

ANNOTATED DISASSEMBLY OF JOT

=====

\ main turnkey entry point for JOT system

: JOT

RESCUE?

0 TEXT-SAFE !

EMPTY-BUFFERS

LOAD-TEXT \ retrieve document from disk

TEXT-TOP

CACOPH \ play all sounds (cacophony)

1 'MODE !

0 LEVEL !

ACTIVE

?STACK

?KEY 0= 0BRANCH 0014

START-ECHO

?KEY 0= 0BRANCH 0008

ECHO BRANCH FFF4

END-ECHO

KEY DUP LIT 0060 < 0BRANCH 000E

DUP KEYT @ EXECUTE BRANCH FFCC

HOME (".") 07 ASCII " . (".") 10 FROM KEYBOARD!?"

"

0 EXIT-KEY

;S

\ handle recovery from abort

806D : RESCUE?

TEXT-SAFE @ 0= 0BRANCH 0095

HOME (".") 44 JOT WAS ABORTED BEFORE CHANGES
COULD BE SAVED. DO YOU WANT TO SAVE?"

KEY CR LIT 0059 = 0BRANCH 0036

(".") 27 INSERT THE JOT TEXT DISK YOU WERE USING"

CR &HIT RESCUE BRANCH 0004

EMPTY-BUFFERS 1 TEXT-SAFE !
;S

\ handle forced capitalization
8017 : CAPS-MODE-KEY
`SCREMIT @
2+ SDUP LITW 63A8 = EH? 0BRANCH 000A
LITW 63BC BRANCH 001C
LITW 63BC = EH? 0BRANCH 000A
LITW 0EEE BRANCH 0008 2DROP LITW 63A8 CF
A `SCREMIT ! DROP DEPART TEXT-TOP ;S

\ initialize a disk
7F9C : NEW-DISK
Y/NQUERY FREE-ALL
CR (".) 20 IS THIS A 2-DRIVE SYSTEM? (Y/N):"
KEY DUP EMIT CR LIT 0059 = DUP 0= 0BRANCH 001F
(".) 18 REMOVE THE CURRENT DISK "
&HIT B/DSK * DUP BLK1 0 ROT COPY-SOME MAKE-DISK
;S

7F66 : MAKE-DISK
END-MARK DUP >TOP >BOT DUP 0BRANCH 0012
TOP `TOS-BLK C@ >#2 BOT
TOM `TOS-BLK C@ >#2
INDX + WRITE-INDEX FLUSH
;S

7F4A : COPY-DISK
Y/NQUERY
CR 0 B/DSK B/DSK
COPY-SOME
;S

7ED3 : COPY-SOME
DUP FMT ROT ROT DUP 0BRANCH 0011
CR (".") 0A COPYING..."
B/DSK ROT (DO) I #BUFS + B/DSK MIN
I (DO) I OVER > 0BRANCH 000A
I BUFFER BRANCH 0006
I BLOCK DROP OVER 0BRANCH 000A
I >#2 BRANCH 0004 UPDATE (LOOP) FFD6
FLUSH #BUFS (+LOOP) FFC0
2DROP
;S

7EBF : >#2
DUP #2 SWAP REASSIGN UPDATE
;S

7E45 : FMT
(".") 14 PUT A DISK IN DRIVE "
DUP B/DSK / 1+ .
&HIT EMPTY-BUFFERS
(".") 0F INITIALIZING..."
&DRV DROP 1 LIT B7EB C!
LIT 0004 LIT B7F4 C!
&RWTS 0BRANCH 001F
LIT 0007 EMIT
CR (".") 10 FORMATTING ERROR"
QUIT
;S

7E22 : &HIT
(".") 0F AND HIT ANY KEY"
KEY DROP CR
;S

7E16 : SET

!

;S

7DF1 : END-ECHO

BLACK-CURS CURS-TYPE WORD-LEN !

CAP ! PUNKED ! WORD1 ! CHV!

;S

7DDE : ECHO

BLINK `ECHO @ EXECUTE

;S

7DA4 : BLINK

BLINK-COUNTER @ 1+ BLINK-PERIOD MOD DUP BLINK-COUNTER !

-DUP 0BRANCH 0012

WHITE-PERIOD = 0BRANCH 0006

BLACK-CURS CURS-TYPE BRANCH 000A

INVERSE WHITE-CURS CURS-TYPE INVERSE

;S

7D45 : START-ECHO

LIT 000B 0 (DO) LF (LOOP) FFFC

LIT 000B 0 (DO) UP (LOOP) FFFC

CURS-PREP

WORD1 @ PUNKED @ CAP @ WORD-LEN @ 0 WORD-LEN !

LITW 7C93 CFA `ECHO !

BOTTOM SIZE ECHO-PTR !

LIT FFFF BLINK-COUNTER !

;S

7CE1 : CURS-PREP

TWEEN CURS-SIZE DUP WHITE-CURS C!

BLACK-CURS C!
TWEEN 0BRANCH 0022
TOP>* DUP END-MARK < 0BRANCH 0004
ARRIVE? CH @ SWAP *>TOP CH @ BL BRANCH 000E
CH @ -> DUP LIT 003C DUP WHITE-CURS 1+ C!
BLACK-CURS 1+ C!
SWAP CURS-CHV !
;S

7CD2 : <-
LIT FC10 CALL
;S

7CC3 : ->
LIT FBF4 CALL
;S

7C89 : PAINT
ECHO-PTR @ -DUP 0BRANCH 001A
1 - BOTTOM PEEK
POUR
DROP LIT FFFF ECHO-PTR +! BRANCH 000C
LITW 7C71 CFA 'ECHO ! ECHO-DONE?
;S

7C67 : CLEAN
SPACE
LIT 0027 CH C@ - LIT 0013 MIN
SPACES ECHO-DONE?
;S

7C30 : ECHO-DONE?
CH @ LIT 1627 > 0BRANCH 001A
BL LIT 0080 + CURS-ADR C!

```
TELL-FREE
LITW 7BDE CFA `ECHO !
;S
```

\ bottom of screen shows memory calculation of
free disk space

```
7BEC : TELL-FREE
LIT 0017 BCALC
LIT 0028 BL LIT 0080 + FILL
LIT 0017 LIT 0014 VHTAB
FREE-BLOCKS @ LIT 0004 - .
(.") 07 K FREE."
;S
```

```
7BD5 : IDLE
LIT 0078 0 (DO) (LOOP) FFFE
;S
```

```
7BB3 : CURS-TYPE
CH @ SWAP CURS-CHV @ CHV!
COUNT TYPE CHV!
;S
```

```
7B9C : BLACK-CURS 13DA \does>
```

```
7B85 : WHITE-CURS 13DA \does>
```

```
7B76 : ECHO-PTR 0F21
```

```
7B6A : `ECHO 0F21
```

```
7B56 : BLINK-COUNTER 0F21
```

```
7B47 : ECHO-CHV 0F21
```

7B38 : CURS-CHV 0F21

7B25 : WHITE-PERIOD 0F05

7B12 : BLINK-PERIOD 0F05

7AFB : PLUS-KEY
DROP LIT 002B INSCH
;S

7AE3 : CARET-KEY
DROP LIT 005E INSCH
;S

7ACB : SLASH-KEY
DROP LIT 002F INSCH
;S

7AB5 : PUNCSTUFF
PUNCT (´) (STUFF)
;S

7AA0 : KEYSTUFF
KEYT (´) (STUFF)
;S

7A8D :]KEY
DROP LIT 005D INSCH
;S

7A7A : [KEY
DROP LIT 005B INSCH
;S

7A39 : PARA-DEL-KEY
DROP DEPART MARK-> TWEEN 3 = 0BRANCH 001A
LIT 0004 SOUND TOP >* DROP ARRIVE?
HOVER @ -DUP 0BRANCH 0004
*>TOP 0 HOVER !
;S

7A0B : PARAKEY
DROP DEPART MARK-> TWEEN 3 = 0BRANCH 0008
TOP>* HOVER !
PARAMARK *>TOP 1 MODE !
;S

79D5 : PRINT-KEY
DROP DEPART TEXT-TOP SAVE-TEXT 1 TEXT-SAFE !
PR-START BOT> DUP >PR PR-DONE? 0BRANCH FFF6
LOAD-TEXT TEXT-TOP 0 TEXT-SAFE !
;S

79A2 : PR-DONE?
KEY? 0BRANCH 000A
DROP 1 BRANCH 0018
END-MARK < 0BRANCH 0008
0 BRANCH 000A
PR-FLUSH PR-CR ENDPAGE 1
;S

7956 : >PR
SDUP MIN-SP < EH?> 0BRANCH 0008
CAPIZE? BRANCH 0030
SENTMARK < EH? 0BRANCH 0008
BL BRANCH 0020
1 CAP ! PARAMARK < EH? 0BRANCH 000A

LIT 0013 BRANCH 0008
2DROP LIT 0010 PERMIT
;S

792A : EXIT-KEY
DROP RESCUE LIT 0017 0 VHTAB
CR (.") 08 ----- OK"
EMPTY-BUFFERS
QUIT
;S

7913 : RESCUE
DEPART SAVE-TEXT 1 TEXT-SAFE !
;S

7903 : TEXT-SAFE 0F21

78BC : PERMIT
SDUP LIT 0010 = EH? 0BRANCH 0008
PR-PARA BRANCH 0028 LIT 0013 = EH? 0BRANCH 0008
PR-SENT BRANCH 0016 BL = EH? 0BRANCH 0008
PR-BL BRANCH 0006
DROP PR-PR
;S

789A : PR-SENT
BLOCKING @ 0BRANCH 000A
PR-FLUSH PR-CR BRANCH 0006
PR-BL PR-BL
;S

786E : PR-BL
PR-PTR C@ 0BRANCH 001A
PR-FLUSH BL PR-EAT COL C@

PR-WIDTH @ < 0= 0BRANCH 0004

PR-CR

;S

781A : PR-PARA

COL C@ 0BRANCH 0006

PR-FLUSH PR-CR PARA-SKIP @ 1+ ENDPAGE?

DROP PR-LINE @ TOPMARG @ > 0BRANCH 0008

PARA-SKIP @ PR-SKIP BLOCKING @ 0= 0BRANCH 000C

1PR INDENT @ SPACES 0PR COL C@ PR-PTR !

;S

7794 : PR-PR

PR-EAT PR-PTR @ PR-WIDTH @ > 0BRANCH 006C

COL C@ PR-BUF C@ BL - 0BRANCH 0024

PR-WIDTH @ 2 - PR-UPTO

1PR (.") 01 -"

0PR COL C@ 1 - COL C! BRANCH 001A

COL C@ 1+ DUP COL C! PR-BUF C@

BL - 0BRANCH FFEA

COL C@ PR-PTR @ PR-CR

OVER - DUP ROT

PR-BUF 0 PR-BUF ROT CMOVE

PR-PTR !

;S

7744 : PR-CR

COL C@ PR-WIDTH @ < 0=

END-CR @ 0= AND

DUP PR-LINE +! 0=

SPACING @ 1 - + DUP

ENDPAGE? 0= 0BRANCH 0008

PR-SKIP BRANCH 0004

DROP 0 COL C!

0 PR-PTR !
;S

772B : PR-FLUSH
PR-PTR @ 1 - PR-UPTO
;S

7710 : PR-EAT
PR-PTR @ PR-BUF C!
1 PR-PTR +!
;S

76E6 : PR-UPTO
COL C@ - 1+ -DUP 0BRANCH 0010
1PR COL C@ PR-BUF SWAP TYPE 0PR
;S

76BD : ENDPAGE?
PR-LINE @ +
PAGELEN @ BOTMARG @ - > DUP 0BRANCH 0004
ENDPAGE
;S

7692 : PR-START
0 PAGE# !
0 PR-PTR !
1PR
(. ") 03 "
0PR 1 PR-SKIP NEWPAGE
;S

7674 : ENDPAGE
ROLLPAPER @ 0BRANCH 0008
PAGELEN @ SKIP-TO NEWPAGE

;S

763C : NEWPAGE

1 PAGE# +!

1PR ROLL PAPER @ 0BRANCH 000A

LIT 002D BRANCH 0006

LIT 000C EMIT

0 PR-LINE !

TOPMARG @ PR-SKIP

;S

7626 : SKIP-TO

PR-LINE @ - PR-SKIP

;S

75EA : PR-SKIP

DUP 0 > 0BRANCH 0024

DUP PR-LINE +!

1PR 0 (DO) CR LF? @ 0BRANCH 0004

LF (LOOP) FFF2 0PR BRANCH 0004

DROP

;S

75DC : 0PR

0 PR

;S

75A8 : 1PR

SLOT @ DUP

PR -DUP 0BRANCH 0016

LIT 07F8 + DUP C@ LIT 0080 OR

SWAP C! COL C@ CH C! ;S

7588 : COL
SLOT @ -DUP 0BRANCH 000C
LIT 05F8 + BRANCH 0004
CH
;S

757E : LF? 0F21

756E : ROLLPAPER 0F21

74DC : PR-BUF 13DA

74D0 : PAGE# 0F21

74C2 : BOTMARG 0F21

74C2 : BOTMARG 0F21

74B4 : TOPMARG 0F21

74A6 : PAGELEN 0F21

7498 : PR-LINE 0F21

7489 : BLOCKING 0F21

747C : INDENT 0F21

746C : PARA-SKIP 0F21

745E : SPACING 0F21

7453 : CHSV 0F21

7446 : PR-PTR 0F21

7439 : END-CR 0F21

742A : PR-WIDTH 0F21

741F : SLOT 0F05

73FF : CLR-DEL-KEY
DROP DELETE-BUFFER EMPTY-CSTACK
LIT 0004 3 SOUNDS
;S

73D0 : DELETE-KEY
DROP 0 HOVER ! TWEEN 0BRANCH 000A
MODE DELETE BRANCH 000A
LIT 0004 SOUND
ERAC
;S

736F : DELETE
MARK-> BOTTOM TOS-TYPE LIT 0004 < 0BRANCH 0044
DUP 3 SOUNDS CUT-MARK >DEL
BOTTOM DELETE-BUFFER ROT TYPE-SP XFER
BOTTOM TOS-TYPE 3 < 0BRANCH 0006
BOT> >DEL BOTTOM
TOS-TYPE 2 > TWEEN 3 = AND 0BRANCH 0008
TOP>* >DEL ARRIVE? BRANCH 0004
DROP
;S

7357 : SLURP-KEY
END-WORD? 2DROP ACTIVE BLURP
;S

7319 : BLURP
DEL>? 0BRANCH 002E
LIT 0005 SOUND
DUP PARAMARK < 0= 0BRANCH 0018
2LIT 0005 SOUNDS
<-MARK ARRIVE?
SP-> SPIT
*>TOP BRANCH 0006
>DEL SPIT
;S

72EC : SPIT
DELETE-BUFFER LIT 0004 + @
0= 0= 0BRANCH 0012
DELETE-BUFFER BOTTOM CUT-MARK XFER
DEL>? 0BRANCH 0004
DROP
;S

72B8 : ESC-KEY
DROP LEVEL @ 1+ LIT 0004 MOD
DUP LEVEL ! -DUP 0BRANCH 000A
1 SOUNDS BRANCH 0006
2 SOUND
;S

728F : MODE-KEY
DROP `MODE @ 3 + MODETAB @
DUP `MODE ! ABS 0 SOUNDS
;S

7273 : MODETAB 13DA

7254 : LETTER
LEVEL @ 0= 0BRANCH 0008
LIT 0020 + INSCH
;S

721C : INSCH
LEVEL @ 1 = 0BRANCH 0008
0 LEVEL ! HOVER @ -DUP 0BRANCH 000A
>BOT 0 HOVER ! *>TOP 1 'MODE !
;S

7200 : SENTKEY
END-WORD? DROP 1 WASPUNKED !
END-SENT? DROP
;S

71DA : SPACE-BAR
DROP INS-SP? 0= MODE 1 > OR 0BRANCH 0006
MODE NOISY-STEP
;S

7185 : BACK-KEY
DROP WORDMODE TWEEN 0= 0BRANCH 0016
BUMPY @ *>TOP PUNKED @ WASPUNKED !
LIT FFFF STEP TWEEN 3 = 0BRANCH 0006
TOP>* >BOT TWEEN 3 < 0BRANCH 0010
LIT 0007 SOUND
TOP>* BUMPY ! CHEK-WORD
;S

7173 : <-KEY
SUPER
MINUS
NOISY-STEP

;S

7163 : ->KEY

SUPER

NOISY-STEP

;S

7163 : ->KEY

SUPER

NOISY-STEP

;S

7151 : SUPER

DROP MODE 1+

;S

7124 : NOISY-STEP

DUP DUP 0< 0BRANCH 000C

MINUS LIT 0007 BRANCH 0006

LIT 0006 SOUNDS STEP

;S

70FB : STEP

DEPART

0 HOVER !

DUP 0< 0BRANCH 000C

MINUS UNSHIFT? BKWD BRANCH 0006

UNSHIFT? FWD

;S

70E0 : UNSHIFT?

DUP 1 > 0BRANCH 0004

UNSHIFT

;S

70CE : FWD
MARK-> TYPE-SP
BOT>***>TOP SP->
;S

70A7 : BKWD
DUP LIT 0004 = 0BRANCH 000A
DROP TEXT-TOP BRANCH 000A
<-MARK TYPE-SP TOP>***>BOT ARRIVE?
;S

7080 : SP->
BOTTOM TOS DUP MIN-SP < 0=
SWAP PARAMARK < AND 0BRANCH 0006
BOT> *>TOP ;S

7053 : MARK->
BOTTOM TOS DUP MIN-SP < 0=
SWAP END-MARK < AND 0BRANCH 000A
BOT> *>TOP BRANCH FFE2
;S

7026 : <-MARK
TOP TOS DUP END-MARK <
SWAP MIN-SP < 0= AND 0BRANCH 000A
TOP>* >BOT BRANCH FFE2
;S

6FDF : DEPART
END-WORD? DROP
TWEEN 3 = 0BRANCH 0018
BOTTOM TOS-TYPE
LIT 0004 = 0BRANCH 0006

TOP>* DROP BRANCH 0012
BOTTOM TOS-TYPE 2 > 0BRANCH 0006
END-SENT? DROP CLRPUNC CLRWAS ACTIVE
;S

6FC5 : INS-SP?
END-WORD? -DUP 0= 0BRANCH 0004
END-SENT?
;S

6F93 : END-SENT?
WASPUNKED @
TWEEN 1 = AND
DUP 0BRANCH 000C
TOP>* DROP
SENTMARK
*>TOP ACTIVE
0 WASPUNKED !
;S

6F53 : END-WORD?
TWEEN 0= DUP 0BRANCH 0028
PUNKED @ WASPUNKED !
SPACER *>TOP 0 HOVER !
LEVEL @ 3 < 0BRANCH 0008
0 LEVEL ! ACTIVE ;S

6F3D : ANDIF
COMPILE DUP IF COMPILE DROP
;S

6F28 : ORIF
COMPILE -DUP COMPILE 0= IF
;S

6EED : ERAC
TOP>* DROP TWEEN 3 = 0BRANCH 0020
CLRPUNC 1 CAP !
BOTTOM TOS-TYPE 3 = 0BRANCH 0008
BOT> HOVER ! BRANCH 000
4 CHEK-WORD ACTIVE
;S

6EC5 : CHEK-WORD
SPACER >BOT CLRPUNC SPACER
TOP>***>BOT TOP>* *>TOP ARRIVE?
SPACER BOT>***>TOP BOT> DROP
;S

6EAE : ACTIVE MODE
DROP SPACER BUMPY !
;S

6E8F : TEXT-TOP
HOME TOP BOTTOM END-MARK XFER
BANNER CR AT-LEFT
;S

6E7A : WORDMODE 1 ´MODE ! ;S

6E63 : MODE
´MODE @ ABS DUP ´MODE !
;S

6E43 : UNSHIFT
LEVEL @ 0BRANCH 000C
2 SOUND 0 LEVEL !
;S

6E37 : BUMPY 0F21 \variable \$0080

6E2B : HOVER 0F21 \variable \$0000

6E1F : `MODE 0F21 \variable \$0001

6E10 : JUST-ESC 0F21 \variable \$0000

6E04 : LEVEL 0F21 \variable \$0000

6DAA : NOISE-KEY

DROP MUFF @ SDUP LIT 0008 = EH? 0BRANCH 000A

 LIT 0006 BRANCH 002A

LIT 0006 = EH? 0BRANCH 0008

 2 BRANCH 0018

2 = EH? 0BRANCH 0008

 0 BRANCH 0008

2DROP LIT 0008

MUFF !

CACOPH

;S

6D79 : CACOPH

LIT 0008 0 (DO)

 I SOUND I 1+

 MUFF @ < 0BRANCH 0008

 PAUSE PAUSE PAUSE

(LOOP) FFE6

;S

6D40 : SOUNDS

SWAP -DUP 0BRANCH 0024

0 SWAP 0 (DO)

```
-DUP 0BRANCH 000C
0 (DO)
  PAUSE
  (LOOP) FFFC
  DUP (SOUND)
(LLOOP) FFEA
DROP DROP
;S
```

```
6D30 : SOUND (SOUND) DROP ;S
```

```
6C6A : (SOUND)
DUP MUFF @ < 0BRANCH 00AA
0 SWAP SDUP 0 = EH? 0BRANCH 000C
  LIT 0007 EMIT BRANCH 008C
1 = EH? 0BRANCH 000A
  CLUCK 1+ BRANCH 007A
2 = EH? 0BRANCH 000A
  CLACK 1+ BRANCH 0068
3 = EH? 0BRANCH 000E
  0 2 UP- SWEEP BRANCH 0052
LIT 0004 = EH? 0BRANCH 0010
  LIT 0046 1 UP- SWEEP BRANCH 0038
LIT 0005 = EH? 0BRANCH 000E
  0 2 DWN- SWEEP BRANCH 0020
DROP LIT 0005 LIT 0014 OSC
LIT 0007 = 0BRANCH 0008
  PAUSE CLUCK 1+ 1+ BRANCH 0006
DROP 0
;S
```

```
6C59 : DWN- LIT FFFF CLICKER ;S
```

```
6C49 : UP- CLICKER LIT FFFF ;S
```

6C3E : MUFF 0F21

6C14 : CLUCK 1 LIT 0004 OSC LIT 003C 0 (DO)
(LOOP) FFFE LIT 0005 LIT 0004 OSC ;S

6BFE : CLACK LIT 000A LIT 0004 OSC/2 ;S

6BE6 : PAUSE LIT 0177 0 (DO) (LOOP) FFFE ;S

6BC4 : OSC/2 0 (DO) GLICK DUP 0 (DO) (LOOP) FFFE
(LOOP) FFF2 DROP ;S

6BA2 : OSC 0 (DO) GLICK DUP 0 GLICK (DO) (LOOP)
FFFE (LOOP) FFF0 DROP ;S

6B90 : GLICK 0 CLICKER C! ;S

6B78 : CLICK 0 0 CLICKER C! CLICKER C! ;S

6B6A : CLICKER 0F05

\ machine code for apple sound sweep

6B09 : SWEEP 6B13

6B13-	A9 04	LDA	#\$04
6B15-	20 E0 08	JSR	\$08E0
6B18-	86 E0	STX	\$E0
6B1A-	A5 D1	LDA	\$D1
6B1C-	8D 56 6B	STA	\$6B56
6B1F-	A5 D2	LDA	\$D2
6B21-	8D 57 6B	STA	\$6B57
6B24-	A5 D3	LDA	\$D3
6B26-	8D 38 6B	STA	\$6B38
6B29-	A5 D4	LDA	\$D4
6B2B-	8D 39 6B	STA	\$6B39
6B2E-	A2 00	LDX	#\$00
6B30-	88	DEY	
6B31-	D0 0A	BNE	\$6B3D

6B33-	A4 D7	LDY	\$D7
6B35-	E6 D5	INC	\$D5
6B37-	AD FF FF	LDA	FFFF
6B3A-	4C 47 6B	JMP	\$6B47
6B3D-	A5 D1	LDA	\$D1
6B3F-	E6 D1	INC	\$D1
6B41-	AD FF FF	LDA	FFFF
6B44-	4C 47 6B	JMP	\$6B47
6B47-	CA	DEX	
6B48-	D0 11	BNE	\$6B5B
6B4A-	A6 D5	LDX	\$D5
6B4C-	C6 D7	DEC	\$D7
6B4E-	D0 05	BNE	\$6B55
6B50-	A6 E0	LDX	\$E0
6B52-	4C B8 08	JMP	\$08B8
6B55-	AD 30 C0	LDA	\$C030
6B58-	4C 67 6B	JMP	\$6B67
6B5B-	A5 D1	LDA	\$D1
6B5D-	C6 D1	DEC	\$D1
6B5F-	D0 00	BNE	\$6B61
6B61-	AD FF FF	LDA	FFFF
6B64-	4C 67 6B	JMP	\$6B67
6B67-	4C 30 6B	JMP	\$6B30

6AF5 : BOT>***>TOP B>***>T ;S

6AE5 : *>TOP POUR >TOP ;S

6AC7 : ARRIVE?

LOST @ 0BRANCH 0008

ARRIVE BRANCH 0004

SENTCAP?

;S

6A7A : ARRIVE

CUT-MARK >BOT TWEEN LIT 0004 < 0BRANCH 0016

TOP>* >BOT WORD1 @ 0BRANCH FFF6

SPACER TOP>***>BOT BRANCH 0008

WORD1-BIT WORD1 ! 0 CH C! 0 LOST ! SENT

CAP? CUT-MARK B>***>T BOT> DROP ;S

6A34 : TOP>***>BOT


```
DIME ! TOP S-CS ! DONE 0= 0BRANCH 0024
TOP `TOS BOTTOM PREPUSH
TOP #CHARS BOTTOM @ MIN
(T>*>B) DUP TOP #CPOPPED
BOTTOM #CPUSHED
BRANCH FFD8
;S
```

```
69E4 : (T>*>B)
0 SWAP 0 (DO)
  DROP OVER I + C@ DUP DIME @ < 0BRANCH 0016
  DUP UNPOUR OVER I - C! I 1+ BRANCH 0008
  DROP I LEAVE
(LLOOP) FFCE R
OT ROT 2DROP
;S
```

```
69A2 : B>***>T
DIME ! BOTTOM S-CS ! DONE 0= 0BRANCH 0024
BOTTOM `TOS TOP PREPUSH
BOTTOM #CHARS TOP @ MIN (B>*>T)
DUP BOTTOM #CPOPPED TOP #CPUSHED BRANCH FFD8
;S
```

```
6954 : (B>*>T)
0 SWAP 0 (DO)
  DROP OVER I + C@ DUP DIME @ < 0BRANCH 0014
POUR
  OVER I - C! I 1+ BRANCH 0008
  DROP I LEAVE
(LLOOP) FFD0
ROT ROT 2DROP
;S
```

6942 : TOP>* TOP> DUP UNPOUR ;S

68AD : UNPOUR

DUP MIN-SP < 0= 0BRANCH 001A

WORD1 @ 0BRANCH 0004

AT-LEFT DUP WORD 1-BIT AND WORD1 ! BRANCH 000A

LIT FFFF WORD-LEN +!

CH C@ OVER CH-SIZE - DUP 0< 0BRANCH 0038

DROP DUP END-MARK <

0= CV C@ 0=

UNLF LIT 0026 CH C!

OVER 0BRANCH 0004

BANNER?

OR DUP LOST !

0= 0BRANCH 0004

GROPE

BRANCH 0006

CH C!

PARAMARK < 0= 0BRANCH 0008

0 LOST !

;S

6877 : GROPE

CV C@ BCALC CH C@ 1 - 2DUP + C@

BL LIT 0080 + - 0BRANCH FFEA

1+ CH C!

DROP

;S

6858 : POUR

DUP MIN-SP < 0BRANCH 000A

DUP NON-SP-POUR BRANCH 0004

SP-POUR

;S

```
67F6 : NON-SP-POUR
CH C@ LIT 0025 > 0BRANCH 003C
CH C@ WORD-LEN @ - NEXT-LINE
AT-LEFT CV C@ 1 - BCALC + DUP CURS-ADR WORD-LEN
@ CMOVE
WORD-LEN @ BL LIT 0080 +
FILL WORD-LEN @ CH +! (>SCR) 1 WORD-LEN +!
;S
```

```
67DD : (>SCR)
DUP CHEKCHAR CAPIZE?
`SCREMIT @ EXECUTE
;S
```

```
67CE : `SCREMIT 0F21
```

```
6774 : SP-POUR
DUP DUP SENTMARK < 0= CAP !
DUP CH-TYPE 3 - 0BRANCH 000A
    CH-SIZE SPACES BRANCH 0016
DROP CH C@ 0BRANCH 0004
    NEXT-LINE
AT-LEFT LIT 0005 SPACES
0 WORD-LEN !
HI-BITS AND WORD1 @ OR 0 WORD1 !
;S
```

```
6758 : NEXT-LINE LIT 0028 CH C@ - SPACES ;S
```

```
6738 : AT-LEFT WORD1-BIT WORD1 ! 0 LOST ! 0 CH
C! ;S
```

```
672C : WORD1 0F21      \ variable $0000
```

671D : WORD-LEN 0F21 \ variable \$0000

6712 : LOST 0F21 \ variable \$0000

66EC : BANNER?

CV C@ 2 < 0BRANCH 000E

UNLF UNLF

0 CH C! BANNER

;S

6686 : BANNER

(.) 50 JOT(TM) VERSION 0.53 (C) 1986 TED

NELSON"

LIT 0026 SPACES

;S

6658 : MULTI<-

CH C@ SWAP - DUP 0< 0BRANCH 000E

UNLF LIT 0028 + BRANCH FFEE

CH C!

;S

6649 : LF LIT 000A EMIT ;S

662E : UNLF

CV C@ 0BRANCH 0008

UP BRANCH 0004

SCROLLEDOWN

;S

661F : UP LIT FC1A CALL ;S

65D4 : SCROLLEDOWN

```

LIT 0017 BCALC LIT FFFF LIT 0016 (DO)
  I BCALC DUP ROT LIT 0028 CMOVE
LIT FFFF (+LOOP) FFEC
DROP 0 BCALC LIT 0028 BL
LIT 0080 + FILL
;S

```

```

6599 : CHEKCHAR
SDUP LIT 005D = EH? 0BRANCH 0006
  BRANCH 001C
LIT 0040 < EH?> 0BRANCH 000C
  PUNCT @ EXECUTE BRANCH 0006
2DROP CLRPUNC
;S

```

```

6587 : PUNCT BL - (PUNCT) ;S

```

```

6573 : SETPUNC 1 PUNKED ! ;S

```

```

655F : CLRPUNC 0 PUNKED ! ;S

```

```

654C : CLRWAS 0 WASPUNKED ! ;S

```

```

653C : WASPUNKED 0F21 \ variable $0000

```

```

652F : PUNKED 0F21 \ variable $0000

```

```

64E1 : (PUNCT) 13DA \ DOES> 4E11 - ARRAY

```

```

64E1- 87 28 50 55 4E 43 54
64E8- A9 D6 63 DA 13 11 4E 20
64F0- 20 7D 65 22 55 69 65 69
64F8- 65 69 65 69 65 22 55 69
6500- 65 22 55 69 65 69 65 69
6508- 65 69 65 7D 65 69 65 69
6510- 65 69 65 69 65 69 65 69
6518- 65 69 65 69 65 69 65 69

```

6520- 65 69 65 69 65 69 65 69
6528- 65 69 65 69 65 7D 65 86

63D6 : KEYT 13DA \ DOES> 4E11 - ARRAY

63D6- 84 4B
63D8- 45 59 D4 B0 63 DA 13 11
63E0- 4E 61 0D 61 0D 61 0D 27
63E8- 80 61 0D 35 79 61 0D 61
63F0- 0D 7B 71 61 0D 48 7A 06
63F8- 7B D7 7A 9A 72 B6 6D E1
6400- 79 15 7A 0D 74 61 0D 0A
6408- 72 61 0D 6B 71 61 0D 61
6410- 0D 61 0D 61 0D 61 0D C2
6418- 72 61 0D 61 0D 61 0D 61
6420- 0D E6 71 24 72 24 72 24
6428- 72 24 72 24 72 24 72 24
6430- 72 24 72 24 72 24 72 90
6438- 71 24 72 24 72 24 72 DD
6440- 73 24 72 24 72 24 72 24
6448- 72 24 72 24 72 24 72 24
6450- 72 24 72 24 72 24 72 24
6458- 72 81 7A 24 72 94 7A 24
6460- 72 63 73 5D 72 5D 72 5D
6468- 72 5D 72 5D 72 5D 72 5D
6470- 72 5D 72 5D 72 5D 72 5D
6478- 72 5D 72 5D 72 5D 72 5D
6480- 72 5D 72 5D 72 5D 72 5D
6488- 72 5D 72 5D 72 5D 72 5D
6490- 72 5D 72 5D 72 5D 72 24
6498- 72 24 72 24 72 3B 5E 24
64A0- 72 24 72 24 72 24 72 24
64A8- 72 24 72 24 72 24 72 24
64B0- 72 24 72 24 72 24 72 24
64B8- 72 24 72 24 72 24 72 24
64C0- 72 24 72 24 72 24 72 24
64C8- 72 24 72 24 72 24 72 24
64D0- 72 24 72 24 72 24 72 24
64D8- 72 24 72 24 72 24 72 0E
64E0- 72 87

*

63B0 : REVCAPS DUP DUP LETTER? = 0BRANCH 000C
INVERSE EMIT INVERSE BRANCH 0004 A
LLCAPS ;S

```

639C : ALLCAPS CAPIZE DROP EMIT ;S

6380 : CAPIZE? CAP @ 0BRANCH 0008 CAPIZE
CAP ! ;S

635D : CAPIZE DUP LETTER? -DUP 0BRANCH 000C SWAP
DROP 0 BRANCH 0004 1 ;S

632D : LETTER? LIT FFDF AND DUP DUP LIT 0041 <
SWAP LIT 005A > OR 0BRANCH 0006 D
ROP 0 ;S

6314 : SENTCAP? TWEEN 1 > CAP ! ;S

630A : CAP 0F21          \ VARIABLE $0001

62F6 : LIKEY BL CURS-ADR C! DARKEY ;S

62DB : CURS-ADR CV C@ BCALC CH C@ + ;S

62C8 : DARKEY KEY? 0BRANCH FFFC ;S

62B0 : INVERSE LIT 0032 LIT 00C0 TOGGLE ;S

6299 : KEY? ?KEY DUP 0BRANCH 0006 KEY SWAP ;S

6284 : ?KEY KBD C@ LIT 007F > ;S

626F : CHV! CH ! LIT FC22 CALL ;S

6265 : KBD 0F05          \ CONSTANT $C000

624E : CURS-SIZE 13DA    \ DOES> 550C = CTABLE
625E- 22 55

```

6260- 01 01 02 05 01

6239 : CH-SIZE 13DA \ DOES> 550C = CTABLE

6247- CA

6248- 61 01 01 02 05 01

6229 : TWEEN TOP TOS-TYPE ;S

6216 : TOS-TYPE TOS CH-TYPE ;S

61C0 : CH-TYPE

SDUP MIN-SP < EH? 0BRANCH 0008

0 BRANCH 0038

SENTMARK < EH? 0BRANCH 0008

1 BRANCH 0028

PARAMARK < EH? 0BRANCH 0008

2 BRANCH 0018

END-MARK < EH? 0BRANCH 0008

3 BRANCH 0008

2DROP LIT 0004

;S

618E : DEFAULT

\ NO MATCH

FOUND IN A CASE STATEMENT

CASES @

DUP 0BRANCH 0010

0 (DO) THEN (LOOP) FFFC

BRANCH 0004

DROP

LIT 0005 ?PAIRS CASES ! ;S

\ ANOTHER FORM OF THE CASE STATEMENT - NOT SURE
WHEN USED

6176 : CASE> 1 CASES +! COMPILE EH?> IF ;S


```

615F : CASE
1 CASES +!      \ INCREMENT NUMBER OF CASES
COMPILE EH?     \ ADD LOGIC TO EVALUATE CASE
VALUE
IF              \ DO SUBSEQUENT LOGIC ONLY IF
CASE MATCHES
;S              \ SHOULD HAVE A "THEN" AT THE END
OF THAT LOGIC

```

```

6140 : SWITCH   \ NEW SWITCH-CASE STRUCTURE
      CASES @    \ GET PREVIOUS NUMBER OF CASES ON
STACK
      0 CASES !  \ ZERO OUT THE NUMBER OF CASES
      LIT 0005   \ PUT A 5 ON THE STACK (STATE
PARAMETER?)
      COMPILE SDUP \ ADD A DUP TO THE WORD BEING
COMPILED
      ;S

```

```

6127 : EH?>
0BRANCH 0008
  1 BRANCH 0006
DUP
0
;S

```

```

610D : EH?      \ COMPILED BY CASE TO EVALUATE
THE CONDITION
0BRANCH 000A    \ IF FALSE, SKIP TO THE DUP BELOW
  DROP 1        \ IF TRUE, REPLACE WITH 1
  BRANCH 0006   \ EXIT
DUP
0

```

;S

6100 : SDUP DUP ;S \ SYNONYM FOR DUP -
COMPILED BY SWITCH

60F4 : CASES 0F21 \ VARIABLE \$0000 - COUNTS
THE NUMBER OF CASES?

LFA = \$1992 (WORD WITH 1 SPACE THAT LINKS TO
\$8118 - JOT)

\ WORD CONTAINS 1 SPACE - USED TO LINK
VOCABULARIES?

60EE :

LFA = \$6127 (EH?>)

CFA = \$343B (IN THE EDITOR VOCABULARY)

60DF : SW-STUFF 13DA \ DOES> \ 197E =
VOCABULARY - "SWITCH STUFF"

608C : XFER

DIME ! D-CS ! S-CS ! DONE 0= 0BRANCH 0036

S-CS @ 'TOS D-CS @ PREPUSH

S-CS @ #CHARS

D-CS @ @ MIN

LIT 00FF MIN MLXFER

DUP S-CS @ #CPOPPED

D-CS @ #CPUSHED BRANCH FFC6

;S

605B : DONE

S-CS @ DUP LIT 0004 + @ 0= 0BRANCH 000A

DROP 1 BRANCH 000C

TOS DIME @ < 0=

;S

6050 : D-CS 0F21 \ variable \$99, \$58

6045 : S-CS 0F21 \ variable \$54, \$57

6036 : >= (MACRO) < 0= ;S

6029 : <> (MACRO) - ;S

601A : <= (MACRO) > 0= ;S

600C : NOT (MACRO) 0= ;S

5FCC : MLXFER 5FD7

5FD7-	A9 03	LDA	#\$03
5FD9-	20 E0 08	JSR	\$08E0
5FDC-	86 E0	STX	\$E0
5FDE-	A5 D3	LDA	\$D3
5FE0-	38	SEC	
5FE1-	E5 D1	SBC	\$D1
5FE3-	8D F9 5F	STA	\$5FF9
5FE6-	A5 D4	LDA	\$D4
5FE8-	E5 D2	SBC	\$D2
5FEA-	8D FA 5F	STA	\$5FFA
5FED-	A6 D1	LDX	\$D1
5FEF-	A0 00	LDY	#\$00
5FF1-	B1 D5	LDA	(\$D5),Y
5FF3-	CD CA 5F	CMP	\$5FCA
5FF6-	B0 07	BCS	\$5FFF
5FF8-	9D B7 AC	STA	\$ACB7,X
5FFB-	C8	INY	
5FFC-	CA	DEX	
5FFD-	D0 F2	BNE	\$5FF1
5FFF-	A6 E0	LDX	\$E0
6001-	A9 00	LDA	#\$00
6003-	CA	DEX	
6004-	95 00	STA	\$00,X
6006-	CA	DEX	
6007-	94 00	STY	\$00,X
6009-	4C B8 08	JMP	\$08B8

5FC1 : DIME 0F21 \ variable \$00F0 = 240

5EE2 : CLEAR-TEXT

EMPTY-BUFFERS
FREE-ALL
END-MARK >TOP
END-MARK >BOT
;S

\ load index block (35)
5ECE : LOAD-TEXT INDX LOAD-INDEX ;S

5E9D : LOAD-INDEX
EMPTY-BUFFERS
DUP BLOCK PTR !
FREE-BLOCKS
LOAD-BUNCH
TOP LOAD-CS
DELETE-BUFFER
LOAD-CS
BOTTOM
LOAD-CS
SLURP-BUFFER
LOAD-CS
FLUSH-ONE
;S

5E7F : LOAD-CS
DUP LIT 0004 LOAD-BYTES
LIT 0004 + LOAD-BUNCH
;S

5E64 : LOAD-BUNCH PTR @ @ 2+ LOAD-BYTES ;S

5E43 : LOAD-BYTES
PTR @
OVER PTR +!

ROT ROT
CMOVE
;S

5E30 : SAVE-KEY
DROP
SAVE-TEXT
;S

5E1A : SAVE-TEXT
INDX WRITE-INDEX
WRITE-ALL
;S

\ *** THIS IS THE DATA STRUCTURE FOR THE
DOCUMENT INDEX ***
5DE8 : WRITE-INDEX
DUP BUFFER PTR !
FREE-BLOCKS SAVE-BUNCH
TOP SAVE-CS
DELETE-BUFFER SAVE-CS
BOTTOM SAVE-CS
SLURP-BUFFER SAVE-CS
UPDATE
FLUSH-ONE
;S

5DCA : SAVE-CS DUP LIT 0004 SAVE-BYTES LIT 0004
+ SAVE-BUNCH ;S

5DB1 : SAVE-BUNCH DUP @ 2+ SAVE-BYTES ;S

5D92 : SAVE-BYTES PTR @ SWAP DUP PTR +!
CMOVE ;S

```

5D88 : PTR 0F21      \ variable $AE,$A8

5D79 : >SIP SLURP-BUFFER CPUSH ;S

5D6A : >DEL DELETE-BUFFER CPUSH ;S

5D5B : >BOT BOTTOM CPUSH ;S

5D4C : >TOP TOP CPUSH ;S

5D32 : CPUSH SWAP OVER PREPUSH C! 1 SWAP
#CPUSHED ;S

5D0D : #CPUSHED SWAP DUP 0BRANCH 000C MINUS SWAP
+! BRANCH 0006 SWAP #CPOPPED ;S

5CD3 : PREPUSH DUP @ 0= 0BRANCH 001C 1 OVER LIT
0004 + +! ALLOC OVER `TOS-BLK C!
  B/BUF OVER ! `TOS 1 - UPDATE ;S

5CC3 : SIP>? SLURP-BUFFER CPOP? ;S

5CB3 : DEL>? DELETE-BUFFER CPOP? ;S

5CA4 : BOT> BOTTOM CPOP ;S

5C95 : TOP> TOP CPOP ;S

5C6A : EMPTY-CSTACK
DUP LIT 0004 + @ 0BRANCH 000A
DUP POP-BLK BRANCH FFEC
DROP
;S

```

5C4E : CPOP CPOP? 0= 0BRANCH 000B (.") 04 CPOP"
QUIT ;S

5C1E : CPOP? DUP LIT 0004 + @ 0= 0BRANCH 000A
DROP 0 BRANCH 000E DUP TOS 1 ROT #
CPOPPED 1 ;S

5BED : #CPOPPED SWAP -DUP 0BRANCH 001A OVER +!
DUP #CHARS 0BRANCH 0008 DROP BRAN
CH 0004 POP-BLK BRANCH 0004 DROP ;S

5BB8 : FREE-ALL 0 FREE-BLOCKS ! BLKN 1+ BLK1
(DO) I FREE (LOOP) FFFA DELETE-BUFF
ER CLR-CSTK TOP CLR-CSTK SLURP-BUFFER CLR-CSTK
BOTTOM CLR-CSTK ;S

5B8E : POP-BLK DUP `TOS-BLK C@ FREE LIT FFFF
OVER LIT 0004 + +! 0 SWAP ! ;S

5B75 : FREE 1 FREE-BLOCKS +! DUP FREE-BUFFER
LAST-FREE C! ;S

5B33 : ALLOC FREE-BLOCKS @ 0BRANCH 0012 LAST-
FREE C@ LIT FFFF FREE-BLOCKS +! BRA
NCH 001A (.") 13 OUT OF DISK BLOCKS!" QUIT DUP
BUFFER DROP ;S

5B19 : LAST-FREE FREE-BLOCKS DUP @ + 1+ ;S

5B0A : RES-FREE 0F21 \variable \$0000

5A6C : FREE-BLOCKS 0F21 \variable \$0066

5A7E- 8B 8A

5A80- 89 88 87 86 85 84 83 82

5A88- 81 80 7F 7E 7D 7C 7B 7A
5A90- 79 78 77 76 75 74 73 72
5A98- 71 70 6F 6E 6D 6C 6B 6A
5AA0- 69 68 67 66 65 64 63 62
5AA8- 61 60 5F 5E 5D 5C 5B 5A
5AB0- 59 58 57 56 55 54 53 52
5AB8- 51 50 4F 4E 4D 4C 4B 4A
5AC0- 49 48 47 46 45 44 43 42
5AC8- 41 40 3F 3E 3D 3C 3B 3A
5AD0- 39 38 37 36 35 34 33 32
5AD8- 31 30 2F 2E 2D 2C 2B 2A
5AE0- 29 28 27 6B 24 24 00 00
5AE8- 00 00 00 00 00 00 00 00
5AF0- 00 00 00 00 00 00 00 00
5AF8- 00 00 00 00 00 00 00 00
5B00- 00 00 00 00 00 00 00 00
5B08- 00 00

5A41 : TURKEY
QUIT CFA DUP DUP
LITW 2675 !
LITW 4A81 !
LIT 5A4C !
SAVETURNKEY
;S

5A22 : PEEK LIT 0006 + SWAP B/BUF /MOD ROT + C@
TH-CHAR ;S

5A06 : TH-CHAR BLOCK B/BUF ROT 1+ - + C@ ;S

59EF : ^BOT-BLK (MACRO) LIT 0006 + ;S

59D0 : SIZE DUP LIT 0004 + @ B/BUF * SWAP @ - ;S

592B : SLURP-BUFFER 13DA \ DOES> CSTACK

593C- 2E 56 00 00
5940- 00 00 00 00 20 20 20 20
5948- 20 20 20 20 20 00 00 00
5950- 00 00 00 00 00 00 00 00
5958- 00 00 00 00 00 00 00 00
5960- 00 00 00 00 00 00 00 00

5968- 00 00 00 00 00 00 00 00
5970- 00 00 00 00 00 00 00 00
5978- 00 00 00 00 00 00 00 00
5980- 00 00 00 00 00 00 00 00
5988- 00 00 00 00 00 00 00 00
5990- 00 00 00 00 00 00 00 00
5998- 00 00 00 00 00 00 00 00
59A0- 00 00 00 00 00 00 00 00
59A8- 00 00 00 00 00 00 00 00
59B0- 00 00 00 00 00 00 00 00
59B8- 00 00 00 00 00 00 00 00
59C0- 00 00 00 00 00 00 00 00
59C8- 00 00 00 00 00 00 00 00

588C : BOTTOM 13DA

\ DOES> CSTACK

5897- 2E
5898- 56 33 00 00 00 02 00 26
58A0- 25 7B 7C 7D 7E 7F 80 81
58A8- 86 89 82 83 87 85 84 00
58B0- 00 00 00 00 00 00 00 00
58B8- 00 00 00 00 00 00 00 00
58C0- 00 00 00 00 00 00 00 00
58C8- 00 00 00 00 00 00 00 00
58D0- 00 00 00 00 00 00 00 00
58D8- 00 00 00 00 00 00 00 00
58E0- 00 00 00 00 00 00 00 00
58E8- 00 00 00 00 00 00 00 00
58F0- 00 00 00 00 00 00 00 00
58F8- 00 00 00 00 00 00 00 00
5900- 00 00 00 00 00 00 00 00
5908- 00 00 00 00 00 00 00 00
5910- 00 00 00 00 00 00 00 00
5918- 00 00 00 00 00 00 00 00
5920- 00 00 00 00 00 00 00 00
5928- 00 00 00 8C

57E6 : DELETE-BUFFER 13DA

\ DOES> CSTACK

57F8- 2E 56 FD 03 00 00 01 00
5800- 6D 20 20 20 20 20 20 20
5808- 00 00 00 00 00 00 00 00
5810- 00 00 00 00 00 00 00 00
5818- 00 00 00 00 00 00 00 00
5820- 00 00 00 00 00 00 00 00
5828- 00 00 00 00 00 00 00 00
5830- 00 00 00 00 00 00 00 00
5838- 00 00 00 00 00 00 00 00
5840- 00 00 00 00 00 00 00 00
5848- 00 00 00 00 00 00 00 00
5850- 00 00 00 00 00 00 00 00

5858- 00 00 00 00 00 00 00 00
5860- 00 00 00 00 00 00 00 00
5868- 00 00 00 00 00 00 00 00
5870- 00 00 00 00 00 00 00 00
5878- 00 00 00 00 00 00 00 00
5880- 00 00 00 00 00 00 00 00
5888- 00 00 00 00

574A : TOP 13DA \ DOES> CSTACK

5752- 2E 56 = CSTACK - does nothing ("Character stack?")

5754- FF 03 00 00

5758- 01 00 24 84 85 87 83 82

5760- 89 86 81 80 7F 7E 7D 7C

5768- 7B 7A 20 20 00 00 00 00

5770- 00 00 00 00 00 00 00 00

5778- 00 00 00 00 00 00 00 00

5780- 00 00 00 00 00 00 00 00

5788- 00 00 00 00 00 00 00 00

5790- 00 00 00 00 00 00 00 00

5798- 00 00 00 00 00 00 00 00

57A0- 00 00 00 00 00 00 00 00

57A8- 00 00 00 00 00 00 00 00

57B0- 00 00 00 00 00 00 00 00

57B8- 00 00 00 00 00 00 00 00

57C0- 00 00 00 00 00 00 00 00

57C8- 00 00 00 00 00 00 00 00

57D0- 00 00 00 00 00 00 00 00

57D8- 00 00 00 00 00 00 00 00

57E0- 00 00 00 00 00 00 00

5721 : CLR-CSTK 0 OVER ! 0 OVER LIT 0004 + ! 0
SWAP 2+ ! ;S

5713 : TOS ^TOS C@ ;S

56FA : ^TOS DUP ^TOS-BLK C@ BLOCK SWAP @ + ;S

56E6 : TOS-BLK (MACRO) ^TOS-BLK C@ ;S

56C9 : ^TOS-BLK LIT 0004 + DUP @ + 1+ ;S

56B8 : #RES (MACRO) 2+ @ ;S

```

56A8 : `#RES (MACRO) 2+ ;S

568F : EMPTY? (MACRO) LIT 0004 + @ 0= ;S

5679 : #BLKS (MACRO) LIT 0004 + @ ;S

5664 : `#BLKS (MACRO) LIT 0004 + ;S

564F : #CHARS B/BUF SWAP @ - ;S

563F : #FREE (MACRO) @ ;S

5630 : `#FREE (MACRO) ;S

560F : CSTACK <BUILDS 0 , 0 , 0 , B/DSK ALLOT
DOES> ;S

5604 : "ESC 0F05          \ CONSTANT $001B
55F4 : BACKSLASH 0F05     \ CONSTANT $005C
55EA : "-> 0F05          \ CONSTANT $0015    (CTRL-
U)
55E0 : "<- 0F05          \ CONSTANT $0008    (CTRL-
H)

55CB : TYPE-SP 13DA      \ DOES>
55D7- 0C
55D8- 55 22 55 00 80 90 A0 F0

55BB : WORD1-BIT 0F05    \ CONSTANT $0008
55AD : HI-BITS 0F05      \ CONSTANT $000F
559E : LOW-BITS 0F05     \ CONSTANT $000F
558F : END-MARK 0F05     \ CONSTANT $00F0
5580 : CUT-MARK 0F05     \ CONSTANT $00E0
5571 : PARAMARK 0F05     \ CONSTANT $00A0
5562 : SENTMARK 0F05     \ CONSTANT $0090

```

5555 : SPACER 0F05 \ CONSTANT \$0080
5548 : MIN-SP 0F05 \ CONSTANT \$0080
553D : BLKN 0F05 \ CONSTANT \$008B
5532 : BLK1 0F05 \ CONSTANT \$0024
5527 : INDX 0F05 \ CONSTANT = 35 (BLOCK
NUMBER OF INDEX OF DOCUMENT?)

551C : NOP 5524
5524- 4C B8 08 JMP \$08B8

54F9 : CTABLE <BUILDS CFA , DOES> SWAP OVER @
EXECUTE + 2+ C@ ;S

54A3 : NCOPIES >R SWAP R> OVER - >R R ROT ROT R>
0< 0BRANCH 000A SWAP 1+ BRANCH
0006 1 - SWAP (DO) I OVER I + UNCLOG OVER .
(COPY) DUP SIGNUM MINUS (+LOOP) FFE8
DROP FLUSH ;S

5476 : SIGNUM DUP 0< 0BRANCH 000C DROP LIT FFFF
BRANCH 0010 0= 0BRANCH 0008 0 BR
ANCH 0004 1 ;S

5457 : NWIPES 1+ SWAP (DO) I UNCLOG (WIPE)
(LOOP) FFF8 FLUSH ;S

5438 : UNCLOG 32K-1 LOOK-RES? 0BRANCH 0008 DROP
BRANCH 0006 DROP FLUSH ;S

5428 : 1WIPE (WIPE) FLUSH ;S

53F9 : (WIPE) B/SCR * DUP B/SCR + SWAP (DO) I
BLOCK LIT 0400 LIT 0020 FILL UPDAT

53F9 : (WIPE) B/SCR * DUP B/SCR + SWAP (DO) I

BLOCK LIT 0400 LIT 0020 FILL UPDAT
E (LOOP) FFEE ;S

53E9 : 1COPY (COPY) WRITE-ALL ;S

53B4 : (COPY) B/SCR * OFFSET @ + SWAP B/SCR *
DUP B/SCR + SWAP (DO) DUP I REASSI
GN 1+ (LOOP) FFF6 DROP ;S

537A : WRITE-ALL LIMIT @ FIRST @ (DO) I @ DUP
32K-1 - 0BRANCH 000A UNSIGN WRITE-
ONE BRANCH 0004 DROP LIT 0404 (+LOOP) FFE2 ;S

5364 : FLUSH-ONE DUP WRITE-ONE EMPTY-BUFFER ;S

534A : FREE-BUFFER RESIDENT? 0BRANCH 0004
CHUCK ;S

5327 : EMPTY-BUFFER RESIDENT? 0BRANCH 000C DUP
LIT 0400 ERASE CHUCK ;S

52F5 : WRITE-ONE UPDATED? 0BRANCH 001C DUP 2 -
DUP @ UNSIGN DUP ROT ! 0 &R/W BRA
NCH 0004 DROP ;S

52DA : UPDATED? BLOCK DUP 2 - @ 0< ;S

52C3 : >BLK LIT 0404 * FIRST @ + ;S

5283 : RLIST LIMIT @ FIRST @ (DO) I @ 32K-1 -
0BRANCH 0018 I @ 0< 0BRANCH 0006 (
.") 01 *" I @ UNSIGN . LIT 0404 (+LOOP) FFD8 ;S

523C : BLK> DUP DUP FIRST @ LIT 0404 - U< BLK?

LIMIT @ OVER U< BLK? FIRST @ LIT
0404 - - 0 LIT 0404 U/ ROT ROT BLK? DROP 1 - ;S

5219 : BLK? 0BRANCH 0016 U. (".) 0D
=BLOCK.ADR-2?" QUIT ;S

\ THROW OUT A BUFFER BY RESETTNG ITS ADDRESS TO
\$7FFF?

5203 : CHUCK 2 - 32K-1 SWAP ! ;S

51E2 : REASSIGN BLOCK 2 - 2DUP ! SWAP BLK-TAB !
UPDATE ;S

51BB : BUFFER
DUP RESIDENT? 0BRANCH 000A
SWAP DROP BRANCH 000C
OFFSET @ + BUFFER NOTE-RES
;S

519B : BLOCK DUP RESIDENT? 0BRANCH 000A SWAP
DROP BRANCH 0006 BLOCK NOTE-RES ;S

517C : NOTE-RES DUP 2 - DUP @ UNSIGN BLK-
TAB ! ;S

5160 : #BUFS LIMIT @ FIRST @ - LIT 0404 / ;S

50FC : RESIDENT?
OFFSET @ + DUP ?BLK BLK-TAB 2DUP @ @ UNSIGN =
0BRANCH 000E
SWAP DROP @ 1 BRANCH 001C
SWAP LOOK-RES? 0BRANCH 000E
DUP ROT ! 1 BRANCH 0008
DROP DROP 0 0BRANCH 0010

DUP PREV ! 2+ 1 BRANCH 0004

0

;S

50CA : ?BLK

DUP 0 < OVER DISKMAX @ > OR 0BRANCH 0015

. (.") 0C DISK BLOCK? "

QUIT

;S

4E8C : BLK-TAB 13DA

4E77 : CARRAY <BUILDS ALLOT DOES> + ;S

4E62 : STUFFS (´) ROT ROT (STUFFS) ;S

4E3F : (STUFFS) 1+ SWAP (DO) I OVER (STUFF) 2
(+LOOP) FFF6 DROP ;S

4E2F : STUFF (´) (STUFF) ;S

4E19 : (STUFF) 2 - SWAP ! ;S

4DFF : ARRAY <BUILDS 2* ALLOT DOES> SWAP 2* + ;S

4DF0 : 2* (MACRO) DUP + ;S

4DDC : MACRO ?COMP IMMEDIATE COMPILE (MACRO) ;S

4D8C : (MACRO)

STATE @ 0BRANCH 003C

GRAB 2+ DUP LITW 0C39 - 0BRANCH 0026

DUP CFA ,

DUP LITW 08A0 =

SWAP LITW 4386 = OR 0BRANCH 0006
GRAB , BRANCH FFCE
DROP R> DROP
;S

4D70 : CGRAB R> R C@ R> 1+ >R SWAP >R ;S

4D55 : GRAB R> R @ R> 2+ >R SWAP >R ;S

4D40 : J 4D46

4D46-	86 E0	STX	\$E0
4D48-	BA	TSX	
4D49-	BD 05 01	LDA	\$0105,X
4D4C-	48	PHA	
4D4D-	BD 06 01	LDA	\$0106,X
4D50-	A6 E0	LDX	\$E0
4D52-	4C B1 08	JMP	\$08B1

4D2A : I' 4D31

4D31-	86 E0	STX	\$E0
4D33-	BA	TSX	
4D34-	BD 03 01	LDA	\$0103,X
4D37-	48	PHA	
4D38-	BD 04 01	LDA	\$0104,X
4D3B-	A6 E0	LDX	\$E0
4D3D-	4C B1 08	JMP	\$08B1

4CAE : LOOK-RES? 0 LIMIT @ FIRST @ (DO) OVER I @
UNSIGN = 0BRANCH 000E 2DROP I 1
LEAVE BRANCH 0006 I NOTE-IF-FREE B/BUF LIT 0004
+ (+LOOP) FFD8 ;S

4C7D : NOTE-IF-FREE DUP @ 32K-1 = 0BRANCH 0012 -
BUF DUP USE ! PREV ! BRANCH 0004
DROP ;S

4C5A : -BUF DUP FIRST @ = 0BRANCH 0008 DROP
LIMIT @ LIT 0404 - ;S

4C49 : UNSIGN 32K-1 AND ;S

4C3D : 32K-1 0F05 \ CONSTANT \$7FFF

4A97 : EDIT: LOOKUP EDIT ;S

4A78 : EDIT QUIT ED-SCR ! 0 ED-CV ! 0 ED-CH !
RE ;S

4A6B : RE ?STACK EDIT-LOOP ;S

4881 : INCLUDE TASTE 0BRANCH 000A BL WORD BRANCH
0006 LOOKUP LOAD ;S

485C : LOOKUP LOOKUP? 0= 0BRANCH 0012 CR HERE
COUNT TYPE (.") 03 ?!?" QUIT ;S

47F6 : LOOKUP? BL WORD BL APPEND-CHAR OFFSET @
>R BLK @ B/DSK / B/DSK * OFFSET!
BASE @ >R DECIMAL (LOOKUP?) 0BRANCH 0008 1
BRANCH 0006 SUMMARIZE (LOOKUP?) R> BA
SE ! OFFSET @ R - SWAP 0BRANCH 000A + 1 BRANCH
0006 DROP 0 R> OFFSET! ;S

47D2 : APPEND-CHAR HERE C@ 1+ DUP HERE C! HERE +
C! ;S

477A : (LOOKUP?) 0 LOOK1 DUP LOOKS + SWAP (DO) I
IN-INDEX 0BRANCH 000A ROT DROP
1 LEAVE (LOOP) FFEE 0BRANCH 0022 OVER BLOCK LIT
0024 SWAP -TEXT 0= 0BRANCH 0008
1 BRANCH 0006 DROP 0 BRANCH 0004 0 ;S

470B : IN-INDEX BLOCK 0 OVER LIT 0017 LIT 0028 *
+ ROT LIT 0050 + (DO) I LIT 000
4 + LOOKPTR ! IN-LIST 0BRANCH 000A DROP I 1
LEAVE LIT 0028 (+LOOP) FFE0 0BRANCH
001E DUP C@ BL = 0BRANCH 0008 1+ BRANCH FFF0 -
NUMBER 1+ 1 BRANCH 0004 0 ;S

46E9 : -NUMBER LIT 0000 LIT 0000 ROT 1 -
(NUMBER) SWAP DROP ;S

46B5 : IN-LIST 0 LPAR SAME-WORD 0BRANCH 001E -BL
RPAR SAME-WORD 0= 0BRANCH 0012
HERE SAME-WORD 0BRANCH 0006 DROP 1 BRANCH
FFE6 ;S

46A7 : RPAR 13DA

4699 : LPAR 13DA

467B : -BL NEXTCHAR BL = 0BRANCH FFF8 NEXTCHAR
BL - 0BRANCH FFF8 ;S

4661 : SAME-WORD COUNT LOOKPTR @ -TEXT 0= ;S

4646 : NEXTCHAR LOOKPTR 1 OVER +! @ C@ ;S

4638 : LOOKPTR 0F21 \ variable \$E3, \$9E

4625 : I6 LOOK1 LIT 0005 + L ;S

4616 : I3 LOOK1 2+ L ;S

4603 : I5 LOOK1 LIT 0004 + L ;S

45F4 : I2 LOOK1 1+ L ;S

45E3 : I4 LOOK1 3 + L ;S

45D6 : I1 LOOK1 L ;S

45B6 : SUMMARIZE

LOOKS 0 (DO) I 1+ SUM (LOOP) FFF8
;S

4594 : SUM 1 - DUP LOOK1 + SWAP 2 * SEEN + @
(SUM) ;S

454D : (SUM)

DUP LIT 0014 +

HOME (.") 03 ("

OVER . DUP . (.") 0A INDEX);S"

INDEX CV C@ LIT 0016 < 0BRANCH 0004

QUIT

LOAD-BUFFER

UPDATE

;S

4538 : SEEN 0F21 \ VARIABLE

4541- 24 00 33 00 42 00 57

4548- 00 67 00 77 00

452C : LOOKS 0F05 \ CONSTANT \$0006

4520 : LOOK1 0F05 \ CONSTANT \$0054

4505 : : " <BUILDS LIT 0022 WORD HERE C@ 1+ ALLOT
DOES> ;S

44E7 : CTRL- INPTR C@ LIT 0040 - 1 IN +!

LITERAL ;S

44D3 : " INPTR C@ 1 IN +! LITERAL ;S

44AD : INPTR BLK @ -DUP 0BRANCH 0008 BLOCK
BRANCH 0006 TIB @ IN @ + ;S

446F : FORGET TASTE 0BRANCH 000D (.") 02 - "
FORGET BRANCH 0022 BL WORD BLK @ 0=
0BRANCH 0014 (.") 01 " HERE COUNT TYPE (.")
03 ? " KEY ;S

4457 : TASTE IN @ EXISTS SWAP IN ! ;S

4438 : EXISTS -FIND 0BRANCH 000C DROP DROP 1
BRANCH 0004 0 ;S

4424 : --> ?TERMINAL 0BRANCH 0004 QUIT --> ;S

43F4 : LOAD
>R ?STACK R> 1 WARNING !
?TERMINAL 0BRANCH 0004
QUIT (.") 01 ["
LOAD
LIT 0008 EMIT
(.") 02] "
;S

43EB : S0 0FA2 \ USER VAR \$0006

43DF : ´ (´) LITERALW ;S

43CB : (´) -FIND 0= 0 ?ERROR DROP ;S

```

43BC : >V CONTEXT ! DEFINITIONS ;S

43AF : V> CURRENT @ ;S

4392 : LITERALW STATE @ 0BRANCH 0008 COMPILE
LITW , ;S

437D : LITW R @ R> 2+ >R ;S

436F : #2! B/DSK OFFSET! ;S

4361 : #1! 0 OFFSET! ;S

4341 : OFFSET! OFFSET @ - -DUP 0BRANCH 0008
FLUSH OFFSET +! ;S

4334 : #2 B/DSK + ;S

4328 : B/DSK 0F05 \ CONSTANT $008C (140 1K
BLOCKS PER DISK)

3D39 : TASK ;S

3D00 : SEARCH 1+ SWAP (DO) I DUP SCOPY SRCH EFL
@ 0BRANCH 000A EDIT LEAVE BRANCH
0004 DROP (LOOP) FFE4 LIT 0017 0 VHTAB ;S

3CA1 : SRCH 0 EFL ! LIT 0018 0 (DO) I DUP BCALC
LIT 0028 0 (DO) I OVER + #CHRS @
SLINE -TEXT 0= 0BRANCH 001A OVER I VHTAB KEY
LIT 0045 = 0BRANCH 0008 1 EFL ! (L
OOP) FFD2 DROP DROP (LOOP) FFBC ;S

3C90 : ST SLINE #CHRS @ TYPE ;S

```

3C73 : SW CR (.") 05 WORD?" SLINE LIT 0028
EXPECT COUNT-CHRS ;S

3C38 : COUNT-CHRS 0 #CHRS ! SLINE DUP C@ 0BRANCH
001C DUP C@ LIT 0080 OR OVER C!
1+ 1 #CHRS +! BRANCH FFE0 ;S

3C2E : EFL 0F21 \ VARIABLE \$00,\$00

3C22 : #CHRS 0F21 \ VARIABLE \$03,\$00

3BEE : SLINE 0F21

3BF8- C3 CF CC 00 00 D2 00 00
3C00- 20 20 20 20 20 20 20 20
3C08- 20 20 20 20 20 20 20 20
3C10- 20 20 20 20 20 20 20 20
3C18- 20 20 20 20 20 20 20 20
3C20- 20 20

3BA3 : SCAN
CR LIT 0020 0 (DO)
LIT 0007 SPACES I DUP LIT 0040 + EMIT
LIT 0007 SPACES 2 * CTRL + @ 2+ NFA ID.
CR ?TERMINAL 0BRANCH 0004
LEAVE
(LOOP) FFCC
;S

\ ^^^ IS THIS THE START OF JOT DEFINITIONS????

3B96 : EDIT EDIT ;S

342A : EDITOR 13DA \ DOES> (vocabulary)

341A : MON LIT FF69 CALL ;S

3407 : DEMO EMPTY-BUFFERS LIT 0070 LOAD ;S

\ WORD = "P"? 81 90 - looks like printer logic

33A7 : LIT 0016 0 VHTAB

SLOT @ PR CR

LIT 7FFF BUFFER DUP LIT 0018 0 (DO)

DUP I BSTR LIT 0028 +

(LOOP) FFF2

DROP LIT 0018 0 (DO)

CR DUP LIT 0028 -TRAILING TYPE

LIT 0028 +

(LOOP) FFEC

DROP CR 0 PR

;S

337C : LS

1+ SWAP (DO)

CR I LIST

I 2 MOD 0BRANCH 0008

LIT 000C EMIT

(LOOP) FFE8

CR

;S

3362 : VLINE 336C

336C- B5 02 LDA \$02,X

336E- 85 2D STA \$2D

3370- B5 04 LDA \$04,X

3372- B4 00 LDY \$00,X

3374- 20 28 F8 JSR \$F828

3377- E8 INX

3378- E8 INX

3379- 4C C8 09 JMP \$09C8

3348 : HLINE 3352

3352- B5 02 LDA \$02,X

```

3354- 85 2C      STA  $2C
3356- B4 04      LDY  $04,X
3358- B5 00      LDA  $00,X
335A- 20 19 F8   JSR  $F819
335D- E8         INX
335E- E8         INX
335F- 4C C8 09   JMP  $09C8

```

332F : SCRN 3338

```

3338- B4 02      LDY  $02,X
333A- B5 00      LDA  $00,X
333C- 20 71 F8   JSR  $F871
333F- 95 02      STA  $02,X
3341- A9 00      LDA  #$00
3343- 95 03      STA  $03,X
3345- 4C CA 09   JMP  $09CA

```

331C : PLOT 3325

```

3325- B4 02      LDY  $02,X
3327- B5 00      LDA  $00,X
3329- 20 00 F8   JSR  $F800
332C- 4C C8 09   JMP  $09C8

```

330A : COLOR 3314

```

3314- B5 00      LDA  $00,X
3316- 20 64 F8   JSR  $F864
3319- 4C CA 09   JMP  $09CA

```

32DD : TEXT

LIT 0017 LIT 0025 C!

LIT 1800 LIT 0022 !

LIT 2800 LIT 0020 !

(TXT)

CR

;S

32B6 : GR (GR) LIT C053 C@ LIT C056 C@ LIT 0014

LIT 0022 C! DROP DROP CLEAR ;S

3294 : CLEAR LIT 0014 0 (DO) I BCALC LIT 0028

ERASE (LOOP) FFF4 ;S

3278 : (TXT)
LIT C051 C@
LIT C054 C@
DROP DROP
;S

3259 : (GR) LIT C050 C@ DROP LIT 0017 LIT 0025
C! CR ;S

323F : L DUP SCR ! SCOPY LIT 0016 0 VHTAB
QUIT ;S

3213 : SCOPY BLOCK DUP LIT 0018 0 (DO) I SBTR
LIT 0028 + DUP (LOOP) FFF2 DROP DR
OP ;S

31EE : BSTR 31F7
31F7- B5 00 LDA \$00,X
31F9- 20 C1 FB JSR \$FBC1
31FC- B5 02 LDA \$02,X
31FE- 85 D1 STA \$D1
3200- B5 03 LDA \$03,X
3202- 85 D2 STA \$D2
3204- A0 28 LDY #\$28
3206- 88 DEY
3207- B1 28 LDA (\$28),Y
3209- 49 80 EOR #\$80
320B- 91 D1 STA (\$D1),Y
320D- 98 TYA
320E- D0 F6 BNE \$3206
3210- 4C C8 09 JMP \$09C8

31C9 : SBTR 31D2
31D2- B5 00 LDA \$00,X
31D4- 20 C1 FB JSR \$FBC1
31D7- B5 02 LDA \$02,X
31D9- 85 D1 STA \$D1
31DB- B5 03 LDA \$03,X
31DD- 85 D2 STA \$D2
31DF- A0 28 LDY #\$28
31E1- 88 DEY
31E2- B1 D1 LDA (\$D1),Y

```

31E4- 49 80      EOR    #$80
31E6- 91 28      STA    ($28),Y
31E8- 98         TYA
31E9- D0 F6      BNE    $31E1
31EB- 4C C8 09    JMP    $09C8

```

```

3169 : CODE ?EXEC CREATE SMUDGE ASSEMBLER MEM !
CSP LATEST PFA DUP 2 - ! ;S

```

```

2B78 : ASSEMBLER 13DA      \ DOES>

```

```

2B65 : RAND URAND U* SWAP DROP ;S

```

```

2B3F : URAND RSEED @ LIT 2725 U* LIT 3947 S->D
D+ DROP DUP RSEED ! ;S

```

```

2B33 : RSEED 0F21 \ variable $1001

```

```

2AC9 : BUFFERS FLUSH LIMIT @ HERE LIT 0200 + -
LIT 0404 / MIN 1 MAX LIT 0404 * L
IMIT @ SWAP - FIRST ! FIRST @ DUP USE ! DUP
PREV ! DUP LIT 0022 +ORIGIN ! DUP LI
T 0026 +ORIGIN ! LIT 0028 +ORIGIN ! EMPTY-
BUFFERS ;S

```

```

2A75 : BACKUP OVER OVER SWAP - LIT 0404 * FIRST
@ + LIMIT @ U< 0= 0BRANCH 0015 C
R (".") 08 TOO MANY" DROP DROP QUIT EMPTY-BUFFERS
1+ SWAP (DO) I BLOCK UPDATE DRO
P (LOOP) FFF6 ;S

```

```

2A40 : DUMP BASE C@ >R HEX OVER + SWAP (DO)
I .ROW ?TERMINAL 0BRANCH 0004 LEAVE
LIT 0008 (+LOOP) FFEE R> BASE C! ;S

```

2A2D : .ROW CR .ADDRESS .VALUES .ASCII ;S

29F8 : .ASCII DUP LIT 0008 + SWAP (DO) I C@ DUP
LIT 0021 < 0BRANCH 0008 DROP LIT
002E EMIT (LOOP) FFE6 ;S

29CE : .VALUES DUP LIT 0008 + OVER (DO) I C@
3 .R (LOOP) FFF6 SPACE SPACE ;S

29B7 : .ADDRESS DUP LIT 0005 U.R ;S

2939 : SAVETURNKEY
Y/NQUERY LIT 14C1 LFA DUP @ 0BRANCH 0016
DUP @ PFA LFA SWAP 0 SWAP ! BRANCH FFE6
LIT 19F8 LIT 0021 + LATEST PFA CFA OVER ! LIT
0915 CFA
OVER 2+ ! LIT FFFC SWAP LIT 0004 + !
CR (.") 0B INSERT DISK"
KEY DROP
SAVESYSTEM BRANCH FFE8
;S

2927 : &KA 0F05 \ constant \$000A

290F : &VRD 2918
2918- AD E9 B7 LDA \$B7E9
291B- AC EA B7 LDY \$B7EA
291E- 8D EA B7 STA \$B7EA
2921- 8C E9 B7 STY \$B7E9
2924- 4C B8 08 JMP \$08B8

28D2 : INITIALIZEDISK Y/NQUERY &RWTS-FMT LIT
7FFF BUFFER DUP LIT 0400 BLANKS LIT
008C 0 (DO) DUP I 0 &R/W (LOOP) FFF6 DROP ;S

28B5 : SAVESYSTEM FORTH DEFINITIONS REBOOT &SIZE
&DUMP-RWTS &DUMP-FORTH ;S

288F : &SIZE PAD 0 +ORIGIN - LIT 0100 /MOD SWAP
0BRANCH 0004 1+ SECTORS C! ;S

286F : &DUMP-FORTH SECTORS C@ 0 +ORIGIN 0 &KA
&DISK-DUMP ;S

2850 : &DUMP-RWTS LIT 000A LIT B600 0 0 &DISK-
DUMP ;S

27CB : &DISK-DUMP
0 &DRV DROP LIT B7ED C! LIT B7EC C! LIT B7F0 ! 2
LIT B7F4 C!
&RWTS -DUP 0BRANCH 0004
ERRMSG LIT B7F1 C@ 1+ LIT B7F1 C! LIT B7ED C@
1+ DUP LIT 0010 = 0BRANCH 0014
LIT B7EC C@ 1+ LIT B7EC C!
DROP 0 LIT B7ED C! 1 -
DUP 0 = 0BRANCH FFB0
DROP
;S

2746 : &RWTS-FMT 0 &DRV DROP 1 LIT B7EB C! LIT
0004 LIT B7F4 C! CR CR (".") 0D FO
RMATTING..." CR CR &RWTS 0BRANCH 002D LIT FE80
CALL LIT 0087 EMIT (".") 10 FORMAT
RMATTING..." CR CR &RWTS 0BRANCH 002D LIT FE80
CALL LIT 0087 EMIT (".") 10 FORMAT
TING ERROR" LIT FE84 CALL QUIT BRANCH 0016 (".")
OF INITIALIZING..." CR ;S

2738 : SECTORS 0F05 \constant \$E0 = 224, \$B7

= 183

2726 : GET EMPTY-BUFFERS LIT 0020 LOAD ;S

2715 : LOAD DUP . LOAD ;S

2700 : LK ´ + @ 2+ NFA ID. ;S

26DB : JOIN ´ ´ OVER OVER > 0BRANCH 0004 SWAP
LFA SWAP NFA SWAP ! ;S

266B : VLIST QUIT OUT ! CONTEXT @ @ DUP C@ LIT
0020 AND 0= 0BRANCH 0032 DUP C@
LIT 001F AND LIT 0004 + OUT @ + C/L @ > 0BRANCH
000A CR 0 OUT ! DUP ID. SPACE SP
ACE PFA LFA @ DUP 0= ?TERMINAL OR 0BRANCH FFB0
DROP CR ;S

263B : INDEX CR 1+ SWAP (DO) CR I 3 .R SPACE 0
I .LINE ?TERMINAL 0BRANCH 0004 LE
AVE (LOOP) FFE6 ;S

25D9 : LIST CR DUP SCR ! (".) 06 SCR # " . CR C/
L @ LIT 0028 = 0BRANCH 000A LIT
0018 BRANCH 0006 LIT 0010 0 (DO) CR C/L @ LIT
0028 - 0BRANCH 000A I 3 .R SPACE I
SCR @ .LINE (LOOP) FFDE ;S

25A7 : VHTAB LIT 0027 MIN 0 MAX LIT 0024 C! LIT
0017 MIN 0 MAX LIT 0025 C! LIT F
C22 CALL ;S

2560 : Y/NQUERY CR (".) 14 ARE YOU SURE? (Y/N):"
KEY DUP EMIT LIT 0059 = 0= 0BRA

NCH 000F (.") 08 ABORTED" QUIT ;S

2507 : WHERE DUP B/SCR / DUP SCR ! (.") 06 SCR #
" . SWAP C/L @ /MOD C/L @ * ROT
BLOCK + CR C/L @ 1 - TYPE CR HERE C@ - SPACES
LIT 005E EMIT 0 0 QUIT ;S

24D9 : IND DUP 0BRANCH 0014 LIT 00C0 + LIT 0100
* ?CARD BRANCH 0008 DROP LIT FD1
B LIT 0038 ! ;S

24AC : PR DUP 0BRANCH 0014 LIT 00C0 + LIT 0100
* ?CARD BRANCH 0008 DROP LIT FDF0
LIT 0036 ! ;S

2484 : ?CARD DUP @ OVER @ - 0BRANCH 0010 CR (.")
07 NO CARD" QUIT ;S

2477 : D= D- D0= ;S

2469 : D0= OR 0= ;S

245C : D? 2@ D. ;S

2443 : DMAX 2OVER 2OVER D< 0BRANCH 0004 2SWAP
2DROP ;S

242A : DMIN 2OVER 2OVER D> 0BRANCH 0004 2SWAP
2DROP ;S

241D : D> 2SWAP D< ;S

240C : D< D- 0< SWAP DROP ;S

```

23FF : D- DMINUS D+ ;S

23E8 : 2ROT LIT 0006 ROLL LIT 0006 ROLL ;S

23D0 : 2SWAP LIT 0004 ROLL LIT 0004 ROLL ;S

23C1 : 2DUP OVER OVER ;S

23A9 : 2OVER LIT 0004 PICK LIT 0004 PICK ;S

2399 : 2DROP DROP DROP ;S

2373 : --> ?LOADING 0 IN ! B/SCR BLK @ OVER MOD
- BLK +! BLK ? ;S

2367 : ? @ . ;S

235B : . S->D D. ;S

234A : .R >R S->D R> D.R ;S

233D : U. 0 D. ;S

232D : U.R 0 SWAP D.R ;S

231E : D. 0 D.R SPACE ;S

22FA : D.R >R SWAP OVER DABS <# #S SIGN #> R>
OVER - SPACES TYPE ;S

22E3 : #S # OVER OVER OR 0= 0BRANCH FFF4 ;S

22B9 : # BASE @ M/MOD ROT LIT 0009 OVER <
0BRANCH 0008 LIT 0007 + LIT 0030 + HOL

```

D ;S

22A0 : SIGN ROT 0< 0BRANCH 0008 LIT 002D HOLD ;S

2289 : #> DROP DROP HLD @ PAD OVER - ;S

227A : <# PAD HLD ! ;S

2259 : SPACES 0 MAX -DUP 0BRANCH 000C 0 (DO)
SPACE (LOOP) FFFC ;S

221A : &R/WSECT MINUS 2+ LIT B7F4 ! DUP LIT 022F
> 0BRANCH 0014 LIT 008C &DRV DR
OP LIT 0230 - BRANCH 0008 0 &DRV DROP &I/O ;S

21AB : FORGET ´ NFA DUP FENCE @ U< LIT 0015 ?
ERROR >R VOC-LINK @ R OVER U< 0BRAN
CH 0012 FORTH DEFINITIONS @ DUP VOC-LINK !
BRANCH FFE8 DUP LIT 0004 - PFA LFA @
DUP R U< 0BRANCH FFF2 OVER 2 - ! @ -DUP 0=
0BRANCH FFD8 R> DP ! ;S

2197 : ´ -FIND 0= 0 ?ERROR DROP LITERAL ;S

2187 : WHILE IF 2+ ;S

2166 : ELSE 2 ?PAIRS COMPILE BRANCH HERE 0 ,
SWAP 2 ENDIF 2 ;S

2151 : IF COMPILE 0BRANCH HERE 0 , 2 ;S

2134 : REPEAT >R >R AGAIN R> R> 2 - ENDIF ;S

211E : AGAIN 1 ?PAIRS COMPILE BRANCH BACK ;S


```

2112 : END UNTIL ;S

20FC : UNTIL 1 ?PAIRS COMPILE 0BRANCH BACK ;S

20E6 : +LOOP 3 ?PAIRS COMPILE (+LOOP) BACK ;S

20D1 : LOOP 3 ?PAIRS COMPILE (LOOP) BACK ;S

20C0 : DO COMPILE (DO) HERE 3 ;S

20B3 : THEN ENDIF ;S

2097 : ENDIF ?COMP 2 ?PAIRS HERE OVER -
SWAP ! ;S

2085 : BEGIN ?COMP HERE 1 ;S

2074 : BACK HERE - , ;S

205F : MYSELF LATEST PFA CFA , ;S

2032 : REBOOT VOC-LINK @ LIT 0020 +ORIGIN ! HERE
LIT 001E +ORIGIN ! LATEST LIT 0
00C +ORIGIN ! ;S

201E : <<COMPILE>> [COMPILE] ;S

2000 : [COMPILE] -FIND 0= 0 ?ERROR DROP CFA , ;S

1F70 : &R/W MINUS 2+ LIT B7F4 C! DUP DISKMAX @ >
OVER 0< OR 0BRANCH 001E CR (." )
  11 DISK RANGE ERROR " . DROP QUIT &DRV CLIT 04
* OVER OVER &I/O OVER LIT 0100 +

```

OVER 1+ &I/O OVER LIT 0200 + OVER 2+ &I/O SWAP
LIT 0300 + SWAP 3 + &I/O ;S

1F3E : &I/O SWAP LIT B7F0 ! CLIT 10 0 SWAP U/
LIT B7EC C! LIT B7ED C! &RWTS -DUP
0BRANCH 0004 ERRMSG ;S

1F0A : &DRV DUP LIT 008B > 0BRANCH 000E LIT 008C
- DRIVE2 BRANCH 0004 DRIVE1 @ L
IT B7E9 ! &VRD ;S

1EFD : DRIVE2 0F21 \ variable \$02, \$60 (slot
6 drive 2)

1EF0 : DRIVE1 0F21 \ variable \$01, \$60 (slot
6 drive 1)

1EA4 : ERRMSG CR CLIT 87 EMIT CLIT 10 = 0BRANCH
001C (".") 13 WRITE PROTECT ERROR
" BRANCH 0013 (".") 0E DISK I/O ERROR" CR QUIT ;S

1E81 : CALL 1E8A
1E8A- B5 00 LDA \$00,X
1E8C- 8D 9B 1E STA \$1E9B
1E8F- B5 01 LDA \$01,X
1E91- 8D 9C 1E STA \$1E9C
1E94- E8 INX
1E95- E8 INX
1E96- 8A TXA
1E97- 48 PHA
1E98- 98 TYA
1E99- 48 PHA
1E9A- 20 69 FF JSR \$FF69
1E9D- 68 PLA
1E9E- A8 TAY
1E9F- 68 PLA
1EA0- AA TAX
1EA1- 4C B8 08 JMP \$08B8

```

1E62 : &RWTS 1E6C
1E6C- 8A      TXA
1E6D- 48      PHA
1E6E- A9 B7   LDA  #$B7
1E70- A0 E8   LDY  #$E8
1E72- 20 00 BD JSR  $BD00
1E75- 68      PLA
1E76- AA      TAX
1E77- A9 00   LDA  #$00
1E79- 90 03   BCC  $1E7E
1E7B- AD F5 B7 LDA  $B7F5
1E7E- 4C 07 0C JMP  $0C07

```

\ load a forth screen number from disk (nn -)

```

1DE1 : LOAD
BLK @ >R
IN @ >R
0 IN !
B/SCR * BLK !
INTERPRET
R> IN !
R> BLK !
;S

```

```

1D8B : MESSAGE WARNING @ 0BRANCH 0025 -DUP
0BRANCH 001B DUP 1 - CLIT 17 / + CLIT
18 /MOD CLIT 8B + .LINE BRANCH 001F -DUP
0BRANCH 0019 (." ) 06 MSG # " BASE @ DE
CIMAL SWAP . BASE ! ;S

```

```

1D79 : .LINE (LINE) -TRAILING TYPE ;S

```

```

1D52 : (LINE) >R C/L @ B/BUF */MOD R> B/SCR * +
BLOCK + C/L @ ;S

```

```

1CEE : BLOCK OFFSET @ + >R PREV @ DUP @ LIT 7FFF
AND R - 0BRANCH 6836 0= 0BRANC
H 0014 DROP R BUFFER DUP R 1 &R/W 2 - DUP @ LIT

```

7FFF AND R - 0= 0BRANCH FFD4 DUP
PREV ! R> DROP 2+ ;S

1CCA : EMPTY-BUFFERS
FIRST @ LIMIT @ OVER - ERASE FLUSH
;S

1CA2 : FLUSH
PREV @ DUP USE !
2+ LIT 7FFF BUFFER
OVER = 0BRANCH FFF4
DROP
;S

1C53 : BUFFER
USE @ +BUF 0= 0BRANCH 9306
DROP DUP >R USE ! R @ 0< 0BRANCH 0014
R 2+ R @ LIT 7FFF AND 0 &R/W R ! R PREV ! R> 2+
;S

1C43 : DR0 0 OFFSET ! ;S

1C24 : UPDATE PREV @ @ LIT 8000 OR PREV @ ! ;S

1BF8 : +BUF
LIT 0404 + DUP
LIMIT @ = 0BRANCH 0008
DROP FIRST @ DUP PREV @ -
;S

1BDA : M/MOD >R 0 R U/ R> SWAP >R U/ R> ;S

1BCB : */ */MOD SWAP DROP ;S

1BB7 : */MOD >R M* R> M/ ;S

1BA9 : MOD /MOD DROP ;S

1B9B : / /MOD SWAP DROP ;S

1B9B : / /MOD SWAP DROP ;S

1B88 : /MOD >R S->D R> M/ ;S

1B7C : * U* DROP ;S

1B55 : M/ OVER >R >R DABS R ABS U/ R> R XOR +-
SWAP R> +- SWAP ;S

1B38 : M* OVER OVER XOR >R ABS SWAP ABS U* R>
D+- ;S

1B20 : MAX OVER OVER < 0BRANCH 0004 SWAP DROP ;S

1B08 : MIN OVER OVER > 0BRANCH 0004 SWAP DROP ;S

1AF9 : DABS DUP D+- ;S

1AEB : ABS DUP +- ;S

1AD9 : D+- 0< 0BRANCH 0004 DMINUS ;S

1AC8 : +- 0< 0BRANCH 0004 MINUS ;S

1AB7 : S->D DUP 0< MINUS ;S

1A71 : COLD 1A7A

1A7A- AD 0C 08 LDA \$080C

1A7D- 8D 94 19 STA \$1994

1A80- AD 0D 08 LDA \$080D

1A83- 8D 95 19 STA \$1995

1A86-	A0 23	LDY	#\$23
1A88-	A9 1A	LDA	#\$1A
1A8A-	85 DA	STA	\$DA
1A8C-	A9 61	LDA	#\$61
1A8E-	85 D9	STA	\$D9
1A90-	AD 10 08	LDA	\$0810
1A93-	85 DE	STA	\$DE
1A95-	AD 11 08	LDA	\$0811
1A98-	85 DF	STA	\$DF
1A9A-	B9 0C 08	LDA	\$080C,Y
1A9D-	91 DE	STA	(\$DE),Y
1A9F-	88	DEY	
1AA0-	10 F8	BPL	\$1A9A
1AA2-	D8	CLD	
1AA3-	A9 6C	LDA	#\$6C
1AA5-	85 DB	STA	\$DB
1AA7-	4C 25 0C	JMP	\$0C25
1AAA-	A0 0F	LDY	#\$0F
1AAC-	A9 19	LDA	#\$19
1AAE-	85 DA	STA	\$DA
1AB0-	A9 F8	LDA	#\$F8
1AB2-	85 D9	STA	\$D9
1AB4-	4C 90 1A	JMP	\$1A90

1A57 : COLD1 SP! EMPTY-BUFFERS 1 SLOT ! HOME
ABORT ;S

1A48 : HOME 1A51
1A51- 20 58 FC JSR \$FC58
1A54- 4C B8 08 JMP \$08B8

19EE : ABORT SP! DROP 0 DECIMAL DR0 FORTH
DEFINITIONS LIT 0804 LIT 03F2 ! CLIT A
D LIT 03F4 C! JOT BRANCH FFFC ;S

*1A1F:41 50
*19F4:BF 19
*8702:BF
*8706:19
*1938:37 0C
*8700G

19BF : QUIT 0 BLK ! [RP! CR QUERY INTERPRET
STATE @ 0= 0BRANCH 0008 (".") 03 OK
" BRANCH FFE6 ;S

19B2 : (CLIT 29 WORD ;S

1998 : DEFINITIONS CONTEXT @ CURRENT ! ;S

1990- 7E 19 81 A0 18 81 00 00

1986 : FORTH 13DA \ DOES>

1951 : VOCABULARY <BUILDS LIT A081 , CURRENT @
CFA , HERE VOC-LINK @ , VOC-LINK
! DOES> 2+ CONTEXT ! ;S

193A : IMMEDIATE LATEST CLIT 40 TOGGLE ;S

18EA : INTERPRET -FIND 0BRANCH 001E STATE @ <
0BRANCH 000A CFA , BRANCH 0006 CFA
EXECUTE ?STACK BRANCH 001C HERE NUMBER DPL @ 1+
0BRANCH 0008 DLITERAL BRANCH 00
06 DROP LITERAL ?STACK BRANCH FFC2 ;S

18B0 : ?STACK CLIT BB SP@ < 0BRANCH 0018 (".") 0B
EMPTY STACK" SP! DROP 0 QUIT SP
@ CLIT 50 < CLIT 07 ?ERROR ;S

1893 : DLITERAL STATE @ 0BRANCH 0008 SWAP
LITERAL LITERAL ;S

1877 : LITERAL STATE @ 0BRANCH 0008 COMPILE
LIT , ;S

17DB : CREATE FIRST @ HERE CLIT A0 + U< 2 ?ERROR
-FIND 0BRANCH 002E DROP WARNING
@ LIT FFFF = 0BRANCH 0008 DROP BRANCH 0018 NFA
ID. (".") 0F ISN'T UNIQUE " HER
E DUP C@ DUP 0= CLIT 09 ?ERROR WIDTH @ MIN 1+
ALLOT DP C@ CLIT FD = 0BRANCH 0006
BL C, DUP CLIT 80 TOGGLE HERE 1 - CLIT 80
TOGGLE LATEST , CURRENT @ ! LIT 0F21 , ;S

17AA : ID. PAD CLIT 20 CLIT 5F FILL DUP PFA LFA
OVER - PAD SWAP CMOVE PAD COUNT
CLIT 1F AND TYPE SPACE ;S

176F : ERROR WARNING @ 0< 0BRANCH 0008 DROP
BRANCH 0021 HERE COUNT TYPE (".") 04
? " MESSAGE SP! DROP DROP IN @ BLK @ QUIT ;S

175F : (ABORT) ABORT ;S

171B : -FIND BL WORD BL HERE COUNT + C! HERE
CONTEXT @ @ (FIND) DUP 0= 0BRANCH 0
01A CONTEXT @ @ LATEST = 0= 0BRANCH 000A DROP
HERE LATEST (FIND) ;S

16C4 : NUMBER 0 0 ROT DUP 1+ C@ CLIT 2D = DUP >R
+ LIT FFFF DPL ! (NUMBER) DUP C
@ BL - 0BRANCH 0015 DUP C@ CLIT 2E - 0 ?ERROR 0
BRANCH FFDD DROP R> 0BRANCH 0004
DMINUS ;S

1677 : (NUMBER) 1+ DUP >R C@ BASE @ DIGIT
0BRANCH 002C SWAP BASE @ U* DROP ROT B
ASE @ U* D+ DPL @ 1+ 0BRANCH 0008 1 DPL +! R>
BRANCH FFC6 R> ;S

1629 : WORD BLK @ 0BRANCH 000C BLK @ BLOCK
BRANCH 0006 TIB @ IN @ + SWAP ENCLOSE
HERECLIT22BLANKSIN+!OVER->RRHEREC!
+HERE1+R>1+CMOVE ;S

1618 : PAD HERE CLIT 44 + ;S

15FF : HOLD LIT FFFF HLD +! HLD @ C! ;S

15EE : BLANKS BL FILL ;S

15DE : ERASE 0 FILL ;S

\ WORD NAME = 1 SPACE. HIDDEN?

15C2 : BLK @ 0BRANCH 000A

0 IN ! ?EXEC

R> DROP

;S

15A7 : QUERY TIB @ CLIT 50 EXPECT 0 IN ! ;S

14B6 : EXPECT

OVER + OVER (DO)

KEYESC[DUP CLIT 15 = 0BRANCH 003D

DROP CH C@ CV C@ BCALC + C@ CLIT 3F AND

DUP CLIT 1D < 0BRANCH 0007

CLIT 40 OR LIT FBF4 CALL

I C! 0 I 1+ ! BRANCH 0090

DUP CLIT 08 = 0BRANCH 002B

DROP CLIT 08 OVER I = DUP 0BRANCH 0008

0 I ! DUP R> 2 - + >R - BRANCH 005A

DUP CLIT 0D = 0BRANCH 0013

0 I ! DROP CLIT 20 LEAVE

BRANCH 003E

DUP CLIT 18 = 0BRANCH 0025

```
DROP 0 OVER C! 0 OVER 1+ C!  
CLIT 58 EMIT CLIT 58 EMIT  
CLIT 58 LEAVE  
BRANCH 0010  
DUP I C! 0 I 1+ ! EMIT  
(LOOP) FF28  
DROP  
;S
```

```
1488 : ."  
CLIT 22 STATE @ 0BRANCH 0014  
COMPILE (."  
WORD HERE C@ 1+ ALLOT  
BRANCH 000A  
WORD HERE COUNT TYPE  
;S
```

```
146D : (."  
R COUNT DUP 1+ R> + >R TYPE  
;S
```

```
1435 : -TRAILING  
DUP  
0 (DO)  
  OVER OVER + 1 - C@ BL -  
  0BRANCH 0008  
  LEAVE BRANCH 0006  
  1 -  
(LOOP)  
FFE0  
;S
```

```
140C : TYPE  
-DUP 0BRANCH 0018
```

OVER + SWAP (DO)
I C@ EMIT
(LOOP) FFF8
BRANCH 0004
DROP
;S

13F8 : COUNT DUP 1+ SWAP C@ ;S

13C6 : DOES> R> LATEST PFA ! (;CODE)

13DA-	A5 DA	LDA	\$DA
13DC-	48	PHA	
13DD-	A5 D9	LDA	\$D9
13DF-	48	PHA	
13E0-	A0 02	LDY	#\$02
13E2-	B1 DC	LDA	(\$DC),Y
13E4-	85 D9	STA	\$D9
13E6-	C8	INY	
13E7-	B1 DC	LDA	(\$DC),Y
13E9-	85 DA	STA	\$DA
13EB-	18	CLC	
13EC-	A5 DC	LDA	\$DC
13EE-	69 04	ADC	#\$04
13F0-	48	PHA	
13F1-	A5 DD	LDA	\$DD
13F3-	69 00	ADC	#\$00
13F5-	4C B1 08	JMP	\$08B1

13B4 : <BUILDS 0 CONSTANT ;S

139E : ;CODE ?CSP COMPILE (;CODE) [ASSEMBLER ;S

1386 : (;CODE) R> LATEST PFA CFA ! ;S

1371 : DECIMAL CLIT 0A BASE ! ;S

1360 : HEX CLIT 10 BASE ! ;S

134C : SMUDGE LATEST CLIT 20 TOGGLE ;S

133D :] CLIT C0 STATE ! ;S
 132F : [0 STATE ! ;S
 1313 : COMPILE ?COMP R> DUP 2+ >R @ , ;S
 12F9 : ?LOADING BLK @ 0= CLIT 16 ?ERROR ;S
 12E1 : ?CSP SP@ CSP @ - CLIT 14 ?ERROR ;S
 12CD : ?PAIRS - CLIT 13 ?ERROR ;S
 12B8 : ?EXEC STATE @ CLIT 12 ?ERROR ;S
 12A1 : ?COMP STATE @ 0= CLIT 11 ?ERROR ;S
 1286 : ?ERROR SWAP 0BRANCH 0008 ERROR BRANCH
 0004 DROP ;S
 1275 : !CSP SP@ CSP ! ;S
 1262 : PFA 1 TRAVERSE CLIT 05 + ;S
 124D : NFA CLIT 05 - LIT FFFF TRAVERSE ;S
 123F : CFA 2 - ;S
 1230 : LFA CLIT 04 - ;S
 121D : LATEST CURRENT @ @ ;S
 11F7 : TRAVERSE \ SKIP OVER NAME OF WORD
 SWAP
 OVER +

CLIT 7F OVER
C@ < 0BRANCH FFF1
SWAP
DROP
;S

11DC : U< >R 0 R> 0 DMINUS D+ SWAP DROP 0< ;S

11C9 : -DUP DUP 0BRANCH 0004 DUP ;S

11B9 : SPACE BL EMIT ;S

11AB : ROT 3 ROLL ;S

119F : > SWAP < ;S

1193 : = - 0= ;S

1187 : - MINUS + ;S

1176 : C, HERE C! 1 ALLOT ;S

1166 : , HERE ! 2 ALLOT ;S

1156 : ALLOT DP +! ;S

1147 : HERE DP @ ;S

113A : 2+ 2 + ;S

113A : 2+ 2 + ;S

112D : 1+ 1 + ;S

1120 : DISKMAX 0FA2 \ USER VAR \$42 = \$2032 =

REBOOT

1116	:	SLOT 0FA2	\	USER	VAR	\$40	=	\$205B
110D	:	HLD 0FA2	\	USER	VAR	\$3E	=	\$2021
1105	:	R# 0FA2	\	USER	VAR	\$3C	=	\$204C
10FC	:	CSP 0FA2	\	USER	VAR	\$3A	=	\$4152
10F3	:	FLD 0FA2	\	USER	VAR	\$38	=	\$4554
10EA	:	DPL 0FA2	\	USER	VAR	\$36	=	\$494C
10E0	:	BASE 0FA2	\	USER	VAR	\$34	=	\$2054
10D5	:	STATE 0FA2	\	USER	VAR	\$32	=	\$4F4F
10C8	:	CURRENT 0FA2	\	USER	VAR	\$30	=	\$4241
10BB	:	CONTEXT 0FA2	\	USER	VAR	\$2E	=	\$2021
10AF	:	OFFSET 0FA2	\	USER	VAR	\$2C	=	\$2020
10A6	:	SCR 0FA2	\	USER	VAR	\$2A	=	\$202B
109D	:	OUT 0FA2	\	USER	VAR	\$28	=	\$3220
1095	:	IN 0FA2	\	USER	VAR	\$26	=	\$2120
108C	:	BLK 0FA2	\	USER	VAR	\$24	=	\$5245
1083	:	C/L 0FA2	\	USER	VAR	\$1E	=	\$0003
1079	:	PREV 0FA2	\	USER	VAR	\$1C	=	\$0000
1070	:	USE 0FA2	\	USER	VAR	\$1A	=	\$0000
1065	:	LIMIT 0FA2	\	USER	VAR	\$18	=	\$0000
105A	:	FIRST 0FA2	\	USER	VAR	\$16	=	\$0028
104C	:	VOC-LINK 0FA2	\	USER	VAR	\$14	=	\$8404
1044	:	DP 0FA2	\	USER	VAR	\$12	=	\$9414
1039	:	FENCE 0FA2	\	USER	VAR	\$10	=	\$B434
102C	:	WARNING 0FA2	\	USER	VAR	\$0E	=	\$8404
1021	:	WIDTH 0FA2	\	USER	VAR	\$0C	=	\$60F2
1018	:	TIB 0FA2	\	USER	VAR	\$0A	=	\$819B

TIB: $\$830 + ((\$A-1) * 2) = \$842$ WHICH HAS \$9B \$81

```

0830- 18 81 08 00 30 08 BD 00
0838- FF 01 00 01 1F 00 00 00
0840- 38 27 9B 81 F2 60 04 84
0848- 34 B4 14 94 04 84 28 00
0850- 00 00 00 00 00 00 03 00
0858- C4 9A 23 00 00 00 94 19
0860- 94 19 00 00 0A 00 FF FF
0868- 52 47 B1 00 20 40 DD 81

```

```

0870- 01 00 17 01 4F 56 45 52
0878- 20 21 20 32 2B 20 20 20
0880- 21 20 41 42 4F 4F 54 20
0888- 4C 49 54 45 52 41 4C 20
0890- 21 20 5B 20 32 20 43 53

```

*819B.81CF

```

819B- 03 4D 4F 4E 20          \ "MON" = LAST COMMAND TYPED IN
FORTH
81A0- 20 20 20 20 20 20 20 20
81A8- 20 20 20 20 20 20 20 20
81B0- 20 20 20 20 20 20 20 20
81B8- 20 20 20 20 20 20 20 20
81C0- 20 20 20 20 20 20 20 20
81C8- 20 20 20 20 20 20 20 20

```

```

100F : CV 0F05          \ CONSTANT $0025 = ADDRESS 37
1006 : CH 0F05          \ CONSTANT $0024 = ADDRESS 36

```

```

0FF2 : +ORIGIN LIT 0800 + ;S

```

```

0FE6 : B/SCR 0F05      \ CONSTANT 1 = buffers per
screen
0FDA : B/BUF 0F05      \ CONSTANT $0400 = bytes per
buffer
0FD1 : BL 0F05          \ CONSTANT $20
0FC9 : 3 0F05           \ CONSTANT 3
0FC1 : 2 0F05           \ CONSTANT 2
0FB9 : 1 0F05           \ CONSTANT 1
0FB1 : 0 0F05           \ CONSTANT 0

```

```

0F95 : USER CONSTANT (;CODE)

```

```

0FA2- A0 02          LDY    #$02
0FA4- 18             CLC
0FA5- B1 DC          LDA    ($DC),Y
0FA7- 65 DE          ADC    $DE
0FA9- 48             PHA
0FAA- A9 00          LDA    #$00
0FAC- 65 DF          ADC    $DF
0FAE- 4C B1 08       JMP    $08B1

```

```

00DC- 88 1E 30 08

```

0F73 : 2CONSTANT 2VARIABLE (;CODE)

```
0F85- 18          CLC
0F86- A5 DC       LDA    $DC
0F88- 69 02       ADC    #$02
0F8A- 85 D1       STA    $D1
0F8C- A5 DD       LDA    $DD
0F8E- 69 00       ADC    #$00
0F90- 85 D2       STA    $D2
0F92- 4C 39 0F    JMP    $0F39
```

0F5F : 2VARIABLE VARIABLE , ;S

0F46 : 2! 0F4D

```
0F4D- A9 01       LDA    #$01
0F4F- 20 E0 08    JSR    $08E0
0F52- B5 00       LDA    $00,X
0F54- 91 D1       STA    ($D1),Y
0F56- E8          INX
0F57- C8          INY
0F58- C0 04       CPY    #$04
0F5A- D0 F6       BNE    $0F52
0F5C- 4C B8 08    JMP    $08B8
```

0F2D : 2@ 0F34

```
0F34- A9 01       LDA    #$01
0F36- 20 E0 08    JSR    $08E0
0F39- A0 03       LDY    #$03
0F3B- CA         DEX
0F3C- B1 D1       LDA    ($D1),Y
0F3E- 95 00       STA    $00,X
0F40- 88         DEY
0F41- 10 F8       BPL    $0F3B
0F43- 4C B8 08    JMP    $08B8
```

0F10 : VARIABLE CONSTANT (;CODE)

```
0F21- 18          CLC
0F22- A5 DC       LDA    $DC
0F24- 69 02       ADC    #$02
0F26- 48          PHA
0F27- 98          TYA
0F28- 65 DD       ADC    $DD
0F2A- 4C B1 08    JMP    $08B1
```

0EF2 : CONSTANT CREATE , (;CODE)

```
0F05- A0 02       LDY    #$02
```



```

0F07-   B1 DC      LDA    ($DC),Y
0F09-   48          PHA
0F0A-   C8          INY
0F0B-   B1 DC      LDA    ($DC),Y
0F0D-   4C B1 08    JMP    $08B1

```

```

0EE5 :  EMIT (EMIT) ;S

```

```

0ED3 :  ; ?CSP COMPILE ;S SMUDGE [ ;S

```

```

0EA4 :  : ?EXEC !CSP CURRENT @ CONTEXT ! CREATE
SMUDGE ] (;CODE)

```

```

0EBC-   90 13      BCC    $0ED1
0EBE-   A5 DA      LDA    $DA
0EC0-   48          PHA
0EC1-   A5 D9      LDA    $D9
0EC3-   48          PHA
0EC4-   18          CLC
0EC5-   A5 DC      LDA    $DC
0EC7-   69 02      ADC    #$02
0EC9-   85 D9      STA    $D9
0ECB-   98          TYA
0ECC-   65 DD      ADC    $DD
0ECE-   85 DA      STA    $DA
0ED0-   4C B8 08    JMP    $08B8

```

```

0E7E :  BCALC 0E88

```

```

0E88-   B5 00      LDA    $00,X
0E8A-   4A          LSR
0E8B-   29 03      AND    #$03
0E8D-   09 04      ORA    #$04
0E8F-   95 01      STA    $01,X
0E91-   B5 00      LDA    $00,X
0E93-   29 18      AND    #$18
0E95-   90 02      BCC    $0E99
0E97-   69 7F      ADC    #$7F
0E99-   95 00      STA    $00,X
0E9B-   0A          ASL
0E9C-   0A          ASL
0E9D-   15 00      ORA    $00,X
0E9F-   95 00      STA    $00,X
0EA1-   4C B8 08    JMP    $08B8

```

```

0E4D :  -TEXT 0E57

```

```

0E57-   A9 03      LDA    #$03
0E59-   20 E0 08    JSR    $08E0

```

0E5C-	84 D4	STY	\$D4
0E5E-	A4 D3	LDY	\$D3
0E60-	38	SEC	
0E61-	88	DEY	
0E62-	30 0B	BMI	\$0E6F
0E64-	B1 D5	LDA	(\$D5),Y
0E66-	F1 D1	SBC	(\$D1),Y
0E68-	05 D4	ORA	\$D4
0E6A-	85 D4	STA	\$D4
0E6C-	4C 61 0E	JMP	\$0E61
0E6F-	98	TYA	
0E70-	90 07	BCC	\$0E79
0E72-	C8	INY	
0E73-	A5 D4	LDA	\$D4
0E75-	F0 02	BEQ	\$0E79
0E77-	A9 01	LDA	#\$01
0E79-	48	PHA	
0E7A-	98	TYA	
0E7B-	4C B1 08	JMP	\$08B1

0E25 : ROLL 0E2E

0E2E-	20 06 0E	JSR	\$0E06
0E31-	E4 E0	CPX	\$E0
0E33-	30 02	BMI	\$0E37
0E35-	D0 05	BNE	\$0E3C
0E37-	A6 E0	LDX	\$E0
0E39-	4C CA 09	JMP	\$09CA
0E3C-	48	PHA	
0E3D-	B5 01	LDA	\$01,X
0E3F-	B4 FF	LDY	\$FF,X
0E41-	94 01	STY	\$01,X
0E43-	CA	DEX	
0E44-	E4 E0	CPX	\$E0
0E46-	D0 F7	BNE	\$0E3F
0E48-	E8	INX	
0E49-	E8	INX	
0E4A-	4C B3 08	JMP	\$08B3

0E11 : PICK 0E1A

0E1A-	20 06 0E	JSR	\$0E06
0E1D-	48	PHA	
0E1E-	B5 01	LDA	\$01,X
0E20-	A6 E0	LDX	\$E0
0E22-	4C B3 08	JMP	\$08B3

\ SUBROUTINE -

0E06-	86 E0	STX	\$E0
0E08-	B5 00	LDA	\$00,X
0E0A-	0A	ASL	

```

0E0B- 65 E0      ADC    $E0
0E0D- AA          TAX
0E0E- B5 00      LDA    $00,X
0E10- 60          RTS

```

0DF8 : C! 0DFF

```

0DFF- B5 02      LDA    $02,X
0E01- 81 00      STA    ($00,X)
0E03- 4C C8 09   JMP    $09C8

```

0DE1 : ! 0DE7

```

0DE7- B5 02      LDA    $02,X
0DE9- 81 00      STA    ($00,X)
0DEB- F6 00      INC    $00,X
0DED- D0 02      BNE    $0DF1
0DEF- F6 01      INC    $01,X
0DF1- B5 03      LDA    $03,X
0DF3- 81 00      STA    ($00,X)
0DF5- 4C C8 09   JMP    $09C8

```

0DD1 : C@ 0DD8

```

0DD8- A1 00      LDA    ($00,X)
0DDA- 95 00      STA    $00,X
0DDC- 94 01      STY    $01,X
0DDE- 4C B8 08   JMP    $08B8

```

0DBD : @ 0DC3

```

0DC3- A1 00      LDA    ($00,X)
0DC5- 48          PHA
0DC6- F6 00      INC    $00,X
0DC8- D0 02      BNE    $0DCC
0DCA- F6 01      INC    $01,X
0DCC- A1 00      LDA    ($00,X)
0DCE- 4C B3 08   JMP    $08B3

```

0DA9 : TOGGLE 0DB4

\ APPLY A BIT MASK

```

0DB4- A1 02      LDA    ($02,X)
0DB6- 55 00      EOR    $00,X
0DB8- 81 02      STA    ($02,X)
0DBA- 4C C8 09   JMP    $09C8

```

0D8C : +! 0D93

```

0D93- 18          CLC
0D94- A1 00      LDA    ($00,X)

```

0D96-	75 02	ADC	\$02,X
0D98-	81 00	STA	(\$00,X)
0D9A-	F6 00	INC	\$00,X
0D9C-	D0 02	BNE	\$0DA0
0D9E-	F6 01	INC	\$01,X
0DA0-	A1 00	LDA	(\$00,X)
0DA2-	75 03	ADC	\$03,X
0DA4-	81 00	STA	(\$00,X)
0DA6-	4C C8 09	JMP	\$09C8

0D7C : DUP 0D84

0D84-	B5 00	LDA	\$00,X
0D86-	48	PHA	
0D87-	B5 01	LDA	\$01,X
0D89-	4C B1 08	JMP	\$08B1

0D63 : SWAP 0D6C

0D6C-	B5 02	LDA	\$02,X
0D6E-	48	PHA	
0D6F-	B5 00	LDA	\$00,X
0D71-	95 02	STA	\$02,X
0D73-	B5 03	LDA	\$03,X
0D75-	B4 01	LDY	\$01,X
0D77-	94 03	STY	\$03,X
0D79-	4C B3 08	JMP	\$08B3

0D5A : DROP 09CA

09CA-	E8	INX	
09CB-	E8	INX	
09CC-	4C B8 08	JMP	\$08B8

0D49 : OVER 0D52

0D52-	B5 02	LDA	\$02,X
0D54-	48	PHA	
0D55-	B5 03	LDA	\$03,X
0D57-	4C B1 08	JMP	\$08B1

0D30 : DMINUS 0D3B

0D3B-	38	SEC	
0D3C-	98	TYA	
0D3D-	F5 02	SBC	\$02,X
0D3F-	95 02	STA	\$02,X
0D41-	98	TYA	
0D42-	F5 03	SBC	\$03,X
0D44-	95 03	STA	\$03,X
0D46-	4C 23 0D	JMP	\$0D23

0D18 : MINUS 0D22

0D22-	38	SEC	
0D23-	98	TYA	
0D24-	F5 00	SBC	\$00,X
0D26-	95 00	STA	\$00,X
0D28-	98	TYA	
0D29-	F5 01	SBC	\$01,X
0D2B-	95 01	STA	\$01,X
0D2D-	4C B8 08	JMP	\$08B8

0CF5 : D+ 0CFC

0CFC-	18	CLC	
0CFD-	B5 02	LDA	\$02,X
0CFF-	75 06	ADC	\$06,X
0D01-	95 06	STA	\$06,X
0D03-	B5 03	LDA	\$03,X
0D05-	75 07	ADC	\$07,X
0D07-	95 07	STA	\$07,X
0D09-	B5 00	LDA	\$00,X
0D0B-	75 04	ADC	\$04,X
0D0D-	95 04	STA	\$04,X
0D0F-	B5 01	LDA	\$01,X
0D11-	75 05	ADC	\$05,X
0D13-	95 05	STA	\$05,X
0D15-	4C C8 09	JMP	\$09C8

0CDD : + 0CE3

0CE3-	18	CLC	
0CE4-	B5 00	LDA	\$00,X
0CE6-	75 02	ADC	\$02,X
0CE8-	95 02	STA	\$02,X
0CEA-	B5 01	LDA	\$01,X
0CEC-	75 03	ADC	\$03,X
0CEE-	95 03	STA	\$03,X
0CF0-	E8	INX	
0CF1-	E8	INX	
0CF2-	4C B8 08	JMP	\$08B8

0CC0 : < 0CC6

0CC6-	38	SEC	
0CC7-	B5 02	LDA	\$02,X
0CC9-	F5 00	SBC	\$00,X
0CCB-	B5 03	LDA	\$03,X
0CCD-	F5 01	SBC	\$01,X
0CCF-	94 03	STY	\$03,X

0CD1-	50 02	BVC	\$0CD5
0CD3-	49 80	EOR	#\$80
0CD5-	10 01	BPL	\$0CD8
0CD7-	C8	INY	
0CD8-	94 02	STY	\$02,X
0CDA-	4C CA 09	JMP	\$09CA

0CAE : 0< 0CB5

0CB5-	16 01	ASL	\$01,X
0CB7-	98	TYA	
0CB8-	2A	ROL	
0CB9-	94 01	STY	\$01,X
0CBB-	95 00	STA	\$00,X
0CBD-	4C B8 08	JMP	\$08B8

0C99 : 0= 0CA0

0CA0-	B5 00	LDA	\$00,X
0CA2-	15 01	ORA	\$01,X
0CA4-	94 01	STY	\$01,X
0CA6-	D0 01	BNE	\$0CA9
0CA8-	C8	INY	
0CA9-	94 00	STY	\$00,X
0CAB-	4C B8 08	JMP	\$08B8

0C84 : R 0C8A

0C8A-	86 E0	STX	\$E0
0C8C-	BA	TSX	
0C8D-	BD 01 01	LDA	\$0101,X
0C90-	48	PHA	
0C91-	BD 02 01	LDA	\$0102,X
0C94-	A6 E0	LDX	\$E0
0C96-	4C B1 08	JMP	\$08B1

0C72 : R> 0C79

0C79-	CA	DEX	
0C7A-	CA	DEX	
0C7B-	68	PLA	
0C7C-	95 00	STA	\$00,X
0C7E-	68	PLA	
0C7F-	95 01	STA	\$01,X
0C81-	4C B8 08	JMP	\$08B8

0C60 : >R 0C67

0C67-	B5 01	LDA	\$01,X
0C69-	48	PHA	
0C6A-	B5 00	LDA	\$00,X

0C6C-	48	PHA	
0C6D-	E8	INX	
0C6E-	E8	INX	
0C6F-	4C B8 08	JMP	\$08B8

0C42 : LEAVE 0C4C

0C4C-	86 E0	STX	\$E0
0C4E-	BA	TSX	
0C4F-	BD 01 01	LDA	\$0101,X
0C52-	9D 03 01	STA	\$0103,X
0C55-	BD 02 01	LDA	\$0102,X
0C58-	9D 04 01	STA	\$0104,X
0C5B-	A6 E0	LDX	\$E0
0C5D-	4C B8 08	JMP	\$08B8

0C32 : ;S 0C39

0C39-	68	PLA	
0C3A-	85 D9	STA	\$D9
0C3C-	68	PLA	
0C3D-	85 DA	STA	\$DA
0C3F-	4C B8 08	JMP	\$08B8

0C1D : RP! 0C25

0C25-	86 E0	STX	\$E0
0C27-	A0 08	LDY	#\$08
0C29-	B1 DE	LDA	(\$DE),Y
0C2B-	AA	TAX	
0C2C-	9A	TXS	
0C2D-	A6 E0	LDX	\$E0
0C2F-	4C B8 08	JMP	\$08B8

0C0D : SP! 0C15

0C15-	A0 06	LDY	#\$06
0C17-	B1 DE	LDA	(\$DE),Y
0C19-	AA	TAX	
0C1A-	4C B8 08	JMP	\$08B8

0BFE : SP@ 0C06

0C06-	8A	TXA	
0C07-	48	PHA	
0C08-	A9 00	LDA	#\$00
0C0A-	4C B1 08	JMP	\$08B1

0BE8 : XOR 0BF0

0BF0-	B5 00	LDA	\$00,X
-------	-------	-----	--------

0BF2-	55 02	EOR	\$02,X
0BF4-	48	PHA	
0BF5-	B5 01	LDA	\$01,X
0BF7-	55 03	EOR	\$03,X
0BF9-	E8	INX	
0BFA-	E8	INX	
0BFB-	4C B3 08	JMP	\$08B3

0BD3 : OR 0BDA

0BDA-	B5 00	LDA	\$00,X
0BDC-	15 02	ORA	\$02,X
0BDE-	48	PHA	
0BDF-	B5 01	LDA	\$01,X
0BE1-	15 03	ORA	\$03,X
0BE3-	E8	INX	
0BE4-	E8	INX	
0BE5-	4C B3 08	JMP	\$08B3

0BBD : AND 0BC5

0BC5-	B5 00	LDA	\$00,X
0BC7-	35 02	AND	\$02,X
0BC9-	48	PHA	
0BCA-	B5 01	LDA	\$01,X
0BCC-	35 03	AND	\$03,X
0BCE-	E8	INX	
0BCF-	E8	INX	
0BD0-	4C B3 08	JMP	\$08B3

0B81 : U/ 0B88

0B88-	B5 04	LDA	\$04,X
0B8A-	B4 02	LDY	\$02,X
0B8C-	94 04	STY	\$04,X
0B8E-	0A	ASL	
0B8F-	95 02	STA	\$02,X
0B91-	B5 05	LDA	\$05,X
0B93-	B4 03	LDY	\$03,X
0B95-	94 05	STY	\$05,X
0B97-	2A	ROL	
0B98-	95 03	STA	\$03,X
0B9A-	A9 10	LDA	#\$10
0B9C-	85 D1	STA	\$D1
0B9E-	36 04	ROL	\$04,X
0BA0-	36 05	ROL	\$05,X
0BA2-	38	SEC	
0BA3-	B5 04	LDA	\$04,X
0BA5-	F5 00	SBC	\$00,X
0BA7-	A8	TAY	
0BA8-	B5 05	LDA	\$05,X

0BAA-	F5 01	SBC	\$01,X
0BAC-	90 04	BCC	\$0BB2
0BAE-	94 04	STY	\$04,X
0BB0-	95 05	STA	\$05,X
0BB2-	36 02	ROL	\$02,X
0BB4-	36 03	ROL	\$03,X
0BB6-	C6 D1	DEC	\$D1
0BB8-	D0 E4	BNE	\$0B9E
0BBA-	4C CA 09	JMP	\$09CA

0B49 : U* 0B50

0B50-	B5 02	LDA	\$02,X
0B52-	85 D1	STA	\$D1
0B54-	94 02	STY	\$02,X
0B56-	B5 03	LDA	\$03,X
0B58-	85 D2	STA	\$D2
0B5A-	94 03	STY	\$03,X
0B5C-	A0 10	LDY	#\$10
0B5E-	16 02	ASL	\$02,X
0B60-	36 03	ROL	\$03,X
0B62-	36 00	ROL	\$00,X
0B64-	36 01	ROL	\$01,X
0B66-	90 13	BCC	\$0B7B
0B68-	18	CLC	
0B69-	A5 D1	LDA	\$D1
0B6B-	75 02	ADC	\$02,X
0B6D-	95 02	STA	\$02,X
0B6F-	A5 D2	LDA	\$D2
0B71-	75 03	ADC	\$03,X
0B73-	95 03	STA	\$03,X
0B75-	A9 00	LDA	#\$00
0B77-	75 00	ADC	\$00,X
0B79-	95 00	STA	\$00,X
0B7B-	88	DEY	
0B7C-	D0 E0	BNE	\$0B5E
0B7E-	4C B8 08	JMP	\$08B8

0B20 : FILL 0B29

0B29-	A9 03	LDA	#\$03
0B2B-	20 E0 08	JSR	\$08E0
0B2B-	20 E0 08	JSR	\$08E0
0B2E-	A5 D4	LDA	\$D4
0B30-	30 0A	BMI	\$0B3C
0B32-	A5 D1	LDA	\$D1
0B34-	C4 D3	CPY	\$D3
0B36-	D0 07	BNE	\$0B3F
0B38-	C6 D4	DEC	\$D4
0B3A-	10 03	BPL	\$0B3F
0B3C-	4C B8 08	JMP	\$08B8

0B3F-	91 D5	STA	(\$D5),Y
0B41-	C8	INY	
0B42-	D0 F0	BNE	\$0B34
0B44-	E6 D6	INC	\$D6
0B46-	4C 34 0B	JMP	\$0B34

0AF7 : CMOVE 0B02

0B02-	A9 03	LDA	#\$03
0B04-	20 E0 08	JSR	\$08E0
0B07-	C4 D1	CPY	\$D1
0B09-	D0 07	BNE	\$0B12
0B0B-	C6 D2	DEC	\$D2
0B0D-	10 03	BPL	\$0B12
0B0F-	4C B8 08	JMP	\$08B8
0B12-	B1 D5	LDA	(\$D5),Y
0B14-	91 D3	STA	(\$D3),Y
0B16-	C8	INY	
0B17-	D0 EE	BNE	\$0B07
0B19-	E6 D6	INC	\$D6
0B1B-	E6 D4	INC	\$D4
0B1D-	4C 07 0B	JMP	\$0B07

0AEB : KEYESC[1E54

1E54-	20 35 FD	JSR	\$FD35
1E57-	29 7F	AND	#\$7F
1E59-	C9 1D	CMP	#\$1D
1E5B-	D0 02	BNE	\$1E5F
1E5D-	A9 5B	LDA	#\$5B
1E5F-	4C 07 0C	JMP	\$0C07

0AE4 : CR 1E4C

1E4C-	A9 8D	LDA	#\$8D
1E4E-	20 ED FD	JSR	\$FDED
1E51-	4C B8 08	JMP	\$08B8

0AD6 : ?TERMINAL 1E3A

1E3A-	2C 00 C0	BIT	\$C000
1E3D-	10 09	BPL	\$1E48
1E3F-	2C 10 C0	BIT	\$C010
1E42-	2C 00 C0	BIT	\$C000
1E45-	30 F8	BMI	\$1E3F
1E47-	C8	INY	
1E48-	98	TYA	
1E49-	4C 07 0C	JMP	\$0C07

0ACE : KEY 1E32

1E32-	20 0C FD	JSR	\$FD0C
1E35-	29 7F	AND	#\$7F
1E37-	4C 07 0C	JMP	\$0C07

0AC3 : (EMIT) 1E14

1E14-	86 E0	STX	\$E0
1E16-	B5 00	LDA	\$00,X
1E18-	09 80	ORA	#\$80
1E1A-	20 ED FD	JSR	\$FDED
1E1D-	A6 E0	LDX	\$E0
1E1F-	18	CLC	
1E20-	A0 28	LDY	#\$28
1E22-	B1 DE	LDA	(\$DE),Y
1E24-	69 01	ADC	#\$01
1E26-	91 DE	STA	(\$DE),Y
1E28-	C8	INY	
1E29-	B1 DE	LDA	(\$DE),Y
1E2B-	69 00	ADC	#\$00
1E2D-	91 DE	STA	(\$DE),Y
1E2F-	4C CA 09	JMP	\$09CA

0A74 : ENCLOSE 0A80

0A6A-	C8	INY	
0A6B-	D0 06	BNE	\$0A73
0A6D-	F6 01	INC	\$01,X
0A6F-	F6 03	INC	\$03,X
0A71-	E6 D4	INC	\$D4
0A73-	60	RTS	

0A80-	A9 02	LDA	#\$02
0A82-	20 E0 08	JSR	\$08E0
0A85-	8A	TXA	
0A86-	38	SEC	
0A87-	E9 08	SBC	#\$08
0A89-	AA	TAX	
0A8A-	94 01	STY	\$01,X
0A8C-	94 03	STY	\$03,X
0A8E-	B1 D3	LDA	(\$D3),Y
0A90-	C5 D1	CMP	\$D1
0A92-	D0 06	BNE	\$0A9A
0A94-	20 6A 0A	JSR	\$0A6A
0A97-	4C 8E 0A	JMP	\$0A8E
0A9A-	B5 03	LDA	\$03,X
0A9C-	95 05	STA	\$05,X
0A9E-	94 04	STY	\$04,X
0AA0-	B1 D3	LDA	(\$D3),Y
0AA2-	D0 07	BNE	\$0AAB

0AA4-	94 02	STY	\$02,X
0AA6-	94 00	STY	\$00,X
0AA8-	4C B8 08	JMP	\$08B8
0AAB-	C5 D1	CMP	\$D1
0AAD-	F0 06	BEQ	\$0AB5
0AAF-	20 6A 0A	JSR	\$0A6A
0AB2-	4C A0 0A	JMP	\$0AA0
0AB5-	94 02	STY	\$02,X
0AB7-	B5 03	LDA	\$03,X
0AB9-	20 6A 0A	JSR	\$0A6A
0ABC-	95 03	STA	\$03,X
0ABE-	94 00	STY	\$00,X
0AC0-	4C B8 08	JMP	\$08B8

0A05 : (FIND) 0A10

0A10-	A9 02	LDA	#\$02
0A12-	20 E0 08	JSR	\$08E0
0A15-	86 E0	STX	\$E0
0A17-	A0 00	LDY	#\$00
0A19-	B1 D1	LDA	(\$D1),Y
0A1B-	51 D3	EOR	(\$D3),Y
0A1D-	29 3F	AND	#\$3F
0A1F-	D0 2D	BNE	\$0A4E
0A21-	C8	INY	
0A22-	B1 D1	LDA	(\$D1),Y
0A24-	51 D3	EOR	(\$D3),Y
0A26-	0A	ASL	
0A27-	D0 23	BNE	\$0A4C
0A29-	90 F6	BCC	\$0A21
0A2B-	A6 E0	LDX	\$E0
0A2D-	CA	DEX	
0A2E-	CA	DEX	
0A2F-	CA	DEX	
0A30-	CA	DEX	
0A31-	18	CLC	
0A32-	98	TYA	
0A33-	69 05	ADC	#\$05
0A35-	65 D1	ADC	\$D1
0A37-	95 02	STA	\$02,X
0A39-	A0 00	LDY	#\$00
0A3B-	98	TYA	
0A3C-	65 D2	ADC	\$D2
0A3E-	95 03	STA	\$03,X
0A40-	94 01	STY	\$01,X
0A42-	B1 D1	LDA	(\$D1),Y
0A44-	95 00	STA	\$00,X
0A46-	A9 01	LDA	#\$01
0A48-	48	PHA	
0A49-	4C B1 08	JMP	\$08B1

0A4C-	B0 05	BCS	\$0A53
0A4E-	C8	INY	
0A4F-	B1 D1	LDA	(\$D1),Y
0A51-	10 FB	BPL	\$0A4E
0A53-	C8	INY	
0A54-	B1 D1	LDA	(\$D1),Y
0A56-	AA	TAX	
0A57-	C8	INY	
0A58-	B1 D1	LDA	(\$D1),Y
0A5A-	85 D2	STA	\$D2
0A5C-	86 D1	STX	\$D1
0A5E-	05 D1	ORA	\$D1
0A60-	D0 B5	BNE	\$0A17
0A62-	A6 E0	LDX	\$E0
0A64-	A9 00	LDA	#\$00
0A66-	48	PHA	
0A67-	4C B1 08	JMP	\$08B1

09D5 : DIGIT 09DF

09DF-	38	SEC	
09E0-	B5 02	LDA	\$02,X
09E2-	E9 30	SBC	#\$30
09E4-	30 18	BMI	\$09FE
09E6-	C9 0A	CMP	#\$0A
09E8-	30 07	BMI	\$09F1
09EA-	38	SEC	
09EB-	E9 07	SBC	#\$07
09ED-	C9 0A	CMP	#\$0A
09EF-	30 0D	BMI	\$09FE
09F1-	D5 00	CMP	\$00,X
09F3-	10 09	BPL	\$09FE
09F5-	95 02	STA	\$02,X
09F7-	A9 01	LDA	#\$01
09F9-	48	PHA	
09FA-	98	TYA	
09FB-	4C B3 08	JMP	\$08B3
09FE-	98	TYA	
09FF-	48	PHA	
0A00-	E8	INX	
0A01-	E8	INX	
0A02-	4C B3 08	JMP	\$08B3

09CF : I 0C8A

0C8A-	86 E0	STX	\$E0
0C8C-	BA	TSX	
0C8D-	BD 01 01	LDA	\$0101,X
0C90-	48	PHA	
0C91-	BD 02 01	LDA	\$0102,X
0C94-	A6 E0	LDX	\$E0

0C96- 4C B1 08 JMP \$08B1

09B3 : (DO) 09BC

09BC- B5 03 LDA \$03,X
09BE- 48 PHA
09BF- B5 02 LDA \$02,X
09C1- 48 PHA
09C2- B5 01 LDA \$01,X
09C4- 48 PHA
09C5- B5 00 LDA \$00,X
09C7- 48 PHA
09C8- E8 INX
09C9- E8 INX
\ drop 1 value from stack
09CA- E8 INX
09CB- E8 INX
09CC- 4C B8 08 JMP \$08B8

0979 : (+LOOP) 0985

0985- E8 INX
0986- E8 INX
0987- 86 E0 STX \$E0
0989- B5 FF LDA \$FF,X
098B- 48 PHA
098C- 48 PHA
098D- B5 FE LDA \$FE,X
098F- BA TSX
0990- E8 INX
0991- E8 INX
0992- 18 CLC
0993- 7D 01 01 ADC \$0101,X
0996- 9D 01 01 STA \$0101,X
0999- 68 PLA
099A- 7D 02 01 ADC \$0102,X
099D- 9D 02 01 STA \$0102,X
09A0- 68 PLA
09A1- 10 BD BPL \$0960
09A3- 18 CLC
09A4- BD 01 01 LDA \$0101,X
09A7- FD 03 01 SBC \$0103,X
09AA- BD 02 01 LDA \$0102,X
09AD- FD 04 01 SBC \$0104,X
09B0- 4C 6D 09 JMP \$096D

094A : (LOOP) 0955

0955- 86 E0 STX \$E0
0957- BA TSX
0958- FE 01 01 INC \$0101,X

095B-	D0 03	BNE	\$0960
095D-	FE 02 01	INC	\$0102,X
0960-	18	CLC	
0961-	BD 03 01	LDA	\$0103,X
0964-	FD 01 01	SBC	\$0101,X
0967-	BD 04 01	LDA	\$0104,X
096A-	FD 02 01	SBC	\$0102,X
096D-	A6 E0	LDX	\$E0
096F-	0A	ASL	
0970-	90 A3	BCC	\$0915
0972-	68	PLA	
0973-	68	PLA	
0974-	68	PLA	
0975-	68	PLA	
0976-	4C 3C 09	JMP	\$093C

0928 : 0BRANCH 0934

0934-	E8	INX	
0935-	E8	INX	
0936-	B5 FE	LDA	\$FE,X
0938-	15 FF	ORA	\$FF,X
093A-	F0 D9	BEQ	\$0915
093C-	18	CLC	
093D-	A5 D9	LDA	\$D9
093F-	69 02	ADC	#\$02
0941-	85 D9	STA	\$D9
0943-	90 02	BCC	\$0947
0945-	E6 DA	INC	\$DA
0947-	4C B8 08	JMP	\$08B8

090A : BRANCH 0915

0915-	18	CLC	
0916-	B1 D9	LDA	(\$D9),Y
0918-	65 D9	ADC	\$D9
091A-	48	PHA	
091B-	C8	INY	
091C-	B1 D9	LDA	(\$D9),Y
091E-	65 DA	ADC	\$DA
0920-	85 DA	STA	\$DA
0922-	68	PLA	
0923-	85 D9	STA	\$D9
0925-	4C BA 08	JMP	\$08BA

08F1 : EXECUTE 08FD

08FD-	B5 00	LDA	\$00,X
08FF-	85 DC	STA	\$DC
0901-	B5 01	LDA	\$01,X
0903-	85 DD	STA	\$DD

```

0905-    E8            INX
0906-    E8            INX
0907-    4C DB 00      JMP    $00DB

```

EXAMPLE:

```

00DB-    6C 88 1E      JMP    ($1E88)

```

08D1 : CLIT 08DA

```

08DA-    B1 D9          LDA    ($D9),Y
08DC-    48            PHA
08DD-    98            TYA
08DE-    F0 CB          BEQ    $08AB

```

\ SUBROUTINE TO READ [ACC] # OF 2-BYTE VALUES FROM STACK

```

08E0-    0A            ASL
08E1-    85 D0          STA    $D0
08E3-    B5 00          LDA    $00,X
08E5-    99 D1 00      STA    $00D1,Y
08E8-    E8            INX
08E9-    C8            INY
08EA-    C4 D0          CPY    $D0
08EC-    D0 F5          BNE    $08E3
08EE-    A0 00          LDY    #$00
08F0-    60            RTS

```

0898 : LIT 08A0

```

08A0-    B1 D9          LDA    ($D9),Y
08A2-    48            PHA
08A3-    E6 D9          INC    $D9
08A5-    D0 02          BNE    $08A9
08A7-    E6 DA          INC    $DA
08A9-    B1 D9          LDA    ($D9),Y
08AB-    E6 D9          INC    $D9
08AD-    D0 02          BNE    $08B1
08AF-    E6 DA          INC    $DA

```

\ SUBROUTINE - CONTINUE PROCESSING AND GO ON TO NEXT WORD

```

08B1-    CA            DEX
08B2-    CA            DEX
\ SUBROUTINE -
08B3-    95 01          STA    $01,X
08B5-    68            PLA
08B6-    95 00          STA    $00,X
08B8-    A0 01          LDY    #$01
08BA-    B1 D9          LDA    ($D9),Y
08BC-    85 DD          STA    $DD
08BE-    88            DEY
08BF-    B1 D9          LDA    ($D9),Y

```



```

08C1- 85 DC      STA  $DC
08C3- 18         CLC
08C4- A5 D9      LDA  $D9
08C6- 69 02      ADC  #$02
08C8- 85 D9      STA  $D9
08CA- 90 02      BCC  $08CE
08CC- E6 DA      INC  $DA
08CE- 4C DB 00   JMP  $00DB

```

*1938:39 30 \ UNDO PATCH FOR DISASSEMBLY

*800L

```

0800- EA         NOP
0801- 4C 7A 1A   JMP  $1A7A
0804- EA         NOP
0805- 4C AA 1A   JMP  $1AAA

```

```

0808- 00 00 01 00 18 81 08 00   \ 80C,80D = NFA OF TOPMOST WORD
(JOT)
0810- 30 08 BD 00 FF 01 00 01
0818- 1F 00 00 00 38 27 9B 81
0820- F2 60 04 84 34 B4 04 84
0828- 04 84 28 00 00 00 00 00

```

ZERO PAGE:

```

0000- 4C 3C D4 4C 3A DB FF FF
0008- FF FF 4C 99 E1 FF 00 6B
0010- FF 00 FF 04 00 FF FF FF
0018- FF FF FF FF FF FF FF FF
0020- 00 28 00 18 12 17 00 FF
0028- D0 07 D0 07 00 00 00 00
0030- FF 00 FF AA 04 00 F0 FD
0038- 1B FD 47 55 3C 00 B7 00
0040- 00 00 01 70 00 08 00 D8
0048- E8 B7 FF FF FF FF 8F 9C
0050- 00 C0 55 FF 00 FF FF FF
0058- FF FF FF FF FF FF 38 FF
0060- FF FF FF FF FF FF FF 01
0068- 08 03 08 03 08 03 08 00
0070- C0 FF FF 00 C0 FF FF FF
0078- FF FF 00 FF FF 00 08 FF
0080- FF FF FF FF FF FF FF FF
0088- FF 00 FF FF FF FF FF 03
0090- 4C FF 00 FF FF FF FF FF
0098- FF 00 00 00 00 83 00 00
00A0- 00 06 00 01 80 FF 7F DB
00A8- FF 00 00 AE 7B 91 17 20

```

00B0-	00	22	00	57	08	00	00	00
00B8-	00	FE	FF	69	FF	00	00	03
00C0-	00	EF	38	E9	30	38	E9	D0
00C8-	60	80	4F	C7	52	FF	FF	FF
00D0-	04	1A	34	9B	81	00	01	00
00D8-	00	28	34	6C	88	1E	30	08
00E0-	BD	FF	FF	FF	FF	FF	FF	FF
00E8-	FF	FF	FF	FF	FF	FF	FF	FF
00F0-	FF	01	00	00	FF	FF	FF	FF
00F8-	F8	FF	FF	FF	FF	FF	FF	FF