	0C 06		.WORD SEMIS
2542	1179			;
2543	1179			;
2544	1179			;
2545	1179			;
2546	1179	8A	L2321	.BYTE \$8A, 'VOCABULAR', \$D9
2546	117A	56 4F		
2546	1183	D9		
2547	1184	62 11		.WORD L2309 ; LINK TO IMMEDIATE
2548	1186	D6 07		.WORD DOCOL
2549	1188	40 0C		.WORD BUILD
2550	118A	2A 02		.WORD LIT, \$A081
2550	118C	81 A0		
2551	118E	D9 09		.WORD COMMA
2552	1190	58 09		.WORD CURR
2553	1192	79 07		.WORD AT
2554	1194	C7 0A		.WORD CFA
2555	1196	D9 09		.WORD COMMA
2556	1198	BD 09		.WORD HERE
2557	119A	0F 09		.WORD VOCL
2558	119C	79 07		.WORD AT
2559	119E	D9 09		.WORD COMMA
2560	11A0	0F 09		.WORD VOCL
2561	11A2	9D 07		.WORD STORE

LINE #	LOC	CODE	LINE	
2562	11A4	50 0C		.WORD DOES
2563	11A6	AE 09	DOVOC	.WORD TWOP
2564	11A8	4B 09		.WORD CON
2565	11AA	9D 07		.WORD STORE
2566	11AC	0C 06		.WORD SEMIS
2567	11AE		;	
2568	11AE		;	FORTH
2569	11AE		;	SCREEN 53 LINE 9
2570	11AE		;	
2571	11AE	C5	L2346	.BYTE \$C5,'FORT',\$C8
2571	11AF	46 4F		
2571	11B3	C8		
2572	11B4	79 11		.WORD L2321 ; LINK TO VOCABULARY
2573	11B6	5C 0C	FORTH	.WORD DODOE
2574	11B8	A6 11		.WORD DOVOC
2575	11BA	81 A0		.WORD \$A081
2576	11BC	64 1A	XFOR	.WORD NTOP points to top name in FORTH
2577	11BE	00 00	VLO	.WORD 0 last vocabulary link ends at zero
2578	11C0		;	
2579	11C0		;	DEFINITIONS
2580	11C0		;	SCREEN 53 LINE 11
2581	11C0		;	
2582	11C0	8B	L2357	.BYTE \$8B,'DEFINITION',\$D3
2582	11C1	44 45		
2582	11CB	D3		
2583	11CC	AE 11		.WORD L2346 ; LINK TO VOCABULARY
2584	11CE	D6 07	DEFIN	.WORD DOCOL
2585	11D0	4B 09		.WORD CON
2586	11D2	79 07		.WORD AT
2587	11D4	58 09		.WORD CURR
2588	11D6	9D 07		.WORD STORE
2589	11D8	0C 06		.WORD SEMIS
2590	11DA		;	
2591	11DA		;	(
2592	11DA		;	SCREEN 53 LINE 14
2593	11DA		;	
2594	11DA	C1	L2369	.BYTE \$C1,\$A8
2594	11DB	A8		
2595	11DC	C0 11		.WORD L2357 ; LINK TO DEFINITIONS
2596	11DE	D6 07		.WORD DOCOL
2597	11E0	67 02		.WORD CLIT
2598	11E2	29		.BYTE \$29
2599	11E3	70 0E		.WORD WORD
2600	11E5	0C 06		.WORD SEMIS
2601	11E7		;	
2602	11E7		;	
2603	11E7		;	QUIT
2604	11E7		;	SCREEN 54 LINE 2
2605	11E7		;	
2606	11E7	84	L2381	.BYTE \$84,'QUI',\$D4
2606	11E8	51 55 49		
2606	11EB	D4		
2607	11EC	DA 11		.WORD L2369 ; LINK TO (
2608	11EE	D6 07	QUIT	.WORD DOCOL
2609	11F0	5D 08		.WORD ZERO

LINE #	LOC	CODE	LINE
2610	11F2	18 09	.WORD BLK
2611	11F4	9D 07	.WORD STORE
2612	11F6	B5 0B	.WORD LBRAC
2613	11F8	F8 05	L2388 .WORD RPSTO
2614	11FA	F4 04	.WORD CR
2615	11FC	B0 0D	.WORD QUERY
2616	11FE	20 11	.WORD INTER
2617	1200	63 09	.WORD STATE
2618	1202	79 07	.WORD AT
2619	1204	73 06	.WORD ZEQU
2620	1206	56 03	.WORD ZBRAN
2621	1208	07 00	L2396 .WORD 7 L2399-L2396
2622	120A	F6 0C	.WORD PDOTQ
2623	120C	02	.BYTE 2, 'OK'
2623	120D	4F 4B	
2624	120F	37 03	L2399 .WORD BRAN
2625	1211	E7 FF	L2400 .WORD \$FFE7 L2388-L2400
2626	1213	0C 06	.WORD SEMIS
2627	1215		;
2628	1215		;
2629	1215		;
2630	1215		;
2631	1215	85	L2406 .BYTE \$85, 'ABOR', \$D4
2631	1216	41 42	
2631	121A	D4	
2632	121B	E7 11	.WORD L2381 ; LINK TO QUIT
2633	121D	D6 07	ABORT .WORD DOCOL
2634	121F	E8 05	.WORD SPSTO
2635	1221	FD 0B	.WORD DECIM
2636	1223	68 14	.WORD DRO
2637	1225	F4 04	.WORD CR
2638	1227	F6 0C	.WORD PDOTQ
2639	1229	0E	.BYTE 14, 'fig-FORTH 1.0'
2639	122A	66 69	
2640	1238	B6 11	.WORD FORTH
2641	123A	CE 11	.WORD DEFIN
2642	123C	EE 11	.WORD QUIT
2643	123E		;
2644	123E		;
2645	123E		;
2646	123E		;
2647	123E		;
2648	123E	84	L2423 .BYTE \$84, 'COL', \$C4
2648	123F	43 4F 4C	
2648	1242	C4	
2649	1243	15 12	.WORD L2406 ; LINK TO ABORT
2650	1245	47 12	COLD .WORD *+2
2651	1247	AD 0C 02	LDA ORIG+\$0C ; from cold start area
2652	124A	8D BC 11	STA FORTH+6
2653	124D	AD 0D 02	LDA ORIG+\$0D
2654	1250	8D BD 11	STA FORTH+7
2655	1253	A0 15	LDY #\$15
2656	1255	D0 02	BNE L2433
2657	1257	A0 0F	WARM LDY #\$0F
2658	1259	AD 10 02	L2433 LDA ORIG+\$10

LINE #	LOC	CODE	LINE	
2659	125C	85 B3		STA UP
2660	125E	AD 11 02		LDA ORIG+\$11
2661	1261	85 B4		STA UP+1
2662	1263	B9 0C 02	L2437	LDA ORIG+\$0C,Y
2663	1266	91 B3		STA (UP),Y
2664	1268	88		DEY
2665	1269	10 F8		BPL L2437
2666	126B	A9 12		LDA #>ABORT ; actually #>(ABORT+2)
2667	126D	85 AF		STA IP+1
2668	126F	A9 1F		LDA #<ABORT+2
2669	1271	85 AE		STA IP
2670	1273	D8		CLD
2671	1274	A9 6C		LDA #\$6C
2672	1276	85 B0		STA W-1
2673	1278	4C FA 05		JMP RPSTO+2 And off we go!
2674	127B			;
2675	127B			;
2676	127B			S->D
2677	127B			SCREEN 56 LINE 1
2678	127B	84	L2453	.BYTE \$84,'S->', \$C4
2678	127C	53 2D 3E		
2678	127F	C4		
2679	1280	3E 12		.WORD L2423 ; LINK TO COLD
2680	1282	D6 07	STOD	.WORD DOCOL
2681	1284	3A 07		.WORD DUP
2682	1286	88 06		.WORD ZLESS
2683	1288	D8 06		.WORD MINUS
2684	128A	0C 06		.WORD SEMIS
2685	128C			;
2686	128C			;
2687	128C			+-
2688	128C			SCREEN 56 LINE 4
2689	128C	82	L2464	.BYTE \$82,'+', \$AD
2689	128D	2B		
2689	128E	AD		
2690	128F	7B 12		.WORD L2453 ; LINK TO S->D
2691	1291	D6 07	PM	.WORD DOCOL
2692	1293	88 06		.WORD ZLESS
2693	1295	56 03		.WORD ZBRAN
2694	1297	04 00	L2469	.WORD 4 L2471-L2469
2695	1299	D8 06		.WORD MINUS
2696	129B	0C 06	L2471	.WORD SEMIS
2697	129D			;
2698	129D			;
2699	129D			D+-
2700	129D			SCREEN 56 LINE 6
2701	129D	83	L2476	.BYTE \$83,'D+', \$AD
2701	129E	44 2B		
2701	12A0	AD		
2702	12A1	8C 12		.WORD L2464 ; LINK TO +-
2703	12A3	D6 07	DPM	.WORD DOCOL
2704	12A5	88 06		.WORD ZLESS
2705	12A7	56 03		.WORD ZBRAN
2706	12A9	04 00	L2481	.WORD 4 L2483-L2481
2707	12AB	F1 06		.WORD DMINU

LINE #	LOC	CODE	LINE	
2708	12AD	0C 06	L2483	.WORD SEMIS
2709	12AF			;
2710	12AF			;
2711	12AF			ABS
2712	12AF			SCREEN 56 LINE 9
2713	12AF	83	L2488	.BYTE \$83,'AB',\$D3
2713	12B0	41 42		
2713	12B2	D3		
2714	12B3	9D 12		.WORD L2476 ; LINK TO D+
2715	12B5	D6 07	ABS	.WORD DOCOL
2716	12B7	3A 07		.WORD DUP
2717	12B9	91 12		.WORD PM
2718	12BB	0C 06		.WORD SEMIS
2719	12BD			;
2720	12BD			;
2721	12BD			DABS
2722	12BD			SCREEN 56 LINE 10
2723	12BD	84	L2498	.BYTE \$84,'DAB',\$D3
2723	12BE	44 41 42		
2723	12C1	D3		
2724	12C2	AF 12		.WORD L2488 ; LINK TO ABS
2725	12C4	D6 07	DABS	.WORD DOCOL
2726	12C6	3A 07		.WORD DUP
2727	12C8	A3 12		.WORD DPM
2728	12CA	0C 06		.WORD SEMIS
2729	12CC			;
2730	12CC			;
2731	12CC			MIN
2732	12CC			SCREEN 56 LINE 12
2733	12CC	83	L2508	.BYTE \$83,'MI',\$CE
2733	12CD	4D 49		
2733	12CF	CE		
2734	12D0	BD 12		.WORD L2498 ; LINK TO DABS
2735	12D2	D6 07	MIN	.WORD DOCOL
2736	12D4	08 07		.WORD OVER
2737	12D6	08 07		.WORD OVER
2738	12D8	3C 0A		.WORD GREAT
2739	12DA	56 03		.WORD ZBRAN
2740	12DC	04 00	L2515	.WORD 4 L2517-L2515
2741	12DE	22 07		.WORD SWAP
2742	12E0	19 07	L2517	.WORD DROP
2743	12E2	0C 06		.WORD SEMIS
2744	12E4			;
2745	12E4			;
2746	12E4			MAX
2747	12E4			SCREEN 56 LINE 14
2748	12E4	83	L2523	.BYTE \$83,'MA',\$D8
2748	12E5	4D 41		
2748	12E7	D8		
2749	12E8	CC 12		.WORD L2508 ; LINK TO MIN
2750	12EA	D6 07	MAX	.WORD DOCOL
2751	12EC	08 07		.WORD OVER
2752	12EE	08 07		.WORD OVER
2753	12F0	1F 0A		.WORD LESS
2754	12F2	56 03		.WORD ZBRAN

LINE #	LOC	CODE	LINE	
2755	12F4	04 00	L2530	.WORD 4 L2532-L2530
2756	12F6	22 07		.WORD SWAP
2757	12F8	19 07	L2532	.WORD DROP
2758	12FA	0C 06		.WORD SEMIS
2759	12FC			;
2760	12FC			;
2761	12FC			;
2762	12FC			;
2763	12FC	82	L2538	.BYTE \$82, 'M', \$AA
2763	12FD	4D		
2763	12FE	AA		
2764	12FF	E4 12		.WORD L2523 ; LINK TO MAX
2765	1301	D6 07	MSTAR	.WORD DOCOL
2766	1303	08 07		.WORD OVER
2767	1305	08 07		.WORD OVER
2768	1307	C3 05		.WORD XOR
2769	1309	3A 06		.WORD TOR
2770	130B	B5 12		.WORD ABS
2771	130D	22 07		.WORD SWAP
2772	130F	B5 12		.WORD ABS
2773	1311	23 05		.WORD USTAR
2774	1313	4C 06		.WORD RFROM
2775	1315	A3 12		.WORD DPM
2776	1317	0C 06		.WORD SEMIS
2777	1319			;
2778	1319			;
2779	1319			;
2780	1319			;
2781	1319	82	L2556	.BYTE \$82, 'M', \$AF
2781	131A	4D		
2781	131B	AF		
2782	131C	FC 12		.WORD L2538 ; LINK TO M*
2783	131E	D6 07	MSLAS	.WORD DOCOL
2784	1320	08 07		.WORD OVER
2785	1322	3A 06		.WORD TOR
2786	1324	3A 06		.WORD TOR
2787	1326	C4 12		.WORD DABS
2788	1328	5D 06		.WORD R
2789	132A	B5 12		.WORD ABS
2790	132C	5B 05		.WORD USLAS
2791	132E	4C 06		.WORD RFROM
2792	1330	5D 06		.WORD R
2793	1332	C3 05		.WORD XOR
2794	1334	91 12		.WORD PM
2795	1336	22 07		.WORD SWAP
2796	1338	4C 06		.WORD RFROM
2797	133A	91 12		.WORD PM
2798	133C	22 07		.WORD SWAP
2799	133E	0C 06		.WORD SEMIS
2800	1340			;
2801	1340			;
2802	1340			;
2803	1340			;
2804	1340	81	L2579	.BYTE \$81, \$AA
2804	1341	AA		

M*
SCREEN 57 LINE 1

M/
SCREEN 57 LINE 3

*
SCREEN 57 LINE 7

LINE #	LOC	CODE	LINE	
2805	1342	19 13		.WORD L2556 ; LINK TO M/
2806	1344	D6 07	STAR	.WORD DOCOL
2807	1346	23 05		.WORD USTAR
2808	1348	19 07		.WORD DROP
2809	134A	0C 06		.WORD SEMIS
2810	134C			;
2811	134C			;
2812	134C			;/MOD
2813	134C			SCREEN 57 LINE 8
2814	134C	84	L2589	.BYTE \$84,'/MO', \$C4
2814	134D	2F 4D 4F		
2814	1350	C4		
2815	1351	40 13		.WORD L2579 ; LINK TO *
2816	1353	D6 07	SLMOD	.WORD DOCOL
2817	1355	3A 06		.WORD TOR
2818	1357	82 12		.WORD STOD
2819	1359	4C 06		.WORD RFROM
2820	135B	1E 13		.WORD MSLAS
2821	135D	0C 06		.WORD SEMIS
2822	135F			;
2823	135F			;
2824	135F			;/
2825	135F			SCREEN 57 LINE 9
2826	135F	81	L2601	.BYTE \$81,\$AF
2826	1360	AF		
2827	1361	4C 13		.WORD L2589 ; LINK TO /MOD
2828	1363	D6 07	SLASH	.WORD DOCOL
2829	1365	53 13		.WORD SLMOD
2830	1367	22 07		.WORD SWAP
2831	1369	19 07		.WORD DROP
2832	136B	0C 06		.WORD SEMIS
2833	136D			;
2834	136D			;
2835	136D			MOD
2836	136D			SCREEN 57 LINE 10
2837	136D	83	L2612	.BYTE \$83,'MO', \$C4
2837	136E	4D 4F		
2837	1370	C4		
2838	1371	5F 13		.WORD L2601 ; LINK TO /
2839	1373	D6 07	MOD	.WORD DOCOL
2840	1375	53 13		.WORD SLMOD
2841	1377	19 07		.WORD DROP
2842	1379	0C 06		.WORD SEMIS
2843	137B			;
2844	137B			;
2845	137B			*/MOD
2846	137B			SCREEN 57 LINE 11
2847	137B	85	L2622	.BYTE \$85,'*/MO', \$C4
2847	137C	2A 2F		
2847	1380	C4		
2848	1381	6D 13		.WORD L2612 ; LINK TO MOD
2849	1383	D6 07	SSMOD	.WORD DOCOL
2850	1385	3A 06		.WORD TOR
2851	1387	01 13		.WORD MSTAR
2852	1389	4C 06		.WORD RFROM

LINE #	LOC	CODE	LINE	
2853	138B	1E 13		.WORD MSLAS
2854	138D	0C 06		.WORD SEMIS
2855	138F			;
2856	138F			;
2857	138F			*/
2858	138F			SCREEN 57 LINE 13
2859	138F	82	L2634	.BYTE \$82,'*', \$AF
2859	1390	2A		
2859	1391	AF		
2860	1392	7B 13		.WORD L2622 ; LINK TO */MOD
2861	1394	D6 07	SSLAS	.WORD DOCOL
2862	1396	83 13		.WORD SSMOD
2863	1398	22 07		.WORD SWAP
2864	139A	19 07		.WORD DROP
2865	139C	0C 06		.WORD SEMIS
2866	139E			;
2867	139E			;
2868	139E			M/MOD
2869	139E			SCREEN 57 LINE 14
2870	139E	85	L2645	.BYTE \$85,'M/MO', \$C4
2870	139F	4D 2F		
2870	13A3	C4		
2871	13A4	8F 13		.WORD L2634 ; LINK TO */
2872	13A6	D6 07	MSMOD	.WORD DOCOL
2873	13A8	3A 06		.WORD TOR
2874	13AA	5D 08		.WORD ZERO
2875	13AC	5D 06		.WORD R
2876	13AE	5B 05		.WORD USLAS
2877	13B0	4C 06		.WORD RFROM
2878	13B2	22 07		.WORD SWAP
2879	13B4	3A 06		.WORD TOR
2880	13B6	5B 05		.WORD USLAS
2881	13B8	4C 06		.WORD RFROM
2882	13BA	0C 06		.WORD SEMIS
2883	13BC			;
2884	13BC			;
2885	13BC			USE
2886	13BC			SCREEN 58 LINE 1
2887	13BC	83	L2662	.BYTE \$83,'US', \$C5
2887	13BD	55 53		
2887	13BF	C5		
2888	13C0	9E 13		.WORD L2645 ; LINK TO M/MOD
2889	13C2	31 08	USE	.WORD DOVAR
2890	13C4	60 3B		.WORD DAREA
2891	13C6			;
2892	13C6			;
2893	13C6			PREV
2894	13C6			SCREEN 58 LINE 2
2895	13C6	84	L2670	.BYTE \$84,'PRE', \$D6
2895	13C7	50 52 45		
2895	13CA	D6		
2896	13CB	BC 13		.WORD L2662 ; LINK TO USE
2897	13CD	31 08	PREV	.WORD DOVAR
2898	13CF	60 3B		.WORD DAREA
2899	13D1			;

```

LINE # LOC      CODE      LINE
2900 13D1          ;                +BUF
2901 13D1          ;                SCREEN 58 LINE 4
2902 13D1          ;
2903 13D1 84      L2678 .BYTE $84,'+BU', $C6
2903 13D2 2B 42 55
2903 13D5 C6
2904 13D6 C6 13          .WORD L2670          ; LINK TO PREV
2905 13D8 D6 07      PBUF .WORD DOCOL
2906 13DA 2A 02          .WORD LIT
2907 13DC 84 00          .WORD SSIZE+4      holds block #, one sector, two nu
2908 13DE 99 06          .WORD PLUS
2909 13E0 3A 07          .WORD DUP
2910 13E2 AC 08          .WORD LIMIT
2911 13E4 06 0A          .WORD EQUAL
2912 13E6 56 03          .WORD ZBRAN
2913 13E8 06 00      L2688 .WORD 6                L2691-L2688
2914 13EA 19 07          .WORD DROP
2915 13EC 94 08          .WORD FIRST
2916 13EE 3A 07      L2691 .WORD DUP
2917 13F0 CD 13          .WORD PREV
2918 13F2 79 07          .WORD AT
2919 13F4 FA 09          .WORD SUB
2920 13F6 0C 06          .WORD SEMIS
2921 13F8          ;
2922 13F8          ;                UPDATE
2923 13F8          ;                SCREEN 58 LINE 8
2924 13F8          ;
2925 13F8 86      L2700 .BYTE $86,'UPDAT', $C5
2925 13F9 55 50
2925 13FE C5
2926 13FF D1 13          .WORD L2678          ; LINK TO +BUF
2927 1401 D6 07      UPDAT .WORD DOCOL
2928 1403 CD 13          .WORD PREV
2929 1405 79 07          .WORD AT
2930 1407 79 07          .WORD AT
2931 1409 2A 02          .WORD LIT,$8000
2931 140B 00 80
2932 140D AD 05          .WORD OR
2933 140F CD 13          .WORD PREV
2934 1411 79 07          .WORD AT
2935 1413 9D 07          .WORD STORE
2936 1415 0C 06          .WORD SEMIS
2937 1417          ;
2938 1417          ;                FLUSH
2939 1417          ;
2940 1417 85      L2705 .BYTE $85,'FLUS', $C8
2940 1418 46 4C
2940 141C C8
2941 141D F8 13          .WORD L2700          ; LINK TO UPDATE
2942 141F D6 07          .WORD DOCOL
2943 1421 A0 08          .WORD LIMIT,FIRST,SUB
2943 1423 94 08
2943 1425 FA 09
2944 1427 AC 08          .WORD BBUF,CLIT
2944 1429 67 02

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LINE # LOC      CODE      LINE
2945 142B 04          .BYTE 4
2946 142C 99 06      .WORD PLUS,SLASH,ONEP
2946 142E 63 13
2946 1430 A1 09
2947 1432 5D 08      .WORD ZERO,PDO
2947 1434 DE 03
2948 1436 2A 02      L2835 .WORD LIT,$7FFF,BUFFR
2948 1438 FF 7F
2948 143A 8D 14
2949 143C 19 07      .WORD DROP,PLOOP
2949 143E 77 03
2950 1440 F6 FF      L2839 .WORD $FFF6          L2835-L2839
2951 1442 0C 06      .WORD SEMIS
2952 1444          ;
2953 1444          ;
2954 1444          ;          EMPTY-BUFFERS
2955 1444          ;          SCREEN 58 LINE 11
2956 1444          ;
2957 1444 8D      L2716 .BYTE $8D,'EMPTY-BUFFER',$D3
2957 1445 45 4D
2957 1451 D3
2958 1452 17 14      .WORD L2705          ; LINK TO FLUSH
2959 1454 D6 07      .WORD DOCOL
2960 1456 94 08      .WORD FIRST
2961 1458 A0 08      .WORD LIMIT
2962 145A 08 07      .WORD OVER
2963 145C FA 09      .WORD SUB
2964 145E 26 0E      .WORD ERASE
2965 1460 0C 06      .WORD SEMIS
2966 1462          ;
2967 1462          ;          DRO
2968 1462          ;          SCREEN 58 LINE 14
2969 1462          ;
2970 1462 83      L2729 .BYTE $83,'DR',$B0
2970 1463 44 52
2970 1465 B0
2971 1466 44 14      .WORD L2716          ; LINK TO EMPTY-BUFFERS
2972 1468 D6 07      DRO .WORD DOCOL
2973 146A 5D 08      .WORD ZERO
2974 146C 3E 09      .WORD OFFSET
2975 146E 9D 07      .WORD STORE
2976 1470 0C 06      .WORD SEMIS
2977 1472          ;
2978 1472          ;          DR1
2979 1472          ;          SCREEN 58 LINE 15
2980 1472          ;
2981 1472 83      L2740 .BYTE $83,'DR',$B1
2981 1473 44 52
2981 1475 B1
2982 1476 62 14      .WORD L2729          ; LINK TO DRO
2983 1478 D6 07      .WORD DOCOL
2984 147A 2A 02      .WORD LIT,SECTR      sectors per drive
2984 147C 20 03
2985 147E 3E 09      .WORD OFFSET
2986 1480 9D 07      .WORD STORE

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LINE # LOC      CODE      LINE
2987 1482 0C 06          .WORD SEMIS
2988 1484          ;
2989 1484          ;          BUFFER
2990 1484          ;          SCREEN 59 LINE 1
2991 1484          ;
2992 1484 86      L2751 .BYTE $86,'BUFBE',$D2
2992 1485 42 55
2992 148A D2
2993 148B 72 14          .WORD L2740          ; LINK TO DRI
2994 148D D6 07      BUFRR .WORD DOCOL
2995 148F C2 13          .WORD USE
2996 1491 79 07          .WORD AT
2997 1493 3A 07          .WORD DUP
2998 1495 3A 06          .WORD TOR
2999 1497 D8 13      L2758 .WORD PBUF
3000 1499 56 03          .WORD ZBRAN
3001 149B FC FF      L2760 .WORD $FFFC          L2758-L2760
3002 149D C2 13          .WORD USE
3003 149F 9D 07          .WORD STORE
3004 14A1 5D 06          .WORD R
3005 14A3 79 07          .WORD AT
3006 14A5 88 06          .WORD ZLESS
3007 14A7 56 03          .WORD ZBRAN
3008 14A9 14 00      L2767 .WORD $14          L2776-L2767
3009 14AB 5D 06          .WORD R
3010 14AD AE 09          .WORD TWOP
3011 14AF 5D 06          .WORD R
3012 14B1 79 07          .WORD AT
3013 14B3 2A 02          .WORD LIT,$7FFF
3013 14B5 FF 7F
3014 14B7 98 05          .WORD ANDD
3015 14B9 5D 08          .WORD ZERO
3016 14BB 89 16          .WORD RSLW
3017 14BD 5D 06      L2776 .WORD R
3018 14BF 9D 07          .WORD STORE
3019 14C1 5D 06          .WORD R
3020 14C3 CD 13          .WORD PREV
3021 14C5 9D 07          .WORD STORE
3022 14C7 4C 06          .WORD RFROM
3023 14C9 AE 09          .WORD TWOP
3024 14CB 0C 06          .WORD SEMIS
3025 14CD          ;
3026 14CD          ;          BLOCK
3027 14CD          ;          SCREEN 60 LINE 1
3028 14CD          ;
3029 14CD 85      L2788 .BYTE $85,'BLOC',$CB
3029 14CE 42 4C
3029 14D2 CB
3030 14D3 84 14          .WORD L2751          ; LINK TO BUFFER
3031 14D5 D6 07      BLOCK .WORD DOCOL
3032 14D7 3E 09          .WORD OFFSET
3033 14D9 79 07          .WORD AT
3034 14DB 99 06          .WORD PLUS
3035 14DD 3A 06          .WORD TOR
3036 14DF CD 13          .WORD PREV

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LINE #	LOC	CODE	LINE		
3037	14E1	79 07		.WORD AT	
3038	14E3	3A 07		.WORD DUP	
3039	14E5	79 07		.WORD AT	
3040	14E7	5D 06		.WORD R	
3041	14E9	FA 09		.WORD SUB	
3042	14EB	3A 07		.WORD DUP	
3043	14ED	99 06		.WORD PLUS	
3044	14EF	56 03		.WORD ZBRAN	
3045	14F1	34 00	L2804	.WORD \$34	L2830-L2804
3046	14F3	D8 13	L2805	.WORD PBUF	
3047	14F5	73 06		.WORD ZEQU	
3048	14F7	56 03		.WORD ZBRAN	
3049	14F9	14 00	L2808	.WORD \$14	L2818-L2808
3050	14FB	19 07		.WORD DROP	
3051	14FD	5D 06		.WORD R	
3052	14FF	8D 14		.WORD BUFFR	
3053	1501	3A 07		.WORD DUP	
3054	1503	5D 06		.WORD R	
3055	1505	65 08		.WORD ONE	
3056	1507	89 16		.WORD RSLW	
3057	1509	6D 08		.WORD TWO	
3058	150B	FA 09		.WORD SUB	
3059	150D	3A 07	L2818	.WORD DUP	
3060	150F	79 07		.WORD AT	
3061	1511	5D 06		.WORD R	
3062	1513	FA 09		.WORD SUB	
3063	1515	3A 07		.WORD DUP	
3064	1517	99 06		.WORD PLUS	
3065	1519	73 06		.WORD ZEQU	
3066	151B	56 03		.WORD ZBRAN	
3067	151D	D6 FF	L2826	.WORD \$FFD6	L2805-L2826
3068	151F	3A 07		.WORD DUP	
3069	1521	CD 13		.WORD PREV	
3070	1523	9D 07		.WORD STORE	
3071	1525	4C 06	L2830	.WORD RFROM	
3072	1527	19 07		.WORD DROP	
3073	1529	AE 09		.WORD TWOP	
3074	152B	0C 06		.WORD SEMIS	; END OF BLOCK
3075	152D			;	
3076	152D			;	
3077	152D			.FILE FOR4/2	
3078	152D			; START OF FORTH4	
3079	152D			;	
3080	152D			;	
3081	152D			;	
3082	152D			;	(LINE)
3083	152D			;	SCREEN 61 LINE 2
3084	152D			;	
3085	152D	86	L2838	.BYTE \$86, '(LINE', \$A9	
3085	152E	28 4C			
3085	1533	A9			
3086	1534	CD 14		.WORD L2788	; LINK TO BLOCK
3087	1536	D6 07	PLINE	.WORD DOCOL	
3088	1538	3A 06		.WORD TOR	
3089	153A	88 08		.WORD CSLL	

LINE #	LOC	CODE	LINE	
3090	153C	AC 08		.WORD BBUF
3091	153E	83 13		.WORD SSMOD
3092	1540	4C 06		.WORD RFROM
3093	1542	B8 08		.WORD BSCR
3094	1544	44 13		.WORD STAR
3095	1546	99 06		.WORD PLUS
3096	1548	D5 14		.WORD BLOCK
3097	154A	99 06		.WORD PLUS
3098	154C	88 08		.WORD CSLL
3099	154E	0C 06		.WORD SEMIS
3100	1550			;
3101	1550			;
3102	1550			;
3103	1550			;
3104	1550	85	L2857	.BYTE \$85, '.LIN', \$C5
3104	1551	2E 4C		
3104	1555	C5		
3105	1556	2D 15		.WORD L2838 ; LINK TO (LINE)
3106	1558	D6 07	DLINE	.WORD DOCOL
3107	155A	36 15		.WORD PLINE
3108	155C	C3 0C		.WORD DTRAI
3109	155E	95 0C		.WORD TYPE
3110	1560	0C 06		.WORD SEMIS
3111	1562			;
3112	1562			;
3113	1562			;
3114	1562			;
3115	1562	87	L2868	.BYTE \$87, 'MESSAG', \$C5
3115	1563	4D 45		
3115	1569	C5		
3116	156A	50 15		.WORD L2857 ; LINK TO .LINE
3117	156C	D6 07	MESS	.WORD DOCOL
3118	156E	EE 08		.WORD WARN
3119	1570	79 07		.WORD AT
3120	1572	56 03		.WORD ZBRAN
3121	1574	1B 00	L2874	.WORD \$1B L2888-L2874
3122	1576	6D 0A		.WORD DDUP
3123	1578	56 03		.WORD ZBRAN
3124	157A	11 00	L2877	.WORD \$11 L2886-L2877
3125	157C	67 02		.WORD CLIT
3126	157E	04		.BYTE 4
3127	157F	3E 09		.WORD OFSET
3128	1581	79 07		.WORD AT
3129	1583	B8 08		.WORD BSCR
3130	1585	63 13		.WORD SLASH
3131	1587	FA 09		.WORD SUB
3132	1589	58 15		.WORD DLINE
3133	158B	37 03	L2886	.WORD BRAN
3134	158D	0D 00	L2887	.WORD 13 L2891-L2887
3135	158F	F6 0C	L2888	.WORD PDOTQ
3136	1591	06		.BYTE 6, 'MSG #'
3136	1592	4D 53		
3137	1598	5D 19		.WORD DOT
3138	159A	0C 06	L2891	.WORD SEMIS
3139	159C			;

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LINE # LOC      CODE      LINE
3140 159C          ;
3141 159C          ;
3142 159C          ;
3143 159C 84      L2896 .BYTE $84,'LOA', $C4
3143 159D 4C 4F 41
3143 15A0 C4
3144 15A1 62 15      .WORD L2868      ; LINK TO MESSAGE
3145 15A3 D6 07      LOAD .WORD DOCOL
3146 15A5 18 09      .WORD BLK
3147 15A7 79 07      .WORD AT
3148 15A9 3A 06      .WORD TOR
3149 15AB 20 09      .WORD IN
3150 15AD 79 07      .WORD AT
3151 15AF 3A 06      .WORD TOR
3152 15B1 5D 08      .WORD ZERO
3153 15B3 20 09      .WORD IN
3154 15B5 9D 07      .WORD STORE
3155 15B7 B8 08      .WORD BSCR
3156 15B9 44 13      .WORD STAR
3157 15BB 18 09      .WORD BLK
3158 15BD 9D 07      .WORD STORE
3159 15BF 20 11      .WORD INTER
3160 15C1 4C 06      .WORD RFROM
3161 15C3 20 09      .WORD IN
3162 15C5 9D 07      .WORD STORE
3163 15C7 4C 06      .WORD RFROM
3164 15C9 18 09      .WORD BLK
3165 15CB 9D 07      .WORD STORE
3166 15CD 0C 06      .WORD SEMIS
3167 15CF          ;
3168 15CF          ;
3169 15CF          ;
3170 15CF          ;
3171 15CF C3      L2924 .BYTE $C3,'--', $BE
3171 15D0 2D 2D
3171 15D2 BE
3172 15D3 9C 15      .WORD L2896      ; LINK TO LOAD
3173 15D5 D6 07      .WORD DOCOL
3174 15D7 86 0B      .WORD QLOAD
3175 15D9 5D 08      .WORD ZERO
3176 15DB 20 09      .WORD IN
3177 15DD 9D 07      .WORD STORE
3178 15DF B8 08      .WORD BSCR
3179 15E1 18 09      .WORD BLK
3180 15E3 79 07      .WORD AT
3181 15E5 08 07      .WORD OVER
3182 15E7 73 13      .WORD MOD
3183 15E9 FA 09      .WORD SUB
3184 15EB 18 09      .WORD BLK
3185 15ED 49 07      .WORD PSTOR
3186 15EF 0C 06      .WORD SEMIS
3187 15F1          ;
3188 15F1          ; XEMIT writes one ascii character to terminal
3189 15F1          ;
3190 15F1 98      XEMIT TYA

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LINE # LOC      CODE      LINE
3191 15F2 38              SEC
3192 15F3 A0 1A          LDY #$1A
3193 15F5 71 B3          ADC (UP),Y
3194 15F7 91 B3          STA (UP),Y
3195 15F9 C8              INY              ; bump user variable OUT
3196 15FA A9 00          LDA #0
3197 15FC 71 B3          ADC (UP),Y
3198 15FE 91 B3          STA (UP),Y
3199 1600 B5 00          LDA 0,X          ; fetch character to output
3200 1602 86 B5          STX XSAVE
3201 1604 20 C1 D2        JSR OUTCH        ; and display it
3202 1607 A6 B5          LDX XSAVE
3203 1609 4C EE 03        JMP POP
3204 160C              ;
3205 160C              ; XKEY reads one terminal keystroke to stack
3206 160C              ;
3207 160C 86 B5          XKEY STX XSAVE
3208 160E 20 DC D1        JSR INCH          ; might otherwise clobber it while
3209 1611 A6 B5          LDX XSAVE        ; inputing a character to accumulator.
3210 1613 4C DC 05        JMP PUSH0A
3211 1616              ;
3212 1616              ; XQTER leaves a boolean representing terminal break
3213 1616              ;
3214 1616 AD 00 C0        XQTER LDA $C000      ; System dependent port test
3215 1619 CD 01 C0        CMP $C001
3216 161C 29 01          AND #1
3217 161E 4C DC 05        JMP PUSH0A
3218 1621              ;
3219 1621              ; XCR displays a CR and LF to terminal
3220 1621              ;
3221 1621 86 B5          XCR STX XSAVE
3222 1623 20 F1 D0        JSR TCR          ; Use monitor call
3223 1626 A6 B5          LDX XSAVE
3224 1628 4C 44 02        JMP NEXT
3225 162B              ;
3226 162B              ; -DISC
3227 162B              ; Machine level sector read/write
3228 162B 85              L3030 .BYTE $85,'-DIS',$C3
3228 162C 2D 44
3228 1630 C3
3229 1631 CF 15          .WORD L2924      ; Link to -->
3230 1633 35 16          DDISC .WORD *+2
3231 1635 B5 00          LDA 0,X
3232 1637 8D 0C C6        STA $C60C
3233 163A 8D 0D C6        STA $C60D        ; Store sector number
3234 163D B5 02          LDA 2,X
3235 163F 8D 0A C6        STA $C60A
3236 1642 8D 0B C6        STA $C60B        ; Store track number
3237 1645 B5 04          LDA 4,X
3238 1647 8D CD C4        STA $C4CD
3239 164A 8D CE C4        STA $C4CE        ; Store drive number
3240 164D 86 B5          STX XSAVE
3241 164F AD DA C4        LDA $C4DA        ; Sense read or write
3242 1652 D0 06          BNE L3032
3243 1654 20 FE E1        JSR $E1FE

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LINE # LOC      CODE      LINE
3244 1657 4C 5D 16          JMP L3040
3245 165A 20 62 E2    L3032 JSR $E262
3246 165D 20 EF E3    L3040 JSR $E3EF      ; Head up motor off
3247 1660 A6 B5          LDX XSAVE
3248 1662 AD E1 C4          LDA $C4E1      ; Report error code
3249 1665 95 04          STA 4,X
3250 1667 4C EC 03          JMP POPTWO
3251 166A          ;
3252 166A          ;          -BCD
3253 166A          ;          Convert binary value to BCD
3254 166A          ;
3255 166A 84          L3050 .BYTE $84,'-BC',$C4
3255 166B 2D 42 43
3255 166E C4
3256 166F 2B 16          .WORD L3030      ; link to -DISC
3257 1671 D6 07    DBCD .WORD DOCOL
3258 1673 5D 08          .WORD ZERO,CLIT
3258 1675 67 02
3259 1677 0A          .BYTE 10
3260 1678 5B 05          .WORD USLAS,CLIT
3260 167A 67 02
3261 167C 10          .BYTE 16
3262 167D 44 13          .WORD STAR,OR,SEMIS
3262 167F AD 05
3262 1681 0C 06
3263 1683          ;
3264 1683          ;          R/W
3265 1683          ;          Read or write one sector
3266 1683 83          L3060 .BYTE $83,'R/',$D7
3266 1684 52 2F
3266 1686 D7
3267 1687 6A 16          .WORD L3050      ; link to -BCD
3268 1689 D6 07    RSLW .WORD DOCOL
3269 168B 73 06          .WORD ZEQU,LIT,$C4DA,CSTOR
3269 168D 2A 02
3269 168F DA C4
3269 1691 B5 07
3270 1693 22 07          .WORD SWAP,ZERO,STORE
3270 1695 5D 08
3270 1697 9D 07
3271 1699 5D 08          .WORD ZERO,OVER,GREAT,OVER
3271 169B 08 07
3271 169D 3C 0A
3271 169F 08 07
3272 16A1 2A 02          .WORD LIT,SECTL-1,GREAT,OR,CLIT
3272 16A3 3F 06
3272 16A5 3C 0A
3272 16A7 AD 05
3272 16A9 67 02
3273 16AB 06          .BYTE 6
3274 16AC 11 0B          .WORD QERR
3275 16AE 5D 08          .WORD ZERO,LIT,SECTR,USLAS,ONEP
3275 16B0 2A 02
3275 16B2 20 03
3275 16B4 5B 05

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LINE #	LOC	CODE	LINE	
3275	16B6	A1 09		
3276	16B8	22 07		.WORD SWAP,ZERO,CLIT
3276	16BA	5D 08		
3276	16BC	67 02		
3277	16BE	12		.BYTE \$12
3278	16BF	5B 05		.WORD USLAS,DBCD,SWAP,ONEP
3278	16C1	71 16		
3278	16C3	22 07		
3278	16C5	A1 09		
3279	16C7	71 16		.WORD DBCD,DDISC,CLIT
3279	16C9	33 16		
3279	16CB	67 02		
3280	16CD	08		.BYTE 8
3281	16CE	11 0B		.WORD QERR
3282	16D0	0C 06		.WORD SEMIS
3283	16D2		;	
3284	16D2		;	
3285	16D2		;	
3286	16D2	0C 06		.WORD SEMIS
3287	16D4		;	
3288	16D4		;	
3289	16D4		;	SCREEN 72 LINE 2
3290	16D4		;	
3291	16D4	C1	L3202	.BYTE \$C1,\$A7
3291	16D5	A7		
3292	16D6	83 16		.WORD L3060 ; LINK TO R/W
3293	16D8	D6 07	TICK	.WORD DOCOL
3294	16DA	8D 0F		.WORD DFIND
3295	16DC	73 06		.WORD ZEQU
3296	16DE	5D 08		.WORD ZERO
3297	16E0	11 0B		.WORD QERR
3298	16E2	19 07		.WORD DROP
3299	16E4	C1 10		.WORD LITER
3300	16E6	0C 06		.WORD SEMIS
3301	16E8		;	
3302	16E8		;	
3303	16E8		;	FORGET
3304	16E8		;	Altered from Model
3305	16E8		;	SCREEN 72 LINE 6
3306	16E8		;	
3307	16E8	86	L3217	.BYTE \$86,'FORGE',\$D4
3307	16E9	46 4F		
3307	16EE	D4		
3308	16EF	D4 16		.WORD L3202 LINK TO ' TICK
3309	16F1	D6 07	FORG	.WORD DOCOL
3310	16F3	D8 16		.WORD TICK,NFA,DUP
3310	16F5	D5 0A		
3310	16F7	3A 07		
3311	16F9	F9 08		.WORD FENCE,AT,ULESS,CLIT
3311	16FB	79 07		
3311	16FD	13 0A		
3311	16FF	67 02		
3312	1701	15		.BYTE \$15
3313	1702	11 0B		.WORD QERR,TOR,VOCL,AT
3313	1704	3A 06		

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LINE # LOC      CODE      LINE
3313 1706 OF 09
3313 1708 79 07
3314 170A 5D 06      L3220 .WORD R,OVER,ULESS
3314 170C 08 07
3314 170E 13 0A
3315 1710 56 03      .WORD ZBRAN,L3225-*
3315 1712 12 00
3316 1714 B6 11      .WORD FORTH,DEFIN,AT,DUP
3316 1716 CE 11
3316 1718 79 07
3316 171A 3A 07
3317 171C OF 09      .WORD VOCL,STORE
3317 171E 9D 07
3318 1720 37 03      .WORD BRAN,$FFFF-24+1  L3220-*
3318 1722 E8 FF
3319 1724 3A 07      L3225 .WORD DUP,CLIT
3319 1726 67 02
3320 1728 04          .BYTE 4
3321 1729 FA 09      .WORD SUB
3322 172B EA 0A      L3228 .WORD PFA,LFA,AT
3322 172D B8 0A
3322 172F 79 07
3323 1731 3A 07      .WORD DUP,R,ULESS
3323 1733 5D 06
3323 1735 13 0A
3324 1737 56 03      .WORD ZBRAN,$FFFF-14+1  L3228-*
3324 1739 F2 FF
3325 173B 08 07      .WORD OVER,TWO,SUB,STORE
3325 173D 6D 08
3325 173F FA 09
3325 1741 9D 07
3326 1743 79 07      .WORD AT,DDUP,ZEQU
3326 1745 6D 0A
3326 1747 73 06
3327 1749 56 03      .WORD ZBRAN,$FFFF-39+1  L3225-*
3327 174B D9 FF
3328 174D 4C 06      .WORD RFROM,DP,STORE
3328 174F 01 09
3328 1751 9D 07
3329 1753 0C 06      .WORD SEMIS
3330 1755          ;
3331 1755          ;          BACK
3332 1755          ;          SCREEN 73 LINE 1
3333 1755          ;
3334 1755 84          L3250 .BYTE $84,'BAC', $CB
3334 1756 42 41 43
3334 1759 CB
3335 175A E8 16      .WORD L3217          ; LINK TO FORGET
3336 175C D6 07      BACK .WORD DOCOL
3337 175E BD 09      .WORD HERE
3338 1760 FA 09      .WORD SUB
3339 1762 D9 09      .WORD COMMA
3340 1764 0C 06      .WORD SEMIS
3341 1766          ;
3342 1766          ;          BEGIN

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LINE # LOC      CODE      LINE
3343 1766          ;                SCREEN 73 LINE 3
3344 1766          ;
3345 1766 C5      L3261 .BYTE $C5,'BEGI',$CE
3345 1767 42 45
3345 176B CE
3346 176C 55 17      .WORD L3250          ; LINK TO BACK
3347 176E D6 07      .WORD DOCOL
3348 1770 2B 0B      .WORD QCOMP
3349 1772 BD 09      .WORD HERE
3350 1774 65 08      .WORD ONE
3351 1776 0C 06      .WORD SEMIS
3352 1778          ;
3353 1778          ;
3354 1778          ;                ENDIF
3355 1778          ;                SCREEN 73 LINE 5
3356 1778          ;
3357 1778 C5      L3273 .BYTE $C5,'ENDI',$C6
3357 1779 45 4E
3357 177D C6
3358 177E 66 17      .WORD L3261          ; LINK TO BEGIN
3359 1780 D6 07      ENDIF .WORD DOCOL
3360 1782 2B 0B      .WORD QCOMP
3361 1784 6D 08      .WORD TWO
3362 1786 58 0B      .WORD QPAIR
3363 1788 BD 09      .WORD HERE
3364 178A 08 07      .WORD OVER
3365 178C FA 09      .WORD SUB
3366 178E 22 07      .WORD SWAP
3367 1790 9D 07      .WORD STORE
3368 1792 0C 06      .WORD SEMIS
3369 1794          ;
3370 1794          ;
3371 1794          ;                THEN
3372 1794          ;                SCREEN 73 LINE 7
3373 1794          ;
3374 1794 C4      L3290 .BYTE $C4,'THE',$CE
3374 1795 54 48 45
3374 1798 CE
3375 1799 78 17      .WORD L3273          ; LINK TO ENDIF
3376 179B D6 07      .WORD DOCOL
3377 179D 80 17      .WORD ENDIF
3378 179F 0C 06      .WORD SEMIS
3379 17A1          ;
3380 17A1          ;
3381 17A1          ;                DO
3382 17A1          ;                SCREEN 73 LINE 9
3383 17A1          ;
3384 17A1 C2      L3300 .BYTE $C2,'D',$CF
3384 17A2 44
3384 17A3 CF
3385 17A4 94 17      .WORD L3290          ; LINK TO THEN
3386 17A6 D6 07      .WORD DOCOL
3387 17A8 9F 0B      .WORD COMP
3388 17AA DE 03      .WORD PDO
3389 17AC BD 09      .WORD HERE

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LINE # LOC      CODE      LINE
3390 17AE 75 08          .WORD THREE
3391 17B0 0C 06          .WORD SEMIS
3392 17B2          ;
3393 17B2          ;
3394 17B2          ;          LOOP
3395 17B2          ;          SCREEN 73 LINE 11
3396 17B2          ;
3397 17B2 C4          L3313 .BYTE $C4,'LOO',$DO
3397 17B3 4C 4F 4F
3397 17B6 D0
3398 17B7 A1 17          .WORD L3300          ; LINK TO DO
3399 17B9 D6 07          .WORD DOCOL
3400 17BB 75 08          .WORD THREE
3401 17BD 58 0B          .WORD QPAIR
3402 17BF 9F 0B          .WORD COMP
3403 17C1 77 03          .WORD PLOOP
3404 17C3 5C 17          .WORD BACK
3405 17C5 0C 06          .WORD SEMIS
3406 17C7          ;
3407 17C7          ;
3408 17C7          ;          +LOOP
3409 17C7          ;          SCREEN 73 LINE 13
3410 17C7          ;
3411 17C7 C5          L3327 .BYTE $C5,'+LOO',$DO
3411 17C8 2B 4C
3411 17CC D0
3412 17CD B2 17          .WORD L3313          ; LINK TO LOOP
3413 17CF D6 07          .WORD DOCOL
3414 17D1 75 08          .WORD THREE
3415 17D3 58 0B          .WORD QPAIR
3416 17D5 9F 0B          .WORD COMP
3417 17D7 A7 03          .WORD PPLOO
3418 17D9 5C 17          .WORD BACK
3419 17DB 0C 06          .WORD SEMIS
3420 17DD          ;
3421 17DD          ;
3422 17DD          ;          UNTIL
3423 17DD          ;          SCREEN 73 LINE 15
3424 17DD          ;
3425 17DD C5          L3341 .BYTE $C5,'UNTI',$CC
3425 17DE 55 4E
3425 17E2 CC
3426 17E3 C7 17          .WORD L3327          ; LINK TO +LOOP
3427 17E5 D6 07          UNTIL .WORD DOCOL
3428 17E7 65 08          .WORD ONE
3429 17E9 58 0B          .WORD QPAIR
3430 17EB 9F 0B          .WORD COMP
3431 17ED 56 03          .WORD ZBRAN
3432 17EF 5C 17          .WORD BACK
3433 17F1 0C 06          .WORD SEMIS
3434 17F3          ;
3435 17F3          ;
3436 17F3          ;          END
3437 17F3          ;          SCREEN 74 LINE 1
3438 17F3          ;

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LINE #	LOC	CODE	LINE	
3439	17F3	C3	L3355	.BYTE \$C3,'EN',\$C4
3439	17F4	45 4E		
3439	17F6	C4		
3440	17F7	DD 17		.WORD L3341 ; LINK TO UNTIL
3441	17F9	D6 07		.WORD DOCOL
3442	17FB	E5 17		.WORD UNTIL
3443	17FD	OC 06		.WORD SEMIS
3444	17FF			;
3445	17FF			;
3446	17FF			;
3447	17FF			AGAIN
3448	17FF			SCREEN 74 LINE 3
3449	17FF	C5	L3365	.BYTE \$C5,'AGAI',\$CE
3449	1800	41 47		
3449	1804	CE		
3450	1805	F3 17		.WORD L3355 LINK TO END
3451	1807	D6 07	AGAIN	.WORD DOCOL
3452	1809	65 08		.WORD ONE
3453	180B	58 0B		.WORD QPAIR
3454	180D	9F 0B		.WORD COMP
3455	180F	37 03		.WORD BRAN
3456	1811	5C 17		.WORD BACK
3457	1813	OC 06		.WORD SEMIS
3458	1815			;
3459	1815			;
3460	1815			;
3461	1815			REPEAT
3462	1815			SCREEN 74 LINE 5
3463	1815	C6	L3379	.BYTE \$C6,'REPEA',\$D4
3463	1816	52 45		
3463	181B	D4		
3464	181C	FF 17		.WORD L3365 ; LINK TO AGAIN
3465	181E	D6 07		.WORD DOCOL
3466	1820	3A 06		.WORD TOR
3467	1822	3A 06		.WORD TOR
3468	1824	07 18		.WORD AGAIN
3469	1826	4C 06		.WORD RFROM
3470	1828	4C 06		.WORD RFROM
3471	182A	6D 08		.WORD TWO
3472	182C	FA 09		.WORD SUB
3473	182E	80 17		.WORD ENDIF
3474	1830	OC 06		.WORD SEMIS
3475	1832			;
3476	1832			;
3477	1832			;
3478	1832			IF
3479	1832			SCREEN 74 LINE 8
3480	1832	C2	L3396	.BYTE \$C2,'I',\$C6
3480	1833	49		
3480	1834	C6		
3481	1835	15 18		.WORD L3379 ; LINK TO REPEAT
3482	1837	D6 07	IF	.WORD DOCOL
3483	1839	9F 0B		.WORD COMP
3484	183B	56 03		.WORD ZBRAN
3485	183D	BD 09		.WORD HERE

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LINE # LOC      CODE      LINE
3486 183F 5D 08          .WORD ZERO
3487 1841 D9 09          .WORD COMMA
3488 1843 6D 08          .WORD TWO
3489 1845 0C 06          .WORD SEMIS
3490 1847          ;
3491 1847          ;
3492 1847          ; ELSE
3493 1847          ; SCREEN 74 LINE 10
3494 1847          ;
3495 1847 C4          L3411 .BYTE $C4,'ELS',$C5
3495 1848 45 4C 53
3495 184B C5
3496 184C 32 18          .WORD L3396          ; LINK TO IF
3497 184E D6 07          .WORD DOCOL
3498 1850 6D 08          .WORD TWO
3499 1852 58 0B          .WORD QPAIR
3500 1854 9F 0B          .WORD COMP
3501 1856 37 03          .WORD BRAN
3502 1858 BD 09          .WORD HERE
3503 185A 5D 08          .WORD ZERO
3504 185C D9 09          .WORD COMMA
3505 185E 22 07          .WORD SWAP
3506 1860 6D 08          .WORD TWO
3507 1862 80 17          .WORD ENDIF
3508 1864 6D 08          .WORD TWO
3509 1866 0C 06          .WORD SEMIS
3510 1868          ;
3511 1868          ;
3512 1868          ; WHILE
3513 1868          ; SCREEN 74 LINE 13
3514 1868          ;
3515 1868 C5          L3431 .BYTE $C5,'WHIL',$C5
3515 1869 57 48
3515 186D C5
3516 186E 47 18          .WORD L3411          ; LINK TO ELSE
3517 1870 D6 07          .WORD DOCOL
3518 1872 37 18          .WORD IF
3519 1874 AE 09          .WORD TWOP
3520 1876 0C 06          .WORD SEMIS
3521 1878          ;
3522 1878          ;
3523 1878          ; SPACES
3524 1878          ; SCREEN 75 LINE 1
3525 1878          ;
3526 1878 86          L3442 .BYTE $86,'SPACE',$D3
3526 1879 53 50
3526 187E D3
3527 187F 68 18          .WORD L3431          ; LINK TO WHILE
3528 1881 D6 07          SPACS .WORD DOCOL
3529 1883 5D 08          .WORD ZERO
3530 1885 EA 12          .WORD MAX
3531 1887 6D 0A          .WORD DDUP
3532 1889 56 03          .WORD ZBRAN
3533 188B 0C 00          L3449 .WORD $OC          L3455-L3449
3534 188D 5D 08          .WORD ZERO

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LINE #	LOC	CODE	LINE		
3535	188F	DE 03		.WORD PDO	
3536	1891	5E 0A	L3452	.WORD SPACE	
3537	1893	77 03		.WORD PLOOP	
3538	1895	FC FF	L3454	.WORD \$FFFC	L3452-L3454
3539	1897	0C 06	L3455	.WORD SEMIS	
3540	1899			;	
3541	1899			;	<#
3542	1899			;	SCREEN 75 LINE 3
3543	1899			;	
3544	1899	82	L3460	.BYTE \$82,'<', \$A3	
3544	189A	3C			
3544	189B	A3			
3545	189C	78 18		.WORD L3442	; LINK TO SPACES
3546	189E	D6 07	BDIGS	.WORD DOCOL	
3547	18A0	5E 0E		.WORD PAD	
3548	18A2	99 09		.WORD HLD	
3549	18A4	9D 07		.WORD STORE	
3550	18A6	0C 06		.WORD SEMIS	
3551	18A8			;	
3552	18A8			;	#>
3553	18A8			;	SCREEN 75 LINE 5
3554	18A8			;	
3555	18A8	82	L3471	.BYTE \$82,'#',\$BE	
3555	18A9	23			
3555	18AA	BE			
3556	18AB	99 18		.WORD L3460	; LINK TO <#
3557	18AD	D6 07	EDIGS	.WORD DOCOL	
3558	18AF	19 07		.WORD DROP	
3559	18B1	19 07		.WORD DROP	
3560	18B3	99 09		.WORD HLD	
3561	18B5	79 07		.WORD AT	
3562	18B7	5E 0E		.WORD PAD	
3563	18B9	08 07		.WORD OVER	
3564	18BB	FA 09		.WORD SUB	
3565	18BD	0C 06		.WORD SEMIS	
3566	18BF			;	
3567	18BF			;	SIGN
3568	18BF			;	SCREEN 75 LINE 7
3569	18BF			;	
3570	18BF	84	L3486	.BYTE \$84,'SIG',\$CE	
3570	18C0	53 49 47			
3570	18C3	CE			
3571	18C4	A8 18		.WORD L3471	; LINK TO #>
3572	18C6	D6 07	SIGN	.WORD DOCOL	
3573	18C8	4A 0A		.WORD ROT	
3574	18CA	88 06		.WORD ZLESS	
3575	18CC	56 03		.WORD ZBRAN	
3576	18CE	07 00	L3492	.WORD \$7	L3496-L3492
3577	18D0	67 02		.WORD CLIT	
3578	18D2	2D		.BYTE \$2D	
3579	18D3	46 0E		.WORD HOLD	
3580	18D5	0C 06	L3496	.WORD SEMIS	
3581	18D7			;	
3582	18D7			;	#
3583	18D7			;	SCREEN 75 LINE 9

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LINE # LOC      CODE      LINE
3584 18D7
3585 18D7 81          L3501 .BYTE $81,$A3
3585 18D8 A3
3586 18D9 BF 18          .WORD L3486          ; LINK TO SIGN
3587 18DB D6 07          DIG .WORD DOCOL
3588 18DD 6D 09          .WORD BASE
3589 18DF 79 07          .WORD AT
3590 18E1 A6 13          .WORD MSMOD
3591 18E3 4A 0A          .WORD ROT
3592 18E5 67 02          .WORD CLIT
3593 18E7 09           .BYTE 9
3594 18E8 08 07          .WORD OVER
3595 18EA 1F 0A          .WORD LESS
3596 18EC 56 03          .WORD ZBRAN
3597 18EE 07 00          L3513 .WORD 7          L3517-L3513
3598 18F0 67 02          .WORD CLIT
3599 18F2 07           .BYTE 7
3600 18F3 99 06          .WORD PLUS
3601 18F5 67 02          L3517 .WORD CLIT
3602 18F7 30           .BYTE $30
3603 18F8 99 06          .WORD PLUS
3604 18FA 46 0E          .WORD HOLD
3605 18FC 0C 06          .WORD SEMIS
3606 18FE
3607 18FE
3608 18FE
3609 18FE
3610 18FE 82          L3526 .BYTE $82,'#',$D3
3610 18FF 23
3610 1900 D3
3611 1901 D7 18          .WORD L3501          ; LINK TO #
3612 1903 D6 07          DIGS .WORD DOCOL
3613 1905 DB 18          L3529 .WORD DIG
3614 1907 08 07          .WORD OVER
3615 1909 08 07          .WORD OVER
3616 190B AD 05          .WORD OR
3617 190D 73 06          .WORD ZEQU
3618 190F 56 03          .WORD ZBRAN
3619 1911 F4 FF          L3535 .WORD $FFF4          L3529-L3535
3620 1913 0C 06          .WORD SEMIS
3621 1915
3622 1915
3623 1915
3624 1915
3625 1915 83          L3541 .BYTE $83,'D.',$D2
3625 1916 44 2E
3625 1918 D2
3626 1919 FE 18          .WORD L3526          ; LINK TO #S
3627 191B D6 07          DDOTR .WORD DOCOL
3628 191D 3A 06          .WORD TOR
3629 191F 22 07          .WORD SWAP
3630 1921 08 07          .WORD OVER
3631 1923 C4 12          .WORD DABS
3632 1925 9E 18          .WORD BDIGS
3633 1927 03 19          .WORD DIGS

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LINE #	LOC	CODE	LINE	
3634	1929	C6 18		.WORD SIGN
3635	192B	AD 18		.WORD EDIGS
3636	192D	4C 06		.WORD RFROM
3637	192F	08 07		.WORD OVER
3638	1931	FA 09		.WORD SUB
3639	1933	81 18		.WORD SPACS
3640	1935	95 0C		.WORD TYPE
3641	1937	0C 06		.WORD SEMIS
3642	1939		;	
3643	1939		;	D.
3644	1939		;	SCREEN 76 LINE 5
3645	1939		;	
3646	1939	82	L3562	.BYTE \$82,'D',\$AE
3646	193A	44		
3646	193B	AE		
3647	193C	15 19		.WORD L3541 ; LINK TO D.R
3648	193E	D6 07	DDOT	.WORD DOCOL
3649	1940	5D 08		.WORD ZERO
3650	1942	1B 19		.WORD DDOTR
3651	1944	5E 0A		.WORD SPACE
3652	1946	0C 06		.WORD SEMIS
3653	1948		;	
3654	1948		;	.R
3655	1948		;	SCREEN 76 LINE 7
3656	1948		;	
3657	1948	82	L3573	.BYTE \$82,'.', \$D2
3657	1949	2E		
3657	194A	D2		
3658	194B	39 19		.WORD L3562 LINK TO D.
3659	194D	D6 07	DOTR	.WORD DOCOL
3660	194F	3A 06		.WORD TOR
3661	1951	82 12		.WORD STOD
3662	1953	4C 06		.WORD RFROM
3663	1955	1B 19		.WORD DDOTR
3664	1957	0C 06		.WORD SEMIS
3665	1959		;	
3666	1959		;	.
3667	1959		;	SCREEN 76 LINE 9
3668	1959		;	
3669	1959	81	L3585	.BYTE \$81,\$AE
3669	195A	AE		
3670	195B	48 19		.WORD L3573 ; LINK TO .R
3671	195D	D6 07	DOT	.WORD DOCOL
3672	195F	82 12		.WORD STOD
3673	1961	3E 19		.WORD DDOT
3674	1963	0C 06		.WORD SEMIS
3675	1965		;	
3676	1965		;	?
3677	1965		;	SCREEN 76 LINE 11
3678	1965		;	
3679	1965	81	L3595	.BYTE \$81,\$BF
3679	1966	BF		
3680	1967	59 19		.WORD L3585 ; LINK TO .
3681	1969	D6 07	QUES	.WORD DOCOL
3682	196B	79 07		.WORD AT

LINE #	LOC	CODE	LINE	
3683	196D	5D 19		.WORD DOT
3684	196F	0C 06		.WORD SEMIS
3685	1971			;
3686	1971			;
3687	1971			LIST
3688	1971			SCREEN 77 LINE 2
3689	1971	84		;
3689	1972	4C 49 53	L3605	.BYTE \$84,'LIS',\$D4
3689	1975	D4		
3690	1976	65 19		.WORD L3595 ; LINK TO ?
3691	1978	D6 07	LIST	.WORD DOCOL
3692	197A	FD 0B		.WORD DECIM
3693	197C	F4 04		.WORD CR
3694	197E	3A 07		.WORD DUP
3695	1980	32 09		.WORD SCR
3696	1982	9D 07		.WORD STORE
3697	1984	F6 0C		.WORD PDOTQ
3698	1986	06		.BYTE 6,'SCR # '
3698	1987	53 43		
3699	198D	5D 19		.WORD DOT
3700	198F	67 02		.WORD CLIT
3701	1991	10		.BYTE 16
3702	1992	5D 08		.WORD ZERO
3703	1994	DE 03		.WORD PDO
3704	1996	F4 04	L3620	.WORD CR
3705	1998	F7 03		.WORD I
3706	199A	75 08		.WORD THREE
3707	199C	4D 19		.WORD DOTR
3708	199E	5E 0A		.WORD SPACE
3709	19A0	F7 03		.WORD I
3710	19A2	32 09		.WORD SCR
3711	19A4	79 07		.WORD AT
3712	19A6	58 15		.WORD DLINE
3713	19A8	77 03		.WORD PLOOP
3714	19AA	EC FF	L3630	.WORD \$FFEC L3620-L3630
3715	19AC	F4 04		.WORD CR
3716	19AE	0C 06		.WORD SEMIS
3717	19B0			;
3718	19B0			;
3719	19B0			INDEX
3720	19B0			SCREEN 77 LINE 7
3721	19B0	85		;
3721	19B1	49 4E	L3637	.BYTE \$85,'INDE',\$D8
3721	19B5	D8		
3722	19B6	71 19		.WORD L3605 ; LINK TO LIST
3723	19B8	D6 07		.WORD DOCOL
3724	19BA	F4 04		.WORD CR
3725	19BC	A1 09		.WORD ONEP
3726	19BE	22 07		.WORD SWAP
3727	19C0	DE 03		.WORD PDO
3728	19C2	F4 04	L3647	.WORD CR
3729	19C4	F7 03		.WORD I
3730	19C6	75 08		.WORD THREE
3731	19C8	4D 19		.WORD DOTR
3732	19CA	5E 0A		.WORD SPACE

LINE #	LOC	CODE	LINE	
3733	19CC	5D 08		.WORD ZERO
3734	19CE	F7 03		.WORD I
3735	19D0	58 15		.WORD DLINE
3736	19D2	ED 04		.WORD QTERM
3737	19D4	56 03		.WORD ZBRAN
3738	19D6	04 00	L3657	.WORD 4 L3659-L3657
3739	19D8	1F 06		.WORD LEAVE
3740	19DA	77 03	L3659	.WORD PLOOP
3741	19DC	E6 FF	L3660	.WORD \$FFE6 L3647-L3660
3742	19DE	67 02		.WORD CLIT
3743	19E0	0C		.BYTE \$OC FORM FEED FOR PRINTER
3744	19E1	D7 04		.WORD EMIT
3745	19E3	0C 06		.WORD SEMIS
3746	19E5		;	
3747	19E5		;	TRIAD
3748	19E5		;	SCREEN 77 LINE 12
3749	19E5		;	
3750	19E5	85	L3666	.BYTE \$85, 'TRIA', \$C4
3750	19E6	54 52		
3750	19EA	C4		
3751	19EB	B0 19		.WORD L3637 ; LINK TO INDEX
3752	19ED	D6 07		.WORD DOCOL
3753	19EF	75 08		.WORD THREE
3754	19F1	63 13		.WORD SLASH
3755	19F3	75 08		.WORD THREE
3756	19F5	44 13		.WORD STAR
3757	19F7	75 08		.WORD THREE
3758	19F9	08 07		.WORD OVER
3759	19FB	99 06		.WORD PLUS
3760	19FD	22 07		.WORD SWAP
3761	19FF	DE 03		.WORD PDO
3762	1A01	F4 04	L3681	.WORD CR
3763	1A03	F7 03		.WORD I
3764	1A05	78 19		.WORD LIST
3765	1A07	77 03		.WORD PLOOP
3766	1A09	F8 FF	L3685	.WORD \$FFF8 L3681-L3685
3767	1A0B	F4 04		.WORD CR
3768	1A0D	67 02		.WORD CLIT
3769	1A0F	0F		.BYTE \$F
3770	1A10	6C 15		.WORD MESS
3771	1A12	F4 04		.WORD CR
3772	1A14	67 02		.WORD CLIT
3773	1A16	0C		.BYTE \$OC FORM FEED FOR PRINTER
3774	1A17	D7 04		.WORD EMIT
3775	1A19	0C 06		.WORD SEMIS
3776	1A1B		;	
3777	1A1B		;	VLIST
3778	1A1B		;	SCREEN 78 LINE 2
3779	1A1B		;	
3780	1A1B	85	L3696	.BYTE \$85, 'VLIS', \$D4
3780	1A1C	56 4C		
3780	1A20	D4		
3781	1A21	E5 19		.WORD L3666 ; LINK TO TRIAD
3782	1A23	D6 07	VLIST	.WORD DOCOL
3783	1A25	67 02		.WORD CLIT

LINE #	LOC	CODE	LINE	
3784	1A27	80		.BYTE \$80
3785	1A28	29 09		.WORD OUT
3786	1A2A	9D 07		.WORD STORE
3787	1A2C	4B 09		.WORD CON
3788	1A2E	79 07		.WORD AT
3789	1A30	79 07		.WORD AT
3790	1A32	29 09	L3706	.WORD OUT
3791	1A34	79 07		.WORD AT
3792	1A36	88 08		.WORD CSLL
3793	1A38	3C 0A		.WORD GREAT
3794	1A3A	56 03		.WORD ZBRAN
3795	1A3C	0A 00	L3711	.WORD \$A
3796	1A3E	F4 04		.WORD CR
3797	1A40	5D 08		.WORD ZERO
3798	1A42	29 09		.WORD OUT
3799	1A44	9D 07		.WORD STORE
3800	1A46	3A 07	L3716	.WORD DUP
3801	1A48	02 10		.WORD IDDOT
3802	1A4A	5E 0A		.WORD SPACE
3803	1A4C	5E 0A		.WORD SPACE
3804	1A4E	EA 0A		.WORD PFA
3805	1A50	B8 0A		.WORD LFA
3806	1A52	79 07		.WORD AT
3807	1A54	3A 07		.WORD DUP
3808	1A56	73 06		.WORD ZEQU
3809	1A58	ED 04		.WORD QTERM
3810	1A5A	AD 05		.WORD OR
3811	1A5C	56 03		.WORD ZBRAN
3812	1A5E	D4 FF	L3728	.WORD \$FFD4
3813	1A60	19 07		.WORD DROP
3814	1A62	0C 06		.WORD SEMIS
3815	1A64		;	
3816	1A64		;	MON
3817	1A64		;	SCREEN 79 LINE 3
3818	1A64		;	
3819	1A64	83	NTOP	.BYTE \$83,'MO',,\$CE
3819	1A65	4D 4F		
3819	1A67	CE		
3820	1A68	1B 1A		.WORD L3696 ; LINK TO VLIST
3821	1A6A	6C 1A	MON	.WORD *+2
3822	1A6C	86 B5		STX XSAVE
3823	1A6E	00		BRK
3824	1A6F	A6 B5		LDX XSAVE
3825	1A71	4C 44 02		JMP NEXT
3826	1A74		;	
3827	1A74		TOP	.END FOR1/1 ; END OF LISTING

ERRORS = 0000 <0000>

SYMBOL TABLE

SYMBOL VALUE

ABORT	121D	ABS	12B5	AGAIN	1807	ALLOT	09CD
ANDD	0598	AT	0779	BACK	175C	BASE	096D
BBUF	08AC	BDIGS	189E	BINARY	05A3	BL	087E
BLANK	0E37	BLK	0918	BLOCK	14D5	BMAG	0420
BOS	0020	BRAN	0337	BSCR	08B8	BUFFR	148D
BUILD	0C40	BUMP	0360	CAT	078E	CCOMM	09EA
CFA	0AC7	CLIT	0267	CMOVE	04FE	COLD	1245
COLON	07C2	COMMA	09D9	COMP	0B9F	CON	094B
CONST	080B	COUNT	0C82	CR	04F4	CREAT	1036
CRLF	D0D2	CSLL	0888	CSP	0988	CSTOR	07B5
CURR	0958	DABS	12C4	DAREA	3B60	DBCD	1671
DDISC	1633	DDOT	193E	DDOTR	191B	DDUP	0A6D
DECIM	0BFD	DECNP	02FB	DECNP1	0301	DEFIN	11CE
DFIND	0F8D	DIG	18DB	DIGIT	0401	DIGS	1903
DLINE	1558	DLIT	10DE	DMINU	06F1	DOCOL	07D6
DOCON	0815	DODOE	0C5C	DOES	0C50	DOT	195D
DOTR	194D	DOUSE	084A	DOVAR	0831	DOVOC	11A6
DP	0901	DPL	0976	DPLUS	06B2	DPM	12A3
DRO	1468	DROP	0719	DTRAI	0CC3	DUP	073A
EDIGS	18AD	EMIT	04D7	ENCL	0498	ENDIF	1780
ENTER	0200	EQUAL	0A06	ERASE	0E26	ERROR	0FCD
EXEC	031F	EXPEC	0D41	FENCE	08F9	FILL	0E06
FIRST	0894	FLD	097F	FORG	16F1	FORTH	11B6
GREAT	0A3C	HERE	09BD	HEX	0BE8	HEX2	D2CE
HLD	0999	HOLD	0E46	I	03F7	IDDOT	1002
IF	1837	IN	0920	INCH	D1DC	INTER	1120
IP	00AE	KEY	04DF	L1000	08BC	L1010	08D0
L1018	08D9	L1026	08E4	L1034	08F1	L1042	08FC
L1050	0904	L1058	0912	L1066	091B	L107	034C
L1074	0923	L1082	092C	L1090	0935	L1098	0941
L1106	094E	L1114	095B	L1122	0966	L1130	0970
L1138	0979	L1146	0982	L1154	098B	L1162	0993
L1170	099C	L1180	09A9	L1190	09B6	L1200	09C5
L1210	09D5	L122	036B	L1222	09E5	L1234	09F6
L1244	0A02	L1246	0A0E	L1254	0A1B	L1258	0A30
L1260	0A33	L1264	0A38	L127	036E	L1274	0A44
L1286	0A56	L1296	0A66	L130	0379	L1301	0A73
L1303	0A77	L1308	0A79	L1312	0A88	L1320	0A97
L1328	0A9F	L1339	0AB2	L1350	0AC1	L1360	0ACF
L1373	0AE4	L1386	0AF7	L1397	0B08	L1402	0B17
L1405	0B1D	L1406	0B1F	L1407	0B21	L1412	0B23
L1426	0B3A	L1439	0B4F	L1451	0B63	L1466	0B7B
L1480	0B95	L1495	0BB1	L1507	0BBF	L1519	0BCE
L1531	0BE2	L154	039D	L1543	0BF3	L1555	0C08
L1568	0C20	L1582	0C36	L1592	0C48	L1622	0C7A
L1634	0C8E	L1639	0C9B	L1644	0CA5	L1648	0CAD
L1650	0CB1	L1651	0CB3	L1652	0CB5	L1657	0CB7
L1663	0CCB	L1672	0CDD	L1675	0CE3	L1676	0CE5
L1678	0CE9	L1679	0CEB	L1685	0CEF	L1701	0DOA
L1709	0D1A	L1718	0D2C	L1719	0D2E	L1723	0D36
L1729	0D38	L1736	0D4B	L1744	0D5A	L1759	0D77
L1760	0D79	L1765	0D82	L1771	0D8E	L1772	0D90
L1773	0D92	L1779	0D9E	L1781	0DA2	L1788	0DA8
L1804	0DC3	L1810	0DCF	L1824	0DED	L1828	0DF5
L1829	0DF7	L1830	0DF9	L1832	0DFD	L1838	0DFF
L185	03D7	L1856	0E1E	L1866	0E2E	L1876	0E3F

SYMBOL TABLE

SYMBOL VALUE

L1890	OE58	L1902	OE69	L1908	OE78	L1913	OE82
L1914	OE84	L1916	OE88	L1943	OEB5	L1950	OEC7
L1956	OED2	L1961	OEDB	L1962	OEDD	L1968	OEEl
L1971	OEEE	L1979	OEFE	L1994	OF1C	L1998	OF24
L2000	OF28	L2001	OF2A	L2007	OF2E	L2023	OF54
L2031	OF64	L2041	OF77	L2042	OF79	L2045	OF7F
L2047	OF83	L2052	OF85	L2068	OFA9	L207	03F3
L2073	OFB3	L2078	OFB5	L2087	OFC5	L2094	OFD7
L2096	OFDB	L2113	OFFC	L214	03F9	L2142	102D
L2155	104B	L2163	105A	L22	0224	L2200	1099
L2216	10B7	L2222	10C9	L2226	10D1	L2232	10D3
L2238	10E6	L2242	10EE	L2248	10F0	L2269	1114
L227	0415	L2272	1122	L2274	1126	L2279	1130
L2283	1138	L2284	113A	L2286	113E	L2288	1142
L2289	1144	L2295	1150	L2298	1156	L2299	1158
L2301	115C	L2302	115E	L2303	1160	L2309	1162
L2321	1179	L234	0422	L2346	11AE	L2357	11CO
L2369	11DA	L2381	11E7	L2388	11F8	L2396	1208
L2399	120F	L2400	1211	L2406	1215	L2423	123E
L243	0429	L2433	1259	L2437	1263	L2453	127B
L2464	128C	L2469	1297	L2471	129B	L2476	129D
L2481	12A9	L2483	12AD	L2488	12AF	L249	043B
L2498	12BD	L2508	12CC	L2515	12DC	L2517	12EO
L2523	12E4	L2530	12F4	L2532	12F8	L2538	12FC
L254	0445	L2556	1319	L2579	1340	L2589	134C
L2601	135F	L2612	136D	L2622	137B	L2634	138F
L2645	139E	L2662	13BC	L2670	13C6	L2678	13D1
L2688	13E8	L2691	13EE	L2700	13F8	L2705	1417
L2716	1444	L2729	1462	L2740	1472	L2751	1484
L2758	1497	L2760	149B	L2767	14A9	L2776	14BD
L2788	14CD	L280	0470	L2804	14F1	L2805	14F3
L2808	14F9	L281	0472	L2818	150D	L2826	151D
L2830	1525	L2835	1436	L2838	152D	L2839	1440
L284	0477	L2857	1550	L2868	1562	L2874	1574
L2877	157A	L2886	158B	L2887	158D	L2888	158F
L2891	159A	L2896	159C	L2924	15CF	L30	0235
L301	048E	L3030	162B	L3032	165A	L3040	165D
L3050	166A	L3060	1683	L31	0237	L313	04A9
L318	04B2	L3202	16D4	L3217	16E8	L3220	170A
L3225	1724	L3228	172B	L3250	1755	L326	04C1
L3261	1766	L327	04C4	L3273	1778	L3290	1794
L3300	17A1	L3313	17B2	L3327	17C7	L3341	17DD
L3355	17F3	L3365	17FF	L337	04D0	L3379	1815
L3396	1832	L3411	1847	L3431	1868	L344	04D9
L3442	1878	L3449	188B	L3452	1891	L3454	1895
L3455	1897	L3460	1899	L3471	18A8	L3486	18BF
L3492	18CE	L3496	18D5	L35	0260	L3501	18D7
L351	04E1	L3513	18EE	L3517	18F5	L3526	18FE
L3529	1905	L3535	1911	L3541	1915	L3562	1939
L3573	1948	L358	04EF	L3585	1959	L3595	1965
L3605	1971	L3620	1996	L3630	19AA	L3637	19B0
L3647	19C2	L365	04F6	L3657	19D6	L3659	19DA
L3660	19DC	L3666	19E5	L3681	1A01	L3685	1A09
L3696	1A1B	L370	0505	L3706	1A32	L3711	1A3C
L3716	1A46	L3728	1A5E	L375	0510	L386	051E
L396	0533	L411	0550	L418	0556	L433	0573

SYMBOL TABLE

SYMBOL	VALUE						
L444	0587	L453	0592	L469	05A8	L484	05BD
L499	05D3	L511	05E2	L522	05F2	L536	0607
L54	025D	L548	0617	L563	0635	L577	0647
L591	0659	L605	066E	L613	067E	L619	0683
L63	0307	L632	0695	L649	06AD	L670	06D0
L685	06E8	L700	0701	L711	0712	L718	071B
L733	0734	L744	0744	L75	0315	L754	0758
L762	0761	L773	0775	L781	0784	L787	0789
L798	0799	L806	07A9	L813	07B0	L823	07BE
L853	07EE	L867	0800	L885	0820	L89	032E
L902	083D	L920	0859	L928	0861	L936	0869
L944	0871	L952	0879	L960	0882	L968	088C
L976	0898	L984	08A4	L992	08B0	LATES	0AA8
LBRAC	0BB5	LEAVE	061F	LESS	0A1F	LETTER	D2C1
LFA	0AB8	LIMIT	08A0	LIST	1978	LIT	022A
LITER	10C1	LOAD	15A3	MAX	12EA	MEM	4000
MESS	156C	MIN	12D2	MINUS	06D8	MOD	1373
MON	1A6A	MSLAS	131E	MSMOD	13A6	MSTAR	1301
N	00A6	NBUF	0008	NEXT	0244	NFA	0AD5
NP	0014	NTOP	1A64	NUMBER	0F37	OFFSET	093E
ONE	0865	ONEKEY	D1DC	ONEP	09A1	OR	05AD
ORIG	0200	OUT	0929	OUTCH	D2C1	OVER	0708
PABOR	0FBF	PAD	0E5E	PBUF	13D8	PDO	03DE
PDOTQ	0CF6	PFA	0AEA	PFIND	0432	PL1	0384
PL2	0391	PLINE	1536	PLOOP	0377	PLUS	0699
PM	1291	PN1	02E4	PN2	02EB	PNUMB	0EEC
POP	03EE	POPTWO	03EC	PORIG	08C6	PPLOO	03A7
PREV	13CD	PRNAM	02D9	PSCOD	0C12	PSTOR	0749
PUSH	023D	PUSHOA	05DC	PUT	023F	QCOMP	0B2B
QCSP	0B6A	QERR	0B11	QEXEC	0B42	QLOAD	0B86
QPAIR	0B58	QSTAC	10F9	QTERM	04ED	QUERY	0DB0
QUES	1969	QUIT	11EE	R	065D	RBRAC	0BC3
REENTR	0204	RFROM	064C	RNUM	0990	ROT	0A4A
RPSTO	05F8	RSLW	1689	SCR	0932	SCSP	0AFE
SECTL	0640	SECTR	0320	SEMIS	060C	SETUP	0304
SIGN	18C6	SLASH	1363	SLMOD	1353	SMUDG	0BD7
SPACE	0A5E	SPACS	1881	SPAT	05D9	SPSTO	05E8
SSIZE	0080	SSLAS	1394	SSMOD	1383	STAR	1344
STATE	0963	STOD	1282	STORE	079D	SUB	09FA
SWAP	0722	TCOLON	02BE	TCR	DOF1	THREE	0875
TIB	08D6	TIBX	0100	TICK	16D8	TOGGL	076A
TOP	1A74	TOR	063A	TOS	009E	TRACE	026F
TRAV	0A84	TWO	086D	TWOP	09AE	TYPE	0C95
UAREA	3F80	ULESS	0A13	UNTIL	17E5	UP	00B3
UPDAT	1401	UPPER	0EBD	USE	13C2	USER	0844
USLAS	055B	USTAR	0523	VAR	082B	VLO	11BE
VLIST	1A23	VOCL	090F	W	00B1	WARM	1257
WARN	08EE	WIDTH	08E1	WORD	0E70	XBLANK	DOAF
XCR	1621	XEMIT	15F1	XFOR	11BC	XKEY	160C
XOR	05C3	XQTER	1616	XSAVE	00B5	XW	0012
ZBRAN	0356	ZEQU	0673	ZERO	085D	ZLESS	0688

END OF ASSEMBLY

<

HEX 200 1A74 DUMP

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F				
200	EA	4C	47	12	EA	4C	57	12	4	0	D2	5E	7D	20	7F	0	LG	LW	^}	
210	80	3F	9E	0	FF	1	0	1	1F	0	1	0	9	24	9	24	?			\$ \$
220	7B	20	4C	44	83	4C	49	D4	0	0	2C	2	B1	AE	48	E6	{	LD	LI	, H
230	AE	DO	2	E6	AF	B1	AE	E6	AE	DO	2	E6	AF	CA	CA	95				
240	1	68	95	0	A0	1	B1	AE	85	B2	88	B1	AE	85	B1	EA	h			
250	EA	EA	18	A5	AE	69	2	85	AE	90	2	E6	AF	4C	B0	0		i		L
260	84	43	4C	49	D4	24	2	69	2	B1	AE	48	98	F0	C8	86	CLI	\$	i	H
270	B5	20	D2	D0	A5	AF	20	CE	D2	A5	AE	20	CE	D2	20	AF				
280	DO	AO	0	B1	AE	85	12	85	14	C8	B1	AE	85	13	85	15				
290	20	D9	2	A5	13	20	CE	D2	A5	12	20	CE	D2	20	AF	DO				
2A0	A5	B5	20	CE	D2	20	AF	DO	A9	1	20	CE	D2	BA	E8	8A				
2B0	20	CE	D2	20	AF	DO	EA	EA	EA	A6	B5	AO	0	60	86	B5				
2C0	A5	B1	85	14	A5	B2	85	15	20	D2	DO	A9	3A	20	C1	D2				:
2D0	20	AF	DO	20	D9	2	A6	B5	60	20	FB	2	20	FB	2	20				
2E0	FB	2	A0	0	20	FB	2	B1	14	10	F9	C8	B1	14	20	C1				
2F0	D2	B1	14	10	F6	20	AF	DO	AO	0	60	A5	14	DO	2	C6				

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F				
300	15	C6	14	60	A	85	A5	B5	0	99	A6	0	E8	C8	C4	A5				
310	DO	F5	A0	0	60	87	45	58	45	43	55	54	C5	60	2	21			EXECUT	!
320	3	B5	0	85	B1	B5	1	85	B2	E8	E8	4C	B0	0	86	42			L	B
330	52	41	4E	43	C8	15	3	39	3	18	B1	AE	65	AE	48	C8	RANC	9	e	H
340	B1	AE	65	AF	85	AF	68	85	AE	4C	46	2	87	30	42	52	e	h	LF	OBR
350	41	4E	43	C8	2E	3	58	3	E8	E8	B5	FE	15	FF	F0	D9	ANC	.	X	
360	18	A5	AE	69	2	85	AE	90	2	E6	AF	4C	44	2	86	28	i		LD	(
370	4C	4F	4F	50	A9	4C	3	79	3	86	B5	BA	FE	1	1	DO	LOOP	L	y	
380	3	FE	2	1	18	BD	3	1	FD	1	1	BD	4	1	FD	2				
390	1	A6	B5	A	90	A3	68	68	68	68	4C	60	3	87	28	2B			hhhhL	(+
3A0	4C	4F	4F	50	A9	6E	3	A9	3	E8	E8	86	B5	B5	FF	48	LOOP	n		H
3B0	48	B5	FE	BA	E8	E8	18	7D	1	1	9D	1	1	68	7D	2	H		}	h}
3C0	1	9D	2	1	68	10	BD	18	BD	1	1	FD	3	1	BD	2	h			
3D0	1	FD	4	1	4C	91	3	84	28	44	4F	A9	9D	3	E0	3	L	(DO		
3E0	B5	3	48	B5	2	48	B5	1	48	B5	0	48	E8	E8	E8	E8	H	H	H	H
3F0	4C	44	2	81	C9	D7	3	5F	6	85	44	49	47	49	D4	F3	LD		—	DIGI

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F				
400	3	3	4	38	B5	2	E9	30	30	18	C9	A	30	7	38	E9	8	00	0	8
410	7	C9	A	30	D	D5	0	10	9	95	2	A9	1	48	98	4C	0			H L
420	3F	2	98	48	E8	E8	4C	3F	2	86	28	46	49	4E	44	A9	?	H	L?	(FIND
430	F9	3	34	4	A9	2	20	4	3	86	B5	A0	0	B1	A6	51	4			Q
440	A8	29	3F	DO	2D	C8	B1	A6	51	A8	A	DO	23	90	F6	A6	)?	-	Q	#
450	B5	CA	CA	CA	CA	18	98	69	5	65	A6	95	2	A0	0	98			i	e
460	65	A7	95	3	94	1	B1	A6	95	0	A9	1	48	4C	3D	2	e			HL=
470	B0	5	C8	B1	A6	10	FB	C8	B1	A6	AA	C8	B1	A6	85	A7				
480	86	A6	5	A6	DO	B5	A6	B5	A9	0	48	4C	3D	2	87	45				HL= E
490	4E	43	4C	4F	53	C5	29	4	9A	4	A9	2	20	4	3	8A	NCLOS)		
4A0	38	E9	8	AA	94	3	94	1	88	C8	B1	A8	C5	A6	F0	F9	8			
4B0	94	4	B1	A8	DO	E	94	2	94	0	98	D5	4	DO	2	F6				
4C0	2	4C	44	2	94	2	C8	C5	A6	DO	E7	94	0	4C	44	2	LD			LD
4D0	84	45	4D	49	D4	8E	4	F1	15	83	4B	45	D9	DO	4	C	EMI			KE
4E0	16	89	3F	54	45	52	4D	49	4E	41	CC	D9	4	16	16	82	?	TERMINA		
4F0	43	D2	E1	4	21	16	85	43	4D	4F	56	C5	EF	4	0	5	C	!	CMOV	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
800	88	43	4F	4E	53	54	41	4E	D4	EE	7	D6	7	36	10	D7	CONSTAN 6
810	B	D9	9	12	C	A0	2	B1	B1	48	C8	B1	B1	4C	3D	2	H L=
820	88	56	41	52	49	41	42	4C	C5	0	8	D6	7	B	8	12	VARIABLE
830	C	18	A5	B1	69	2	48	98	65	B2	4C	3D	2	84	55	53	i H e L= US
840	45	D2	20	8	D6	7	B	8	12	C	A0	2	18	B1	B1	65	E e
850	B3	48	A9	0	65	B4	4C	3D	2	81	B0	3D	8	15	8	0	H e L= =
860	0	81	B1	59	8	15	8	1	0	81	B2	61	8	15	8	2	Y a
870	0	81	B3	69	8	15	8	3	0	82	42	CC	71	8	15	8	i B q
880	20	0	83	43	2F	CC	79	8	15	8	40	0	85	46	49	52	C/ y @ FIR
890	53	D4	82	8	15	8	60	3B	85	4C	49	4D	49	D4	8C	8	S ; LIMI
8A0	15	8	80	3F	85	42	2F	42	55	C6	98	8	15	8	80	0	? B/BU
8B0	85	42	2F	53	43	D2	A4	8	15	8	8	0	87	2B	4F	52	B/SC +OR
8C0	49	47	49	CE	B0	8	D6	7	2A	2	0	2	99	6	C	6	IGI *
8D0	83	54	49	C2	BC	8	4A	8	A	85	57	49	44	54	C8	D0	TI J WIDT
8E0	8	4A	8	C	87	57	41	52	4E	49	4E	C7	D9	8	4A	8	J WARNIN J
8F0	E	85	46	45	4E	43	C5	E4	8	4A	8	10	82	44	D0	F1	FENC J D

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
900	8	4A	8	12	88	56	4F	43	2D	4C	49	4E	CB	FC	8	4A	J VOC-LIN J
910	8	14	83	42	4C	CB	4	9	4A	8	16	82	49	CE	12	9	BL J I
920	4A	8	18	83	4F	55	D4	1B	9	4A	8	1A	83	53	43	D2	J OU J SC
930	23	9	4A	8	1C	86	4F	46	46	53	45	D4	2C	9	4A	8	# J OFFSE , J
940	1E	87	43	4F	4E	54	45	58	D4	35	9	4A	8	20	87	43	CONTEX 5 J C
950	55	52	52	45	4E	D4	41	9	4A	8	22	85	53	54	41	54	URREN A J " STAT
960	C5	4E	9	4A	8	24	84	42	41	53	C5	5B	9	4A	8	26	N J \$ BAS [J &
970	83	44	50	CC	66	9	4A	8	28	83	46	4C	C4	70	9	4A	DP f J (FL p J
980	8	2A	83	43	53	D0	79	9	4A	8	2C	82	52	A3	82	9	* CS y J , R
990	4A	8	2E	83	48	4C	C4	8B	9	4A	8	30	82	31	AB	93	J . HL J O 1
9A0	9	D6	7	65	8	99	6	C	6	82	32	AB	9C	9	D6	7	e 2
9B0	6D	8	99	6	C	6	84	48	45	52	C5	A9	9	D6	7	1	m HER
9C0	9	79	7	C	6	85	41	4C	4C	4F	D4	B6	9	D6	7	1	y ALLO
9D0	9	49	7	C	6	81	AC	C5	9	D6	7	BD	9	9D	7	6D	I m
9E0	8	CD	9	C	6	82	43	AC	D5	9	D6	7	BD	9	B5	7	C
9F0	65	8	CD	9	C	6	81	AD	E5	9	D6	7	D8	6	99	6	e

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
A00	C	6	81	BD	F6	9	D6	7	FA	9	73	6	C	6	82	55	s U
A10	BC	2	A	D6	7	FA	9	88	6	C	6	81	BC	E	A	21	!
A20	A	38	B5	2	F5	0	B5	3	F5	1	94	3	50	2	49	80	8 P I
A30	10	1	C8	94	2	4C	EE	3	81	BE	1B	A	D6	7	22	7	L "
A40	1F	A	C	6	83	52	4F	D4	38	A	D6	7	3A	6	22	7	RO 8 : "
A50	4C	6	22	7	C	6	85	53	50	41	43	C5	44	A	D6	7	L " SPAC D
A60	7E	8	D7	4	C	6	84	2D	44	55	D0	56	A	D6	7	3A	~ -DU V :
A70	7	56	3	4	0	3A	7	C	6	88	54	52	41	56	45	52	V : TRAVER
A80	53	C5	66	A	D6	7	22	7	8	7	99	6	67	2	7F	8	S f " g
A90	7	8E	7	1F	A	56	3	F1	FF	22	7	19	7	C	6	86	V " "
AA0	4C	41	54	45	53	D4	79	A	D6	7	58	9	79	7	79	7	LATES y X y y
AB0	C	6	83	4C	46	C1	9F	A	D6	7	67	2	4	FA	9	C	LF g
AC0	6	83	43	46	C1	B2	A	D6	7	6D	8	FA	9	C	6	83	CF m
AD0	4E	46	C1	C1	A	D6	7	67	2	5	FA	9	2A	2	FF	FF	NF g *
AEO	84	A	C	6	83	50	46	C1	CF	A	D6	7	65	8	84	A	PF e
AFO	67	2	5	99	6	C	6	84	21	43	53	D0	E4	A	D6	7	g !CS

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
B00	D9	5	88	9	9D	7	C	6	86	3F	45	52	52	4F	D2	F7	?ERRO
B10	A	D6	7	22	7	56	3	8	0	CD	F	37	3	4	0	19	" V 7
B20	7	C	6	85	3F	43	4F	4D	D0	8	B	D6	7	63	9	79	?COM c y
B30	7	73	6	67	2	11	11	B	C	6	85	3F	45	58	45	C3	s g ?EXE
B40	23	B	D6	7	63	9	79	7	67	2	12	11	B	C	6	86	# c y g
B50	3F	50	41	49	52	D3	3A	B	D6	7	FA	9	67	2	13	11	?PAIR : g
B60	B	C	6	84	3F	43	53	D0	4F	B	D6	7	D9	5	88	9	?CS O
B70	79	7	FA	9	67	2	14	11	B	C	6	88	3F	4C	4F	41	y g ?LOA
B80	44	49	4E	C7	63	B	D6	7	18	9	79	7	73	6	67	2	DIN c y s g
B90	16	11	B	C	6	87	43	4F	4D	50	49	4C	C5	7B	B	D6	COMPIL {
BA0	7	2B	B	4C	6	3A	7	AE	9	3A	6	79	7	D9	9	C	+ L : : y
BB0	6	C1	DB	95	B	D6	7	5D	8	63	9	9D	7	C	6	81	] c
BC0	DD	B1	B	D6	7	67	2	C0	63	9	9D	7	C	6	86	53	g c S
BD0	4D	55	44	47	C5	BF	B	D6	7	A8	A	67	2	20	6A	7	MUDG g j
BE0	C	6	83	48	45	D8	CE	B	D6	7	67	2	10	6D	9	9D	HE g m
BFO	7	C	6	87	44	45	43	49	4D	41	CC	E2	B	D6	7	67	DECIMA g

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
C00	2	A	6D	9	9D	7	C	6	87	28	3B	43	4F	44	45	A9	m (;CODE
C10	F3	B	D6	7	4C	6	A8	A	EA	A	C7	A	9D	7	C	6	L
C20	C5	3B	43	4F	44	C5	8	C	D6	7	6A	B	9F	B	12	C	;COD j
C30	B5	B	80	1A	C	6	87	3C	42	55	49	4C	44	D3	20	C	<BUILD
C40	D6	7	5D	8	B	8	C	6	85	44	4F	45	53	BE	36	C	] DOES 6
C50	D6	7	4C	6	A8	A	EA	A	9D	7	12	C	A5	AF	48	A5	L H
C60	AE	48	A0	2	B1	B1	85	AE	C8	B1	B1	85	AF	18	A5	B1	H
C70	69	4	48	A5	B2	69	0	4C	3D	2	85	43	4F	55	4E	D4	i H i L= COUN
C80	48	C	D6	7	3A	7	A1	9	22	7	8E	7	C	6	84	54	H : " T
C90	59	50	C5	7A	C	D6	7	6D	A	56	3	18	0	8	7	99	YP z m V
CA0	6	22	7	DE	3	F7	3	8E	7	D7	4	77	3	F8	FF	37	" w 7
CB0	3	4	0	19	7	C	6	89	2D	54	52	41	49	4C	49	4E	-TRAILIN
CC0	C7	8E	C	D6	7	3A	7	5D	8	DE	3	8	7	8	7	99	:]
CD0	6	65	8	FA	9	8E	7	7E	8	FA	9	56	3	8	0	1F	e ~ V
CE0	6	37	3	6	0	65	8	FA	9	77	3	E0	FF	C	6	84	7 e w
CFO	28	2E	22	A9	B7	C	D6	7	5D	6	82	C	3A	7	A1	9	(."] :

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
D00	4C	6	99	6	3A	6	95	C	C	6	C2	2E	A2	EF	C	D6	L : .
D10	7	67	2	22	63	9	79	7	56	3	14	0	9F	B	F6	C	g "c y V
D20	70	E	BD	9	8E	7	A1	9	CD	9	37	3	A	0	70	E	p 7 p
D30	BD	9	82	C	95	C	C	6	86	45	58	50	45	43	D4	A	EXPEC
D40	D	D6	7	8	7	99	6	8	7	DE	3	DF	4	3A	7	67	: g
D50	2	E	C6	8	79	7	6	A	56	3	1F	0	19	7	67	2	y V g
D60	8	8	7	F7	3	6	A	3A	7	4C	6	6D	8	FA	9	99	: L m
D70	6	3A	6	FA	9	37	3	27	0	3A	7	67	2	D	6	A	: 7 ' : g
D80	56	3	E	0	1F	6	19	7	7E	8	5D	8	37	3	4	0	V ~] 7
D90	3A	7	F7	3	B5	7	5D	8	F7	3	A1	9	9D	7	D7	4	:]
DA0	77	3	A9	FF	19	7	C	6	85	51	55	45	52	D9	38	D	w QUER 8
DB0	D6	7	D6	8	79	7	67	2	50	41	D	5D	8	20	9	9D	y g PA]
DC0	7	C	6	C1	80	A8	D	D6	7	18	9	79	7	56	3	2A	y V *
DD0	0	65	8	18	9	49	7	5D	8	20	9	9D	7	18	9	79	e I] y
DE0	7	5D	8	B8	8	5B	5	19	7	73	6	56	3	8	0	42	] [ s V B
DF0	B	4C	6	19	7	37	3	6	0	4C	6	19	7	C	6	84	L 7 L

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		
E00	46	49	4C	CC	C3	D	D6	7	22	7	3A	6	8	7	B5	7	FIL	" :
E10	3A	7	A1	9	4C	6	65	8	FA	9	FE	4	C	6	85	45	:	L e E
E20	52	41	53	C5	FF	D	D6	7	5D	8	6	E	C	6	86	42	RAS	] B
E30	4C	41	4E	4B	D3	1E	E	D6	7	7E	8	6	E	C	6	84	LANK	~
E40	48	4F	4C	C4	2E	E	D6	7	2A	2	FF	FF	99	9	49	7	HOL .	* I
E50	99	9	79	7	B5	7	C	6	83	50	41	C4	3F	E	D6	7	y	PA ?
E60	BD	9	67	2	44	99	6	C	6	84	57	4F	52	C4	58	E	g D	WOR X
E70	D6	7	18	9	79	7	56	3	C	0	18	9	79	7	D5	14	y V	y "
E80	37	3	6	0	D6	8	79	7	20	9	79	7	99	6	22	7	7	y y "
E90	98	4	BD	9	67	2	22	37	E	20	9	49	7	8	7	FA	g "7	I
EA0	9	3A	6	5D	6	BD	9	B5	7	99	6	BD	9	A1	9	4C	:	] L
EB0	6	FE	4	C	6	85	55	50	50	45	D2	69	E	D6	7	8		UPPE i
EC0	7	99	6	22	7	DE	3	F7	3	8E	7	67	2	5F	3C	A	"	g _<
ED0	56	3	9	0	F7	3	67	2	20	6A	7	77	3	EA	FF	C	V	g j w
EE0	6	88	28	4E	55	4D	42	45	52	A9	B5	E	D6	7	A1	9	(NUMBER	
EFO	3A	7	3A	6	8E	7	6D	9	79	7	1	4	56	3	2C	0	:	: m y V ,

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		
F00	22	7	6D	9	79	7	23	5	19	7	4A	A	6D	9	79	7	"	m y # J m y
F10	23	5	B2	6	76	9	79	7	A1	9	56	3	8	0	65	8	#	v y V e
F20	76	9	49	7	4C	6	37	3	C6	FF	4C	6	C	6	86	4E	v	I L 7 L N
F30	55	4D	42	45	D2	E1	E	D6	7	5D	8	5D	8	4A	A	3A	UMBE	] ] J :
F40	7	A1	9	8E	7	67	2	2D	6	A	3A	7	3A	6	99	6		g - : :
F50	2A	2	FF	FF	76	9	9D	7	EC	E	3A	7	8E	7	7E	8	*	v : ~
F60	FA	9	56	3	15	0	3A	7	8E	7	67	2	2E	FA	9	5D	V	: g .]
F70	8	11	B	5D	8	37	3	DD	FF	19	7	4C	6	56	3	4	] 7	L V ~
F80	0	F1	6	C	6	85	2D	46	49	4E	C4	2E	F	D6	7	7E		-FIN . ~
F90	8	70	E	BD	9	82	C	BD	E	BD	9	4B	9	79	7	79	p	K y y
FA0	7	32	4	3A	7	73	6	56	3	A	0	19	7	BD	9	A8	2	: s V
FBO	A	32	4	C	6	87	28	41	42	4F	52	54	A9	85	F	D6	2	(ABORT
FC0	7	1D	12	C	6	85	45	52	52	4F	D2	B5	F	D6	7	EE		ERRO
FDO	8	79	7	88	6	56	3	4	0	BF	F	BD	9	82	C	95	y	V
FEO	C	F6	C	4	20	20	3F	20	6C	15	E8	5	19	7	19	7		? 1
FFO	20	9	79	7	18	9	79	7	EE	11	C	6	83	49	44	AE	y	y ID

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1000	C5	F	D6	7	5E	E	67	2	20	67	2	5F	6	E	3A	7		^ g g _ :
1010	EA	A	B8	A	8	7	FA	9	5E	E	22	7	FE	4	5E	E		^ " ^
1020	82	C	67	2	1F	98	5	95	C	5E	A	C	6	86	43	52	g	^ CR
1030	45	41	54	C5	FC	F	D6	7	D6	8	BD	9	67	2	A0	99	EAT	g
1040	6	13	A	6D	8	11	B	8D	F	56	3	F	0	19	7	D5	m	V
1050	A	2	10	67	2	4	6C	15	5E	A	BD	9	3A	7	8E	7	g	l ^ :
1060	E1	8	79	7	D2	12	A1	9	CD	9	1	9	8E	7	67	2	y	g
1070	FD	6	A	CD	9	3A	7	67	2	A0	6A	7	BD	9	65	8		: g j e
1080	FA	9	67	2	80	6A	7	A8	A	D9	9	58	9	79	7	9D	g	j X y
1090	7	BD	9	AE	9	D9	9	C	6	C9	5B	43	4F	4D	50	49		[COMPI
10A0	4C	45	DD	2D	10	D6	7	8D	F	73	6	5D	8	11	B	19	LE -	s]
10B0	7	C7	A	D9	9	C	6	C7	4C	49	54	45	52	41	CC	99		LITERA
10C0	10	D6	7	63	9	79	7	56	3	8	0	9F	B	2A	2	D9		c y V *
10D0	9	C	6	C8	44	4C	49	54	45	52	41	CC	B7	10	D6	7		DLITERA
10E0	63	9	79	7	56	3	8	0	22	7	C1	10	C1	10	C	6		c y V "
10F0	86	3F	53	54	41	43	CB	D3	10	D6	7	67	2	9E	D9	5		?STAC g

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F					
1100	13	A	65	8	11	B	D9	5	67	2	20	13	A	67	2	7	e	g	g		
1110	11	B	C	6	89	49	4E	54	45	52	50	52	45	D4	F0	10		INTERPRE			
1120	D6	7	8D	F	56	3	1E	0	63	9	79	7	1F	A	56	3	V	c	y	V	
1130	A	0	C7	A	D9	9	37	3	6	0	C7	A	1F	3	F9	10		7			
1140	37	3	1C	0	BD	9	37	F	76	9	79	7	A1	9	56	3	7	7	v	y	V
1150	8	0	DE	10	37	3	6	0	19	7	C1	10	F9	10	37	3		7		7	
1160	C2	FF	89	49	4D	4D	45	44	49	41	54	C5	14	11	D6	7		IMMEDIAT			
1170	A8	A	67	2	40	6A	7	C	6	8A	56	4F	43	41	42	55	g	@j	VOCABU		
1180	4C	41	52	D9	62	11	D6	7	40	C	2A	2	81	A0	D9	9	LAR	b	@	*	
1190	58	9	79	7	C7	A	D9	9	BD	9	F	9	79	7	D9	9	X	y		y	F
11A0	F	9	9D	7	50	C	AE	9	4B	9	9D	7	C	6	C5	46		P	K		
11B0	4F	52	54	C8	79	11	5C	C	A6	11	81	A0	AA	1B	0	0	ORT	y	\		
11C0	8B	44	45	46	49	4E	49	54	49	4F	4E	D3	AE	11	D6	7		DEFINITION			
11D0	4B	9	79	7	58	9	9D	7	C	6	C1	A8	C0	11	D6	7	K	y	X		
11E0	67	2	29	70	E	C	6	84	51	55	49	D4	DA	11	D6	7	g	)p	QUI	
11F0	5D	8	18	9	9D	7	B5	B	F8	5	F4	4	B0	D	20	11]				

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F					
1200	63	9	79	7	73	6	56	3	7	0	F6	C	2	4F	4B	37	c	y	s	V	OK7
1210	3	E7	FF	C	6	85	41	42	4F	52	D4	E7	11	D6	7	E8		ABOR			
1220	5	FD	B	68	14	F4	4	F6	C	E	66	69	67	2D	46	4F	h		fig-FO		
1230	52	54	48	20	20	31	2E	30	B6	11	CE	11	EE	11	84	43	RTH	1.0		C	
1240	4F	4C	C4	15	12	47	12	AD	C	2	8D	BC	11	AD	D	2	OL	G			
1250	8D	BD	11	A0	15	D0	2	A0	F	AD	10	2	85	B3	AD	11					
1260	2	85	B4	B9	C	2	91	B3	88	10	F8	A9	12	85	AF	A9					
1270	1F	85	AE	D8	A9	6C	85	B0	4C	FA	5	84	53	2D	3E	C4		l	L	S->	
1280	3E	12	D6	7	3A	7	88	6	D8	6	C	6	82	2B	AD	7B	>	:		+ {	
1290	12	D6	7	88	6	56	3	4	0	D8	6	C	6	83	44	2B		V		D+	
12A0	AD	8C	12	D6	7	88	6	56	3	4	0	F1	6	C	6	83		V			
12B0	41	42	D3	9D	12	D6	7	3A	7	91	12	C	6	84	44	41	AB	:		DA	
12C0	42	D3	AF	12	D6	7	3A	7	A3	12	C	6	83	4D	49	CE	B	:		MI	
12D0	BD	12	D6	7	8	7	8	7	3C	A	56	3	4	0	22	7			< V	"	
12E0	19	7	C	6	83	4D	41	D8	CC	12	D6	7	8	7	8	7		MA			
12F0	1F	A	56	3	4	0	22	7	19	7	C	6	82	4D	AA	E4	V	"		M	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F					
1300	12	D6	7	8	7	8	7	C3	5	3A	6	B5	12	22	7	B5			:	"	
1310	12	23	5	4C	6	A3	12	C	6	82	4D	AF	FC	12	D6	7	#	L		M	
1320	8	7	3A	6	3A	6	C4	12	5D	6	B5	12	5B	5	4C	6	:	:	]	[ L	
1330	5D	6	C3	5	91	12	22	7	4C	6	91	12	22	7	C	6	]		"	L	"
1340	81	AA	19	13	D6	7	23	5	19	7	C	6	84	2F	4D	4F		#		/MO	
1350	C4	40	13	D6	7	3A	6	82	12	4C	6	1E	13	C	6	81	@	:		L	
1360	AF	4C	13	D6	7	53	13	22	7	19	7	C	6	83	4D	4F	L	S	"	MO	
1370	C4	5F	13	D6	7	53	13	19	7	C	6	85	2A	2F	4D	4F	_	S		*/MO	
1380	C4	6D	13	D6	7	3A	6	1	13	4C	6	1E	13	C	6	82	m	:		L	
1390	2A	AF	7B	13	D6	7	83	13	22	7	19	7	C	6	85	4D	*	{		"	M
13A0	2F	4D	4F	C4	8F	13	D6	7	3A	6	5D	8	5D	6	5B	5	/MO		:]]
13B0	4C	6	22	7	3A	6	5B	5	4C	6	C	6	83	55	53	C5	L	"	:	[L	US
13C0	9E	13	31	8	E4	3B	84	50	52	45	D6	BC	13	31	8	60		1	;	PRE	1`
13D0	3B	84	2B	42	55	C6	C6	13	D6	7	2A	2	84	0	99	6		;	+BU	*	
13E0	3A	7	A0	8	6	A	56	3	6	0	19	7	94	8	3A	7		:	V		:
13F0	CD	13	79	7	FA	9	C	6	86	55	50	44	41	54	C5	D1	y			UPDAT	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F			
1400	13	D6	7	CD	13	79	7	79	7	2A	2	0	80	AD	5	CD		y	y *
1410	13	79	7	9D	7	C	6	85	46	4C	55	53	C8	F8	13	D6		FLUS	
1420	7	A0	8	94	8	FA	9	AC	8	67	2	4	99	6	63	13		g	c
1430	A1	9	5D	8	DE	3	2A	2	FF	7F	8D	14	19	7	77	3		] *	w
1440	F6	FF	C	6	8D	45	4D	50	54	59	2D	42	55	46	46	45		EMPTY-BUFFE	
1450	52	D3	17	14	D6	7	94	8	A0	8	8	7	FA	9	26	E	R		&
1460	C	6	83	44	52	B0	44	14	D6	7	5D	8	3E	9	9D	7		DR D] >	
1470	C	6	83	44	52	B1	62	14	D6	7	2A	2	20	3	3E	9		DR b * >	
1480	9D	7	C	6	86	42	55	46	46	45	D2	72	14	D6	7	C2		BUFFE r	
1490	13	79	7	3A	7	3A	6	D8	13	56	3	FC	FF	C2	13	9D		y : :	V
14A0	7	5D	6	79	7	88	6	56	3	14	0	5D	6	AE	9	5D		] y V]]	
14B0	6	79	7	2A	2	FF	7F	98	5	5D	8	89	16	5D	6	9D		y *]]	
14C0	7	5D	6	CD	13	9D	7	4C	6	AE	9	C	6	85	42	4C		] L BL	
14D0	4F	43	CB	84	14	D6	7	3E	9	79	7	99	6	3A	6	CD		OC > y :	
14E0	13	79	7	3A	7	79	7	5D	6	FA	9	3A	7	99	6	56		y : y] : V	
14F0	3	34	0	D8	13	73	6	56	3	14	0	19	7	5D	6	8D		4 s V]	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F			
1500	14	3A	7	5D	6	65	8	89	16	6D	8	FA	9	3A	7	79		:] e m : y	
1510	7	5D	6	FA	9	3A	7	99	6	73	6	56	3	D6	FF	3A		] : s V :	
1520	7	CD	13	9D	7	4C	6	19	7	AE	9	C	6	86	28	4C		L (L	
1530	49	4E	45	A9	CD	14	D6	7	3A	6	88	8	AC	8	83	13		INE :	
1540	4C	6	B8	8	44	13	99	6	D5	14	99	6	88	8	C	6		L D	
1550	85	2E	4C	49	4E	C5	2D	15	D6	7	36	15	C3	C	95	C		.LIN - 6	
1560	C	6	87	4D	45	53	53	41	47	C5	50	15	D6	7	EE	8		MESSAG P	
1570	79	7	56	3	1B	0	6D	A	56	3	11	0	67	2	4	3E		y V m V g >	
1580	9	79	7	B8	8	63	13	FA	9	58	15	37	3	D	0	F6		y c X 7	
1590	C	6	4D	53	47	20	23	20	5D	19	C	6	84	4C	4F	41		MSG #] LOA	
15A0	C4	62	15	D6	7	18	9	79	7	3A	6	20	9	79	7	3A		b y : y :	
15B0	6	5D	8	20	9	9D	7	B8	8	44	13	18	9	9D	7	20		] D	
15C0	11	4C	6	20	9	9D	7	4C	6	18	9	9D	7	C	6	C3		L L	
15D0	2D	2D	BE	9C	15	D6	7	86	B	5D	8	20	9	9D	7	B8		--]	
15E0	8	18	9	79	7	8	7	73	13	FA	9	18	9	49	7	C		y s I	
15F0	6	98	38	A0	1A	71	B3	91	B3	C8	A9	0	71	B3	91	B3		8 q q	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F			
1600	B5	0	86	B5	20	C1	D2	A6	B5	4C	EE	3	86	B5	20	DC			L
1610	D1	A6	B5	4C	DC	5	AD	0	C0	CD	1	C0	29	1	4C	DC		L) L	
1620	5	86	B5	20	F1	D0	A6	B5	4C	44	2	85	2D	44	49	53		LD -DIS	
1630	C3	CF	15	35	16	B5	0	8D	C	C6	8D	D	C6	B5	2	8D		5	
1640	A	C6	8D	B	C6	B5	4	8D	CD	C4	8D	CE	C4	86	B5	AD			
1650	DA	C4	D0	6	20	FE	E1	4C	5D	16	20	62	E2	20	EF	E3		L] b	
1660	A6	B5	AD	E1	C4	95	4	4C	EC	3	84	2D	42	43	C4	2B		L -BC +	
1670	16	D6	7	5D	8	67	2	A	5B	5	67	2	10	44	13	AD		] g [g D	
1680	5	C	6	83	52	2F	D7	6A	16	D6	7	73	6	2A	2	DA		R/ j s *	
1690	C4	B5	7	22	7	5D	8	9D	7	5D	8	8	7	3C	A	8		"]] <	
16A0	7	2A	2	3F	6	3C	A	AD	5	67	2	6	11	B	5D	8		* ? < g]	
16B0	2A	2	20	3	5B	5	A1	9	22	7	5D	8	67	2	12	5B		* ["] g [
16C0	5	71	16	22	7	A1	9	71	16	33	16	67	2	8	11	B		q " q 3 g	
16D0	C	6	C	6	C1	A7	83	16	D6	7	8D	F	73	6	5D	8		s]	
16E0	11	B	19	7	C1	10	C	6	86	46	4F	52	47	45	D4	D4		FORGE	
16F0	16	D6	7	D8	16	D5	A	3A	7	F9	8	79	7	13	A	67		: y g	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1700	2	15	11	B	3A	6	F	9	79	7	5D	6	8	7	13	A	: y]
1710	56	3	12	0	B6	11	CE	11	79	7	3A	7	F	9	9D	7	V y :
1720	37	3	E8	FF	3A	7	67	2	4	FA	9	EA	A	B8	A	79	7 : g y
1730	7	3A	7	5D	6	13	A	56	3	F2	FF	8	7	6D	8	FA	:] V m
1740	9	9D	7	79	7	6D	A	73	6	56	3	D9	FF	4C	6	1	y m s V L
1750	9	9D	7	C	6	84	42	41	43	CB	E8	16	D6	7	BD	9	BAC
1760	FA	9	D9	9	C	6	C5	42	45	47	49	CE	55	17	D6	7	BEGI U
1770	2B	B	BD	9	65	8	C	6	C5	45	4E	44	49	C6	66	17	+ e ENDI f
1780	D6	7	2B	B	6D	8	58	B	BD	9	8	7	FA	9	22	7	+ m X "
1790	9D	7	C	6	C4	54	48	45	CE	78	17	D6	7	80	17	C	THE x
17A0	6	C2	44	CF	94	17	D6	7	9F	B	DE	3	BD	9	75	8	D u
17B0	C	6	C4	4C	4F	4F	DO	A1	17	D6	7	75	8	58	B	9F	LOO u X
17C0	B	77	3	5C	17	C	6	C5	2B	4C	4F	4F	DO	B2	17	D6	w \ +LOO
17D0	7	75	8	58	B	9F	B	A7	3	5C	17	C	6	C5	55	4E	u X \ UN
17E0	54	49	CC	C7	17	D6	7	65	8	58	B	9F	B	56	3	5C	TI e X V \
17F0	17	C	6	C3	45	4E	C4	DD	17	D6	7	E5	17	C	6	C5	EN

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1800	41	47	41	49	CE	F3	17	D6	7	65	8	58	B	9F	B	37	AGAI e X 7
1810	3	5C	17	C	6	C6	52	45	50	45	41	D4	FF	17	D6	7	\ REPEA
1820	3A	6	3A	6	7	18	4C	6	4C	6	6D	8	FA	9	80	17	: : L L m
1830	C	6	C2	49	C6	15	18	D6	7	9F	B	56	3	BD	9	5D	I V]
1840	8	D9	9	6D	8	C	6	C4	45	4C	53	C5	32	18	D6	7	m ELS 2
1850	6D	8	58	B	9F	B	37	3	BD	9	5D	8	D9	9	22	7	m X 7] "
1860	6D	8	80	17	6D	8	C	6	C5	57	48	49	4C	C5	47	18	m m WHIL G
1870	D6	7	37	18	AE	9	C	6	86	53	50	41	43	45	D3	68	7 SPACE h
1880	18	D6	7	5D	8	EA	12	6D	A	56	3	C	0	5D	8	DE	] m V]
1890	3	5E	A	77	3	FC	FF	C	6	82	3C	A3	78	18	D6	7	^ w < x
18A0	5E	E	99	9	9D	7	C	6	82	23	BE	99	18	D6	7	19	^ #
18B0	7	19	7	99	9	79	7	5E	E	8	7	FA	9	C	6	84	y ^
18C0	53	49	47	CE	A8	18	D6	7	4A	A	88	6	56	3	7	0	SIG J V
18D0	67	2	2D	46	E	C	6	81	A3	BF	18	D6	7	6D	9	79	g -F m y
18E0	7	A6	13	4A	A	67	2	9	8	7	1F	A	56	3	7	0	J g V
18F0	67	2	7	99	6	67	2	30	99	6	46	E	C	6	82	23	g g 0 F #

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1900	D3	D7	18	D6	7	DB	18	8	7	8	7	AD	5	73	6	56	s V
1910	3	F4	FF	C	6	83	44	2E	D2	FE	18	D6	7	3A	6	22	D. : "
1920	7	8	7	C4	12	9E	18	3	19	C6	18	AD	18	4C	6	8	L
1930	7	FA	9	81	18	95	C	C	6	82	44	AE	15	19	D6	7	D
1940	5D	8	1B	19	5E	A	C	6	82	2E	D2	39	19	D6	7	3A	] ^ . 9 :
1950	6	82	12	4C	6	1B	19	C	6	81	AE	48	19	D6	7	82	L H
1960	12	3E	19	C	6	81	BF	59	19	D6	7	79	7	5D	19	C	> Y y]
1970	6	84	4C	49	53	D4	65	19	D6	7	FD	B	F4	4	3A	7	LIS e :
1980	32	9	9D	7	F6	C	6	53	43	52	20	23	20	5D	19	67	2 SCR #] g
1990	2	10	5D	8	DE	3	F4	4	F7	3	75	8	4D	19	5E	A	] u M ^
19A0	F7	3	32	9	79	7	58	15	77	3	EC	FF	F4	4	C	6	2 y X w
19B0	85	49	4E	44	45	D8	71	19	D6	7	F4	4	A1	9	22	7	INDE q "
19C0	DE	3	F4	4	F7	3	75	8	4D	19	5E	A	5D	8	F7	3	u M ^]
19D0	58	15	ED	4	56	3	4	0	1F	6	77	3	E6	FF	67	2	X V w g
19E0	C	D7	4	C	6	85	54	52	49	41	C4	B0	19	D6	7	75	TRIA u
19F0	8	63	13	75	8	44	13	75	8	8	7	99	6	22	7	DE	c u D u "

```

      0 1 2 3 4 5 6 7 8 9 A B C D E F
1A00 3 F4 4 F7 3 78 19 77 3 F8 FF F4 4 67 2 F      x w      g
1A10 6C 15 F4 4 67 2 C D7 4 C 6 85 56 4C 49 53 1 g      VLIS
1A20 D4 E5 19 D6 7 67 2 80 29 9 9D 7 4B 9 79 7      g ) K y
1A30 79 7 29 9 79 7 88 8 3C A 56 3 A 0 F4 4 y ) y < V
1A40 5D 8 29 9 9D 7 3A 7 2 10 5E A 5E A EA A ] ) : ^ ^
1A50 B8 A 79 7 3A 7 73 6 ED 4 AD 5 56 3 D4 FF y : s V
1A60 19 7 C 6 83 4D 4F CE 1B 1A 6C 1A 86 B5 0 A6      MO 1
1A70 B5 4C 44 2 87 50 2D 43 4F 55 4E D4 64 1A 31 8 LD P-COUN d l

```

OK

Demonstration of startup, with tracing.

```

*>=200
<R>**** PS AA XX YY SS
      0200 B4 1A A0 00 FD
<G>/
IP      W SP RP
121F SP! 05E8 A0 01FE
1221 DECIMAL OBFD 9E 01FE
: DECIMAL
OBFF CLIT 0267 9E 01FC
0C02 BASE 096D 9C 01FC
0C04 ! 079D 9A 01FC
0C06 ;S 060C 9E 01FC
1223 DR0 1468 9E 01FE
: DR0
146A 0 085D 9E 01FC
146C OFFSET 093E 9C 01FC
146E ! 079D 9A 01FC
1470 ;S 060C 9E 01FC
1225 CR 04F4 9E 01FE

1227 (." ) OCF6 9E 01FE
: (." )
OCF8 R 065D 9E 01FC
OCFA COUNT OC82 9C 01FC
: COUNT
OC84 DUP 073A 9C 01FA
OC86 1+ 09A1 9A 01FA
: 1+
09A3 1 0865 9A 01F8
09A5 + 0699 98 01F8
09A7 ;S 060C 9A 01F8
OC88 SWAP 0722 9A 01FA
OC8A C@ 078E 9A 01FA
OC8C ;S 060C 9A 01FA
OCFC DUP 073A 9A 01FC
OCFE 1+ 09A1 98 01FC
: 1+
09A3 1 0865 98 01FA
09A5 + 0699 96 01FA
09A7 ;S 060C 98 01FA
OD00 R> 064C 98 01FC

```

Enter at cold start

IP = hi-level interpretive pointer

<NAME> of dictionary word

W = code field pointer to actual machine code

SP = top of data stack

Address

RP = top of return stack

Address

← begin colon-def. nest call

← return from colon-definition un-nest the call.

← begin to print greeting "fig-FORTH"

```

<M>=02B6 20 DC D1 A6 B5 A0 00 60
</> 02B6 EA EA EA
<G>/
<*>=200
<G>/

```

no-op the call to ONEKEY

```

121F SP! 05E8 A0 01FE
1221 DECIMAL OBFD 9E 01FE
: DECIMAL
OBFF CLIT 0267 9E 01FC
OC02 BASE 096D 9C 01FC
OC04 ! 079D 9A 01FC
OC06 ;S 060C 9E 01FC
1223 DRO 1468 9E 01FE
: DRO
146A 0 085D 9E 01FC
146C OFFSET 093E 9C 01FC
146E ! 079D 9A 01FC
1470 ;S 060C 9E 01FC
1225 CR 04F4 9E 01FE

```

trace continuously without operators
Keystroke

```

1227 (".") OCF6 9E 01FE
: (".")
OCF8 R 065D 9E 01FC
OCFA COUNT 0C82 9C 01FC
: COUNT
OC84 DUP 073A 9C 01FA
OC86 1+ 09A1 9A 01FA
: 1+
09A3 1 0865 9A 01F8
09A5 + 0699 98 01F8
09A7 ;S 060C 9A 01F8
OC88 SWAP 0722 9A 01FA
OC8A C@ 078E 9A 01FA
OC8C ;S 060C 9A 01FA
OCFC DUP 073A 9A 01FC
OCFE 1+ 09A1 98 01FC
: 1+
09A3 1 0865 98 01FA
09A5 + 0699 96 01FA
09A7 ;S 060C 98 01FA
OD00 R> 064C 98 01FC
OD02 + 0699 96 01FE
OD04 >R 063A 98 01FE
OD06 TYPE 0C95 9A 01FC
: TYPE
OC97 -DUP 0A6D 9A 01FA

```

```

<M>=024F 20 6F 02 18 A5 AE 69 02
</> 024F EA EA EA
<*>=200
<G>/

```

no-op TRACE Only
display the high-level nesting.

```

: DECIMAL
: DRO

: (." )
: COUNT
: 1+
: 1+
: TYPE
: -DUP fig-FORTH 1.0
: 2+
: DEFINITIONS greeting
: QUIT message
: [

: QUERY input from terminal
: EXPECT operator types
: +ORIGIN "123 ." <return>
: =
: -
: =
: -
: 1+ 1 emit: 1
: +ORIGIN
: =
: -
: =
: -
: 1+ 2 2
: +ORIGIN
: =
: -
: =
: -
: 1+ 3 3
: +ORIGIN
: =
: -
: =
: -
: 1+ blank
: +ORIGIN
: =
: -
: =
: -
: 1+ . dot
: +ORIGIN
: =
: -
: =
: -
: 1+ <return>
: INTERPRET =
: -FIND blank

```

```

: WORD
: HERE
: BLANKS
: FILL
: 1+
: -
: -
: HERE
: HERE
: 1+
: HERE
: COUNT
: 1+
: UPPER
: >
: >
: >
: HERE
: HERE
: LATEST
: HERE
: NUMBER numeric
: ROT conversion
: 1+
: =
: -
: (NUMBER)
: 1+
: ROT
: 1+
: =
: -
: 1+
: ROT
: 1+
: 1+
: ROT
: 1+
: 1+
: 1+
: 1+
: 1+
: 1+
: 1+
: 1+
: 1+
: LITERAL push to stack
: ?STACK
: U<
: -
: ?ERROR
: U<
: -
: ?ERROR
: -FIND dot's dictionary entry
: WORD
: HERE
: BLANKS
: FILL
: 1+
: -

: -
: HERE
: HERE
: 1+
: HERE
: COUNT
: -
: . execute "dot"
: S->D
: D.
: D.R
: DABS
: D+-
: <#
: PAD
: HERE
: #S
: #
: M/MOD
: ROT output numeric conversion
: HOLD
: #
: M/MOD
: ROT
: HOLD
: #
: M/MOD
: ROT
: HOLD
: SIGN
: ROT
: ROT
: #>
: PAD
: HERE
: -
: -
: SPACES
: MAX
: -DUP
: TYPE
: -DUP 123 print "123"
: SPACE
: ?STACK
: U<
: -
: ?ERROR
: U<
: -
: ?ERROR

```

```

: 1+
: HERE
: COUNT
: 1+
: UPPER
: >
: HERE
: CFA
: -
:
: (".")
: COUNT
: 1+
: 1+
: TYPE
: -DUP OK
: QUERY
: EXPECT
<M>=07DC 20 BE 02 18 A5 B1 69 02
</> 07DC EA EA EA
<R>**** PS AA XX YY SS
      0200 B4 1A A0 00 FD
<*>=200
<G>/

```

*execute
"null" definition*

*print "OK"
back to terminal
for user input*

*no-op
'TCOLON'*

```

fig-FORTH 1.0
EMPTY-BUFFERS OK
1234 . 1234 OK

```

*FORTH is fully
functional. Be sure
to clear disc buffers!*

```

VLIST
MON VLIST TRIAD INDEX LIST ? . .R D. D.R #S
# SIGN #> <# SPACES WHILE ELSE IF REPEAT AGAIN
END UNTIL +LOOP LOOP DO THEN ENDIF BEGIN BACK FORGET
' R/W -BCD -DISC --> LOAD MESSAGE .LINE (LINE)
BLOCK BUFFER DR1 DRO EMPTY-BUFFERS FLUSH UPDATE +BUF
PREV USE M/MOD */ */MOD MOD / /MOD * M/ M*
MAX MIN DABS ABS D+- +- S->D COLD ABORT QUIT
( DEFINITIONS FORTH VOCABULARY IMMEDIATE INTERPRET ?STACK
DLITERAL LITERAL [COMPILE] CREATE ID. ERROR (ABORT)
-FIND NUMBER (NUMBER) UPPER WORD PAD HOLD BLANKS
ERASE FILL QUERY EXPECT ." (".) -TRAILING TYPE
COUNT DOES> <BUILDS ;CODE (;CODE) DECIMAL HEX SMUDGE
] [ COMPILE ?LOADING ?CSP ?PAIRS ?EXEC ?COMP ?ERROR
!CSP PFA NFA CFA LFA LATEST TRAVERSE -DUP SPACE
ROT > < U< = - C, , ALLOT HERE 2+ 1+ HLD
R# CSP FLD DPL BASE STATE CURRENT CONTEXT OFFSET
SCR OUT IN BLK VOC-LINK DP FENCE WARNING WIDTH
TIB +ORIGIN B/SCR B/BUF LIMIT FIRST C/L BL 3 2
I 0 USER VARIABLE CONSTANT ; : C! ! C@ @ TOGGLE
+! DUP SWAP DROP OVER DMINUS MINUS D+ + 0< 0=
R R> >R LEAVE ;S RP! SP! SP@ XOR OR AND U/
U* CMOVE CR ?TERMINAL KEY EMIT ENCLOSE (FIND) DIGIT
I (DO) (+LOOP) (LOOP) OBRANCH BRANCH EXECUTE CLIT
LIT OK

```


