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;
; BBC FORTH ROM DISASSEMBLY
;

BOS      =      $10          ; BOTTOM OF DATA STACK
TOS      =      $58          ; TOP OF DATA STACK
N        =      $60          ; SCRATCH WORKSPACE
XSAVE    =      $68          ; TEMPORARY FOR X REGISTER
W        =      XSAVE+2      ; CODE FIELD POINTER
IP       =      W+2          ; INTERPRETIVE POINTER
UP       =      IP+2         ; USER AREA POINTER

WBSIZ    =      1+255+2      ; WORD BUFFER SIZE

UAREA    =      $400         ; USER AREA
WORDBU   =      UAREA+64     ; WORD BUFFER
TIBB     =      WORDBU+WBSIZ ; TERMINAL INPUT BUFFER
PADD     =      TIBB+126     ; PAD
RAM      =      PADD+80      ; RAM RELOCATION ADDR

EM       =      $7C00        ; END OF MEMORY+1
BLKSIZ   =      1024
HDBT     =      BLKSIZ+4
NOBUF    =      2
BUFS     =      NOBUF*HDBT
BUF1     =      EM-BUFS      ; FIRST BLOCK BUFFER

      *=      $8000          ; ROM ADDRESS

;      ROM HEADER

L8000    JMP      L80D5        ; LANGUAGE ENTRY
L8003    JMP      L805F        ; SERVICE ENTRY
L8006    .BYTE    $E2          ; ROM TYPE
L8007    .BYTE    COPYR-L8000  ; COPYRIGHT OFFSET
L8008    .BYTE    1            ; BINARY VERSION NUMBER
TITLE    .BYTE    'FORTH'     ; TITLE STRING
      .BYTE    0
VERS     .BYTE    '1.03'       ; VERSION STRING
COPYR    .BYTE    0,'(C)'      ; COPYRIGHT IDENT
      .BYTE    ' Acornsoft Ltd. 1983'
      .BYTE    0
      .WORD    L8000          ; TUBE RELOC ADDRESS
      .WORD    0

L8030    .BYTE    $A,$D,'COLD or WARM start (C/W)? ',0
      .BYTE    0

L804E    LDA      #>L8000
      STA      $13
      LDY      #0
L8054    LDA      ($12),Y
      BEQ      L805E
      JSR      $FFEE
      INY
      BNE      L8054
L805E    RTS

;      SERVICE ENTRY

L805F    CMP      #4
      BNE      L80B0
      PHA
      TYA
      PHA

```

	LDA	(\$F2),Y
	CMP	#'F'
	BEQ	L8070
	CMP	#'f'
	BNE	L80AC
L8070	INY	
	LDA	(\$F2),Y
	CMP	#'O'
	BEQ	L807B
	CMP	#'o'
	BNE	L80A8
L807B	INY	
	LDA	(\$F2),Y
	CMP	#'R'
	BEQ	L8086
	CMP	#'r'
	BNE	L80A8
L8086	INY	
	LDA	(\$F2),Y
	CMP	#'T'
	BEQ	L8091
	CMP	#'t'
	BNE	L80A8
L8091	INY	
	LDA	(\$F2),Y
	CMP	#'H'
	BEQ	L809C
	CMP	#'h'
	BNE	L80A8
L809C	INY	
	LDA	(\$F2),Y
	CMP	#\$D
	BNE	L80A8
	LDA	#\$8E
	JMP	\$FFF4
L80A8	CMP	#'.'
	BEQ	L809C
L80AC	PLA	
	TAY	
	PLA	
	RTS	
L80B0	CMP	#9
	BEQ	L80B5
	RTS	
L80B5	PHA	
	TYA	
	PHA	
	JSR	\$FFE7
	LDA	#<TITLE
	STA	\$12
	JSR	L804E
	LDA	#' '
	JSR	\$FFEE
	LDA	#<VERS
	STA	\$12
	JSR	L804E
	JSR	\$FFE7
	PLA	
	TAY	
	PLA	
	RTS	

```

;      LANGUAGE ENTRY

L80D5  CMP      #1
      BEQ      L80DA
      RTS

L80DA  CLI
      LDA      #<L8030
      STA      $12
L80DF  JSR      L804E
      JSR      $FFE0
      CMP      #$1B
      BNE      L80F0
      PHA
      LDA      #$7E
      JSR      $FFF4
      PLA
L80F0  CMP      #'W'
      BEQ      L80FB
      CMP      #'C'
      BNE      L80DF
      JMP      L8102

L80FB  JMP      L8105

      .BYTE    $FF,$FF

      *=      L8000+$100

ORIG   =      *      ; FORTH ORIGIN

      NOP
      NOP
L8102  JMP      COLD+2
L8105  JMP      WARM+2

L8108  .WORD    START+2
L810A  .WORD    PABOR+2

; BOOT-UP LITERALS

L810C  .WORD    TOPNFA      ; TOP NFA
      .WORD    $7F         ; BACKSPACE CHARACTER
L8110  .WORD    UAREA      ; INITIAL USER AREA
      .WORD    TOS         ; INITIAL TOP OF STACK
      .WORD    $1FF        ; INITIAL TOP OF RETURN STACK
      .WORD    TIBB        ; INITIAL TERMINAL INPUT BUFFER
      .WORD    31          ; INITIAL WIDTH
      .WORD    0           ; INITIAL WARNING
      .WORD    TOPDP       ; INITIAL FENCE
      .WORD    TOPDP       ; INITIAL DP
      .WORD    VL0-REL     ; INITIAL VOC-LINK
      .WORD    1

      .BYTE    'RdeG-H'    ; AUTHOR ?

L812A  .WORD    L9501
L812C  .WORD    ESCAPE+2
L812E  .WORD    OSERR+2

L8130  LDA      L8110+1
      STA      UP+1
      LDA      L8110
      STA      UP
L813A  LDA      L810C,Y
      STA      (UP),Y

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```

        DEY
        BPL      L813A
        LDA      #$6C
        STA      W-1
        CLD
        JMP      RPSTO+2          ; RUN FORTH

;      LIT

L814A   .BYTE    $83,'LI',$D4
        .WORD    0
LIT     .WORD    *+2
        LDA      (IP),Y
        PHA
        INC      IP
        BNE      L815B
        INC      IP+1
L815B   LDA      (IP),Y
        INC      IP
        BNE      PUSH
        INC      IP+1

PUSH    DEX
        DEX
PUT      STA      1,X
        PLA
        STA      0,X
NEXT     LDY      #1
L816C   LDA      (IP),Y
        STA      W+1
        DEY
        LDA      (IP),Y
        STA      W
        CLC
        LDA      IP
        ADC      #2
        STA      IP
        BCC      L8180
        INC      IP+1
L8180   BIT      $FF
        BMI      L8187
        JMP      W-1

L8187   JMP      L94ED

SETUP   ASL      A
        STA      $5F
L818D   LDA      0,X
        STA      N,Y
        INX
        INY
        CPY      $5F
        BNE      L818D
        LDY      #0
        RTS

;      EXECUTE

L819B   .BYTE    $87,'EXECUT',$C5
        .WORD    L814A
EXEC     .WORD    *+2
        LDA      0,X
        STA      W
        LDA      1,X
        STA      W+1
        INX

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        INX
        JMP      W-1

;        @EXECUTE

L81B4    .BYTE    $88, '@EXECUT', $C5
        .WORD    L819B
ATEXEC   .WORD    *+2
        LDA      (0,X)
        STA      W
        INC      0,X
        BNE      L81CB
        INC      1,X
L81CB    LDA      (0,X)
        STA      W+1
        INX
        INX
        JMP      W-1

;        BRANCH

L81D4    .BYTE    $86, 'BRANC', $C8
        .WORD    L81B4
BRAN     .WORD    L81E1

L81DF    LDX      XSAVE
L81E1    CLC
        LDA      (IP),Y
        ADC      IP
        PHA
        INY
        LDA      (IP),Y
        ADC      IP+1
        STA      IP+1
        PLA
        STA      IP
        JMP      L816C

;        0BRANCH

L81F4    .BYTE    $87, '0BRANC', $C8
        .WORD    L81D4
ZBRAN    .WORD    *+2
        INX
        INX
        LDA      $FE,X
        ORA      $FF,X
        BEQ      L81E1
BUMP     CLC
        LDA      IP
        ADC      #2
        STA      IP
        BCC      L8213
        INC      IP+1
L8213    JMP      NEXT

;        (LOOP)

L8216    .BYTE    $86, '(LOOP', $A9
        .WORD    L81F4
XLOOP    .WORD    *+2
        STX      XSAVE
        TSX
        INC      $101,X
        BNE      L8233
        TYA

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```

SEC
ADC      $102,X
BVS      L8246
STA      $102,X
L8233    CLC
LDA      $103,X
SBC      $101,X
LDA      $104,X
SBC      $102,X
BVC      L8244
EOR      #$80
L8244    BPL      L81DF

L8246    LDX      XSAVE
PLA
PLA
PLA
PLA
JMP      BUMP

;        (+LOOP)

L824F    .BYTE    $87, '(+LOOP', $A9
        .WORD    L8216
XPLOO    .WORD    *+2
LDA      1,X
PHA
PHA
LDA      0,X
INX
INX
STX      XSAVE
TSX
INX
INX
CLC
ADC      $101,X
STA      $101,X
PLA
ADC      $102,X
STA      $102,X
PLA
BVS      L8246
BPL      L8233
SEC
LDA      $101,X
SBC      $103,X
LDA      $102,X
SBC      $104,X
BVS      L8246
BVC      L8244

;        (ULOOP)

L828C    .BYTE    $87, '(ULOOP', $A9
        .WORD    L824F
XPULO    .WORD    *+2
STX      XSAVE
TSX
INC      $101,X
BNE      L82A3
INC      $102,X
L82A3    CLC
LDA      $103,X
SBC      $101,X
LDA      $104,X

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```

        SBC      $102,X
        JMP      L8244

;      I

L82B3   .BYTE    $81,$C9
        .WORD    L828C
IDO     .WORD    *+2
        STX      XSAVE
        TSX
        LDA      $101,X
        PHA
        LDA      $102,X
        LDX      XSAVE
        JMP      PUSH

;      (DO)

L82C8   .BYTE    $84,'(DO', $A9
        .WORD    L82B3
XDO     .WORD    *+2
        LDA      3,X
        PHA
        LDA      2,X
        PHA
        LDA      1,X
        PHA
        LDA      0,X
        PHA

POPTWO  INX
        INX

POP      INX
        INX
        JMP      NEXT

;      HIADDR

L82E4   .BYTE    $86,'HIADD', $D2
        .WORD    L82C8
HIADR   .WORD    *+2
        STX      XSAVE
        LDA      #$82
        JSR      $FFF4
        TXA
        LDX      XSAVE
        PHA
        TYA
        JMP      PUSH

;      MODEADDR

L82FE   .BYTE    $88,'MODEADD', $D2
        .WORD    L82E4
MODADR  .WORD    *+2
        STX      XSAVE
        LDA      0,X
        TAX
        LDA      #$85
        JSR      $FFF4
        TXA
        LDX      XSAVE
        STY      1,X
        STA      0,X
        JMP      NEXT

```

```

;      DIGIT

L831F  .BYTE    $85, 'DIGI', $D4
      .WORD    L82FE
DIGIT  .WORD    *+2
      SEC
      LDA      2,X
      SBC      #'0'
      BMI      L8348
      CMP      #$A
      BMI      L833B
      SEC
      SBC      #7
      CMP      #$A
      BMI      L8348
L833B  CMP      0,X
      BPL      L8348
      STA      2,X
      LDA      #1
      PHA
      TYA
      JMP      PUT

L8348  TYA
      PHA
      INX
      INX
      JMP      PUT

;      (FIND)

L834F  .BYTE    $86, '(FIND', $A9
      .WORD    L831F
PFIND  .WORD    *+2
      LDA      #2
      JSR      SETUP
      STX      XSAVE
L8361  LDY      #0
      LDA      (N),Y
      EOR      (N+2),Y
      AND      #$3F
      BNE      L8398
L836B  INY
      LDA      (N),Y
      EOR      (N+2),Y
      ASL      A
      BNE      L8396
      BCC      L836B
      LDX      XSAVE
      DEX
      DEX
      DEX
      DEX
      CLC
      TYA
      ADC      #3
      ADC      N
      STA      2,X
      LDY      #0
      TYA
      ADC      N+1
      STA      3,X
      STY      1,X
      LDA      (N),Y
      STA      0,X

```


	LDA	#1
	PHA	
	JMP	PUSH
L8396	BCS	L839D
L8398	INY	
	LDA	(N),Y
	BPL	L8398
L839D	INY	
	LDA	(N),Y
	TAX	
	INY	
	LDA	(N),Y
	STA	N+1
	STX	N
	ORA	N
	BNE	L8361
	LDX	XSAVE
	LDA	#0
	PHA	
	JMP	PUSH
;	ENCLOSE	
L83B4	.BYTE	\$87,'ENCLOS',\$C5
	.WORD	L834F
ENCL	.WORD	*+2
	LDA	#2
	JSR	SETUP
	TXA	
	SEC	
	SBC	#8
	TAX	
	DEY	
	STY	N+1
	DEC	N+3
L83CF	INY	
	BNE	L83D6
	INC	N+1
	INC	N+3
L83D6	LDA	(N+2),Y
	CMP	N
	BEQ	L83CF
	STY	4,X
	LDA	N+1
	STA	5,X
L83E2	LDA	(N+2),Y
	BNE	L8404
	STY	2,X
	STY	0,X
	LDA	N+1
	STA	3,X
	STA	1,X
	TYA	
	CMP	4,X
	BNE	L8401
	LDA	N+1
	CMP	5,X
	BNE	L8401
	INC	2,X
	BNE	L8401
	INC	3,X
L8401	JMP	NEXT
L8404	INY	
	BNE	L840B

L8407	INC	N+3
	INC	N+1
L840B	CMP	N
	BNE	L83E2
	STY	0,X
	LDA	N+1
	STA	1,X
	STA	3,X
	TYA	
	BNE	L841C
	DEC	3,X
L841C	DEY	
	STY	2,X
	JMP	NEXT
;		
	SP@	
L8422	.BYTE	\$83,'SP',\$C0
	.WORD	L83B4
SPAT	.WORD	*+2
	TXA	
L842B	PHA	
	LDA	#0
	JMP	PUSH
;		
	RP@	
L8431	.BYTE	\$83,'RP',\$C0
	.WORD	L8422
RPAT	.WORD	*+2
	STX	XSAVE
	TSX	
	TXA	
	LDX	XSAVE
	PHA	
	LDA	#1
	JMP	PUSH
;		
	SP!	
L8445	.BYTE	\$83,'SP',\$A1
	.WORD	L8431
SPSTO	.WORD	*+2
	LDY	#6
	LDA	(UP),Y
	TAX	
	JMP	NEXT
;		
	RP!	
L8455	.BYTE	\$83,'RP',\$A1
	.WORD	L8445
RPSTO	.WORD	*+2
	STX	XSAVE
	LDY	#8
	LDA	(UP),Y
	TAX	
	TXS	
L8465	LDX	XSAVE
	JMP	NEXT
;		
	(EMIT)	
L846A	.BYTE	\$86,'(EMIT',\$A9
	.WORD	L8455
PEMIT	.WORD	*+2

```

        TYA
        SEC
        LDY      #$1A
        ADC      (UP),Y
        STA      (UP),Y
        INY
        LDA      #0
        ADC      (UP),Y
        STA      (UP),Y
        LDA      0,X
        AND      #$7F
        JSR      $FFEE
        JMP      POP

;      >VDU

L848E   .BYTE    $84,'>VD',$D5
        .WORD    L9FFB-REL
TOVDU   .WORD    *+2
        LDA      0,X
        JSR      $FFEE
        JMP      POP

;      CMOVE

L849F   .BYTE    $85,'CMOV',$C5
        .WORD    L848E
CMOVE   .WORD    *+2
        SEC
        TYA
        SBC      0,X
        TYA
        SBC      1,X
        BPL      L84D0
        LDA      #3
        JSR      SETUP
L84B7   CPY      N
        BNE      L84C2
        DEC      N+1
        BPL      L84C2
        JMP      NEXT

L84C2   LDA      (N+4),Y
        STA      (N+2),Y
        INY
        BNE      L84B7
        INC      N+5
        INC      N+3
        JMP      L84B7

L84D0   INX
        INX
        JMP      POPTWO

;      U*

L84D5   .BYTE    $82,'U',$AA
        .WORD    L849F
USTAR   .WORD    *+2
        LDA      0,X
        STA      N
        LDA      1,X
        STA      N+1
        TYA
        STA      0,X
        CLC

```

	LDY	#\$11
	BNE	L84F9
L84EC	BCC	L84F9
	PHA	
	CLC	
	LDA	0,X
	ADC	N
	STA	0,X
	PLA	
	ADC	N+1
L84F9	ROR	A
	ROR	0,X
	ROR	3,X
	ROR	2,X
	DEY	
	BNE	L84EC
	STA	1,X
	JMP	NEXT
;	U/	
L8508	.BYTE	\$82,'U',\$AF
	.WORD	L84D5
USLAS	.WORD	*+2
	STY	N+1
	LDA	4,X
	LDY	2,X
	STY	4,X
	ASL	A
	STA	2,X
	LDA	5,X
	LDY	3,X
	STY	5,X
	ROL	A
	STA	3,X
	LDA	#\$10
	STA	N
L8527	ROL	4,X
	ROL	5,X
	ROL	N+1
	SEC	
	LDA	4,X
	SBC	0,X
	TAY	
	LDA	5,X
	SBC	1,X
	PHA	
	LDA	N+1
	SBC	#0
	PLA	
	BCC	L8543
	STY	4,X
	STA	5,X
L8543	ROL	2,X
	ROL	3,X
	DEC	N
	BNE	L8527
	JMP	POP
;	AND	
L854E	.BYTE	\$83,'AN',\$C4
	.WORD	L8508
ANDD	.WORD	*+2
	LDA	0,X

```

        AND      2,X
        PHA
        LDA      1,X
        AND      3,X
        INX
        INX
        JMP      PUT

;      OR

L8564   .BYTE    $82,'O',$D2
        .WORD    L854E
ORR     .WORD    *+2
        LDA      0,X
        ORA      2,X
        PHA
        LDA      1,X
        ORA      3,X
        INX
        INX
        JMP      PUT

;      XOR

L8579   .BYTE    $83,'XO',$D2
        .WORD    L8564
XORR    .WORD    *+2
        LDA      0,X
        EOR      2,X
        PHA
        LDA      1,X
        EOR      3,X
        INX
        INX
        JMP      PUT

;      ?KEY

L858F   .BYTE    $84,'?KE',$D9
        .WORD    L8579
QKEY    .WORD    *+2
        STX      XSAVE
        LDX      #1
        LDA      #$C
        JSR      $FFF4
        STX      N
        LDX      #0
        LDA      #$B
        JSR      $FFF4
        STX      N+1
        LDX      #1
        LDA      #$F
        JSR      $FFF4
        LDX      XSAVE
        LDY      1,X
        LDA      0,X
        TAX
        LDA      #$81
        JSR      $FFF4
        TXA
        PHA
        TYA
        PHA
        LDX      N
        LDA      #$C
        JSR      $FFF4

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```

        LDX      N+1
        LDA      #$B
        JSR      $FFF4
        PLA
        LDX      XSAVE
        JMP      PUT

;      (KEY)

L85D7   .BYTE    $85, '(KEY', $A9
        .WORD    L858F
PKEY    .WORD    *+2
        JSR      $FFE0
        JMP      L842B

;      EXIT

L85E7   .BYTE    $84, 'EXI', $D4
        .WORD    LA006-REL
EXIT    .WORD    *+2
        PLA
        STA      IP
        PLA
        STA      IP+1
        JMP      NEXT

;      R@

L85F9   .BYTE    $82, 'R', $C0
        .WORD    L85E7
RAT     .WORD    *+2
        STX      XSAVE
        TSX
        LDA      $101, X
        PHA
        LDA      $102, X
        LDX      XSAVE
        JMP      PUSH

;      >R

L860F   .BYTE    $82, '>', $D2
        .WORD    L85F9
TOR     .WORD    *+2
        LDA      1, X
        PHA
        LDA      0, X
        PHA
        JMP      POP

;      R>

L861F   .BYTE    $82, 'R', $BE
        .WORD    L860F
RFROM   .WORD    *+2
        DEX
        DEX
        PLA
        STA      0, X
        PLA
        STA      1, X
        JMP      NEXT

;      ><

L8631   .BYTE    $82, '>', $BC

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```

        .WORD    L861F
BSWAP   .WORD    *+2
        LDY      0,X
        LDA      1,X
        STA      0,X
        STY      1,X
        JMP      NEXT

;       LEAVE

L8643   .BYTE     $85,'LEAV',$C5
        .WORD    L8631
LEAV    .WORD    *+2
        STX      XSAVE
        TSX
        LDA      $101,X
        STA      $103,X
        LDA      $102,X
        STA      $104,X
        LDX      XSAVE
        JMP      NEXT

;       0=

L8661   .BYTE     $82,'0',$BD
        .WORD    L8643
ZEQU    .WORD    *+2
        LDA      0,X
        ORA      1,X
        STY      1,X
        BNE      L8671
        INY
L8671   STY      0,X
        JMP      NEXT

;       0<

L8676   .BYTE     $82,'0',$BC
        .WORD    L8661
ZLESS   .WORD    *+2
        ASL      1,X
        TYA
        ROL      A
        STY      1,X
        STA      0,X
        JMP      NEXT

;       <

L8688   .BYTE     $81,$BC
        .WORD    L8676
LESS    .WORD    *+2
        SEC
        LDA      2,X
        SBC      0,X
        LDA      3,X
        SBC      1,X
        STY      3,X
        BVC      L869D
        EOR      #$80
L869D   BPL      L86A0
        INY
L86A0   STY      2,X
        JMP      POP

;       D<

```

```

L86A5    .BYTE    $82,'D',$BC
          .WORD    L8688
DLESS    .WORD    *+2
          SEC
          LDA      6,X
          SBC      2,X
          LDA      7,X
          SBC      3,X
          LDA      4,X
          SBC      0,X
          LDA      5,X
          SBC      1,X
          BVC      L86C1
          EOR      #$80
L86C1    BPL      L86C4
          INY
L86C4    TYA
          LDY      #4
L86C7    INX
          INX
          DEY
          BNE      L86C7
          JMP      L842B

;        +

L86CF    .BYTE    $81,$AB
          .WORD    L86A5
PLUS     .WORD    *+2
          CLC
          LDA      0,X
          ADC      2,X
          STA      2,X
          LDA      1,X
          ADC      3,X
          STA      3,X
          JMP      POP

;        D+

L86E5    .BYTE    $82,'D',$AB
          .WORD    L86CF
DPLUS    .WORD    *+2
          CLC
          LDA      2,X
          ADC      6,X
          STA      6,X
          LDA      3,X
          ADC      7,X
          STA      7,X
          LDA      0,X
          ADC      4,X
          STA      4,X
          LDA      1,X
          ADC      5,X
          STA      5,X
          JMP      POPTWO

;        NEGATE

L8708    .BYTE    $86,'NEGAT',$C5
          .WORD    L86E5
NEGAT    .WORD    *+2
          SEC
L8714    TYA

```



```

        SBC      0,X
        STA      0,X
        TYA
        SBC      1,X
        STA      1,X
        JMP      NEXT

;      DNEGATE

L8721   .BYTE    $87,'DNEGAT', $C5
        .WORD    L8708
DNEGAT  .WORD    *+2
        SEC
        TYA
        SBC      2,X
        STA      2,X
        TYA
        SBC      3,X
        STA      3,X
        JMP      L8714

;      DROP

L873B   .BYTE    $84,'DRO', $D0
        .WORD    L8721
DROP    .WORD    POP

;      2DROP

L8744   .BYTE    $85,'2DRO', $D0
        .WORD    L873B
TDROP   .WORD    POPTWO

;      DUP

L874E   .BYTE    $83,'DU', $D0
        .WORD    L8744
DUPP    .WORD    *+2
        LDA      0,X
        PHA
        LDA      1,X
        JMP      PUSH

;      ?DUP

L875E   .BYTE    $84,'?DU', $D0
        .WORD    L874E
QDUP    .WORD    *+2
        LDA      0,X
        ORA      1,X
        BNE      DUPP+2
        JMP      NEXT

;      2DUP

L8770   .BYTE    $84,'2DU', $D0
        .WORD    L875E
TDUP    .WORD    *+2
        LDA      0,X
        PHA
        LDA      1,X
        PHA
        LDA      2,X
        PHA
        LDA      3,X
        DEX

```

```

        DEX
        STA      1,X
        PLA
        STA      0,X
        PLA
        JMP      PUSH

;        SWAP

L878F    .BYTE    $84,'SWA',$D0
        .WORD    L8770
SWAP     .WORD    *+2
        LDA      2,X
        PHA
        LDA      0,X
        STA      2,X
        LDA      3,X
        LDY      1,X
        STY      3,X
        JMP      PUT

;        2SWAP

L87A8    .BYTE    $85,'2SWA',$D0
        .WORD    L878F
TSWAP    .WORD    *+2
        LDY      6,X
        LDA      2,X
        STA      6,X
        STY      2,X
        LDY      7,X
        LDA      3,X
        STA      7,X
        STY      3,X
        LDA      4,X
        PHA
        LDA      0,X
        STA      4,X
        LDA      5,X
        LDY      1,X
        STY      5,X
        JMP      PUT

;        OVER

L87D2    .BYTE    $84,'OVE',$D2
        .WORD    L87A8
OVER     .WORD    *+2
        LDA      2,X
        PHA
        LDA      3,X
        JMP      PUSH

;        2OVER

L87E3    .BYTE    $85,'2OVE',$D2
        .WORD    L87D2
TOVER    .WORD    *+2
        LDA      4,X
        PHA
        LDA      5,X
        DEX
        DEX
        LDY      9,X
        STY      1,X
        LDY      8,X

```

```

        STY      0,X
        JMP      PUSH
;
        ROT
L87FF   .BYTE    $83,'RO',$D4
        .WORD    L87E3
ROT     .WORD    *+2
        LDA      4,X
        PHA
        LDY      5,X
        LDA      3,X
        STA      5,X
        LDA      2,X
        STA      4,X
        LDA      1,X
        STA      3,X
        LDA      0,X
        STA      2,X
        TYA
        JMP      PUT
;
        TRAVERSE
L8820   .BYTE    $88,'TRAVERS',$C5
        .WORD    L87FF
TRAV    .WORD    *+2
        CLC
        LDA      0,X
        ADC      2,X
        STA      2,X
        LDA      1,X
        ADC      3,X
        STA      3,X
        LDA      (2,X)
        CMP      #$80
        BMI      TRAV+2
        JMP      POP
;
        PAGE
L8843   .BYTE    $84,'PAG',$C5
        .WORD    L8820
PAGE    .WORD    *+2
        STX      XSAVE
        LDA      #$83
        JSR      $FFF4
        TXA
        PHA
        TYA
        LDX      XSAVE
        JMP      PUSH
;
        HIMEM
L885B   .BYTE    $85,'HIME',$CD
        .WORD    L8843
HIMEM   .WORD    *+2
        STX      XSAVE
        LDA      #$84
        JSR      $FFF4
        TXA
        PHA
        TYA
        LDX      XSAVE
        JMP      PUSH

```

```

;      ?FILE

L8874  .BYTE   $85,'?FIL',$C5
      .WORD   L885B
QFILE  .WORD   *+2
      TYA
      JSR     $FFDA
      JMP     L842B

;      C@

L8885  .BYTE   $82,'C',$C0
      .WORD   L8874
CAT     .WORD   *+2
      LDA     (0,X)
      STA     0,X
      STY     1,X
      JMP     NEXT

;      @

L8895  .BYTE   $81,$C0
      .WORD   L8885
AT      .WORD   *+2
      LDA     (0,X)
      PHA
      INC     0,X
      BNE     L88A4
      INC     1,X
L88A4  LDA     (0,X)
      JMP     PUT

;      C!

L88A9  .BYTE   $82,'C',$A1
      .WORD   L8895
CSTOR  .WORD   *+2
      LDA     2,X
      STA     (0,X)
      JMP     POPTWO

;      !

L88B7  .BYTE   $81,$A1
      .WORD   L88A9
STORE  .WORD   *+2
      LDA     2,X
      STA     (0,X)
      INC     0,X
      BNE     L88C7
      INC     1,X
L88C7  LDA     3,X
      STA     (0,X)
      JMP     POPTWO

;      +!

L88CE  .BYTE   $82,'+', $A1
      .WORD   L88B7
PSTOR  .WORD   *+2
      CLC
      LDA     (0,X)
      ADC     2,X
      STA     (0,X)
      INC     0,X

```

```

        BNE      L88E2
        INC      1,X
L88E2   LDA      (0,X)
        ADC      3,X
        STA      (0,X)
        JMP      POPTWO

;       TOGGLE

L88EB   .BYTE    $86,'TOGGL', $C5
        .WORD    L88CE
TOGGL   .WORD    *+2
        LDA      (2,X)
        EOR      0,X
        STA      (2,X)
        JMP      POPTWO

;       R:

L88FF   .BYTE    $82,'R', $BA
        .WORD    L88EB
RCOLON  .WORD    DOCOL
        .WORD    QEXEC
        .WORD    SCSP
        .WORD    CURR
        .WORD    AT
        .WORD    CONT
        .WORD    STORE
        .WORD    CREAT
        .WORD    RBRAC
        .WORD    PSCOD
DOCOL   LDA      IP+1
        PHA
        LDA      IP
        PHA
        CLC
        LDA      W
        ADC      #2
        STA      IP
        TYA
        ADC      W+1
        STA      IP+1
        JMP      NEXT

;       R;

L892D   .BYTE    $C2,'R', $BB
        .WORD    L88FF
RSEMI   .WORD    DOCOL
        .WORD    QCSP
        .WORD    COMP
        .WORD    EXIT
        .WORD    LBRAC
        .WORD    EXIT

;       CONSTANT

L893E   .BYTE    $88,'CONSTAN', $D4
        .WORD    L892D
CONST   .WORD    DOCOL
        .WORD    CREAT
        .WORD    COMMA
        .WORD    PSCOD
DOCON   LDY      #2
        LDA      (W),Y
        PHA

```

```

        INY
        LDA      (W),Y
        JMP      PUSH

;      VARIABLE

L895C   .BYTE    $88,'VARIABL',$C5
        .WORD    L893E
VAR     .WORD    DOCOL
        .WORD    CREAT
        .WORD    ZERO
        .WORD    COMMA
        .WORD    PSCOD
DOVAR   CLC
        LDA      W
        ADC      #2
        PHA
        TYA
        ADC      W+1
        JMP      PUSH

;      USER

L897D   .BYTE    $84,'USE',$D2
        .WORD    L895C
USER    .WORD    DOCOL
        .WORD    CONST
        .WORD    PSCOD
DOUSE   LDY      #2
        CLC
        LDA      (W),Y
        ADC      UP
        PHA
        LDA      #0
        ADC      UP+1
        JMP      PUSH

;      -2

L8999   .BYTE    $82,'-', $B2
        .WORD    L897D
NEGTWO  .WORD    DOCON
        .WORD    -2

;      -1

L89A2   .BYTE    $82,'-', $B1
        .WORD    L8999
TRUE    .WORD    DOCON
        .WORD    -1

;      0

L89AB   .BYTE    $81,$B0
        .WORD    L89A2
ZERO    .WORD    DOCON
        .WORD    0

;      1

L89B3   .BYTE    $81,$B1
        .WORD    L89AB
ONE     .WORD    DOCON
        .WORD    1

;      2

```

```

L89BB      .BYTE    $81,$B2
           .WORD    L89B3
TWO        .WORD    DOCON
           .WORD    2

;          BL

L89C3      .BYTE    $82,'B',$CC
           .WORD    L89BB
BLL        .WORD    DOCON
           .WORD    $20

;          C/L

L89CC      .BYTE    $83,'C/',$CC
           .WORD    L89C3
CSLL       .WORD    DOCON
           .WORD    64

;          PAD

L89D6      .BYTE    $83,'PA',$C4
           .WORD    L89CC
PAD        .WORD    DOCON
           .WORD    PADD

;          B/BUF

L89E0      .BYTE    $85,'B/BU',$C6
           .WORD    LA01C-REL
BBUF       .WORD    DOCON
           .WORD    BLKSIZ

;          B/SCR

L89EC      .BYTE    $85,'B/SC',$D2
           .WORD    L89E0
BSCR       .WORD    DOCON
           .WORD    1

;          +ORIGIN

L89F8      .BYTE    $87,'+ORIGI',$CE
           .WORD    L89EC
PORIG      .WORD    DOCOL
           .WORD    LIT,ORIG
           .WORD    PLUS
           .WORD    EXIT

;          S0

L8A0C      .BYTE    $82,'S',$B0
           .WORD    L89F8
SZERO      .WORD    DOUSE
           .BYTE    6

;          R0

L8A14      .BYTE    $82,'R',$B0
           .WORD    L8A0C
RZERO      .WORD    DOUSE
           .BYTE    8

;          TIB

```

L8A1C	.BYTE	\$83, 'TI', \$C2
	.WORD	L8A14
TIB	.WORD	DOUSE
	.BYTE	\$A
;		
WIDTH		
L8A25	.BYTE	\$85, 'WIDT', \$C8
	.WORD	L8A1C
WIDTH	.WORD	DOUSE
	.BYTE	\$C
;		
WARNING		
L8A30	.BYTE	\$87, 'WARNIN', \$C7
	.WORD	L8A25
WARN	.WORD	DOUSE
	.BYTE	\$E
;		
FENCE		
L8A3D	.BYTE	\$85, 'FENC', \$C5
	.WORD	L8A30
FENCE	.WORD	DOUSE
	.BYTE	\$10
;		
DP		
L8A48	.BYTE	\$82, 'D', \$D0
	.WORD	L8A3D
DP	.WORD	DOUSE
	.BYTE	\$12
;		
VOC-LINK		
L8A50	.BYTE	\$88, 'VOC-LIN', \$CB
	.WORD	L8A48
VOCL	.WORD	DOUSE
	.BYTE	\$14
;		
BLK		
L8A5E	.BYTE	\$83, 'BL', \$CB
	.WORD	L8A50
BLK	.WORD	DOUSE
	.BYTE	\$16
;		
>IN		
L8A67	.BYTE	\$83, '>I', \$CE
	.WORD	L8A5E
INN	.WORD	DOUSE
	.BYTE	\$18
;		
QOUT		
L8A70	.BYTE	\$83, 'OU', \$D4
	.WORD	L8A67
OUT	.WORD	DOUSE
	.BYTE	\$1A
;		
SCR		
L8A79	.BYTE	\$83, 'SC', \$D2
	.WORD	L8A70
SCR	.WORD	DOUSE


```

        .BYTE    $1C

;      OFFSET

L8A82   .BYTE    $86, 'OFFSE', $D4
        .WORD    L8A79
OFFSE   .WORD    DOUSE
        .BYTE    $1E

;      CONTEXT

L8A8E   .BYTE    $87, 'CONTEX', $D4
        .WORD    L8A82
CONT    .WORD    DOUSE
        .BYTE    $20

;      CURRENT

L8A9B   .BYTE    $87, 'CURREN', $D4
        .WORD    L8A8E
CURR    .WORD    DOUSE
        .BYTE    $22

;      STATE

L8AA8   .BYTE    $85, 'STAT', $C5
        .WORD    L8A9B
STATE   .WORD    DOUSE
        .BYTE    $24

;      BASE

L8AB3   .BYTE    $84, 'BAS', $C5
        .WORD    L8AA8
BASE    .WORD    DOUSE
        .BYTE    $26

;      DPL

L8ABD   .BYTE    $83, 'DP', $CC
        .WORD    L8AB3
DPL     .WORD    DOUSE
        .BYTE    $28

;      CSP

L8AC6   .BYTE    $83, 'CS', $D0
        .WORD    L8ABD
CSP     .WORD    DOUSE
        .BYTE    $2C

;      R#

L8ACF   .BYTE    $82, 'R', $A3
        .WORD    L8AC6
RNUM    .WORD    DOUSE
        .BYTE    $2E

;      HLD

L8AD7   .BYTE    $83, 'HL', $C4
        .WORD    L8ACF
HLD     .WORD    DOUSE
        .BYTE    $30

;      1+

```

```

L8AE0      .BYTE    $82,'1',$AB
           .WORD    L8AD7
ONEP       .WORD    DOCOL
           .WORD    ONE
           .WORD    PLUS
           .WORD    EXIT

```

```

;          2+

```

```

L8AED      .BYTE    $82,'2',$AB
           .WORD    L8AE0
TWOP       .WORD    DOCOL
           .WORD    TWO
           .WORD    PLUS
           .WORD    EXIT

```

```

           .BYTE    0

```

```

;          1-

```

```

L8AFB      .BYTE    $82,'1',$AD
           .WORD    L8AED
ONESUB     .WORD    DOCOL
           .WORD    TRUE
           .WORD    PLUS
           .WORD    EXIT

```

```

;          2-

```

```

L8B08      .BYTE    $82,'2',$AD
           .WORD    L8AFB
TWOSUB     .WORD    DOCOL
           .WORD    NEG TWO
           .WORD    PLUS
           .WORD    EXIT

```

```

;          HERE

```

```

L8B15      .BYTE    $84,'HER',$C5
           .WORD    L8B08
HERE       .WORD    DOCOL
           .WORD    DP
           .WORD    AT
           .WORD    EXIT

```

```

;          ALLOT

```

```

L8B24      .BYTE    $85,'ALLO',$D4
           .WORD    L8B15
ALLOT      .WORD    DOCOL
           .WORD    DP
           .WORD    PSTOR
           .WORD    EXIT

```

```

;          SPACE

```

```

L8B34      .BYTE    $85,'SPAC',$C5
           .WORD    L8B24
SPACE      .WORD    DOCOL
           .WORD    BLL
           .WORD    EMIT
           .WORD    EXIT

```

```

;          ,

```

```

L8B44      .BYTE    $81,$AC
           .WORD    L8B34
COMMA      .WORD    DOCOL
           .WORD    HERE
           .WORD    STORE
           .WORD    TWO
           .WORD    ALLOT
           .WORD    EXIT

;          C,

L8B54      .BYTE    $82,'C',$AC
           .WORD    L8B44
CCOMM     .WORD    DOCOL
           .WORD    HERE
           .WORD    CSTOR
           .WORD    ONE
           .WORD    ALLOT
           .WORD    EXIT

;          LAST

L8B65      .BYTE    $84,'LAS',$D4
           .WORD    L8B54
LAST      .WORD    DOCOL
           .WORD    CURR
           .WORD    AT
           .WORD    AT
           .WORD    EXIT

;          SMUDGE

L8B76      .BYTE    $86,'SMUDG',$C5
           .WORD    L8B65
SMUDG     .WORD    DOCOL
           .WORD    LAST
           .WORD    LIT,$20
           .WORD    TOGGL
           .WORD    EXIT

;          -

L8B8B      .BYTE    $81,$AD
           .WORD    L8B76
SUBB      .WORD    DOCOL
           .WORD    NEGAT
           .WORD    PLUS
           .WORD    EXIT

;          =

L8B97      .BYTE    $81,$BD
           .WORD    L8B8B
EQUAL     .WORD    DOCOL
           .WORD    SUBB
           .WORD    ZEQU
           .WORD    EXIT

;          >

L8BA3      .BYTE    $81,$BE
           .WORD    L8B97
GREAT     .WORD    DOCOL
           .WORD    SWAP
           .WORD    LESS
           .WORD    EXIT

```

```

;      U<

L8BAF  .BYTE    $82,'U',$BC
        .WORD    L8BA3
LESS   .WORD    DOCOL
        .WORD    ZERO
        .WORD    SWAP
        .WORD    ZERO
        .WORD    DLESS
        .WORD    EXIT

;      LFA

L8BC0  .BYTE    $83,'LF',$C1
        .WORD    L8BAF
LFA    .WORD    DOCOL
        .WORD    LIT,4
        .WORD    SUBB
        .WORD    EXIT

;      NFA

L8BD0  .BYTE    $83,'NF',$C1
        .WORD    L8BC0
NFA    .WORD    DOCOL
        .WORD    LIT,5
        .WORD    SUBB
        .WORD    TRUE
        .WORD    TRAV
        .WORD    EXIT

;      CFA

L8BE4  .BYTE    $83,'CF',$C1
        .WORD    L8BD0
CFA    .WORD    DOCOL
        .WORD    TWOSUB
        .WORD    EXIT

;      PFA

L8BF0  .BYTE    $83,'PF',$C1
        .WORD    L8BE4
PFA    .WORD    DOCOL
        .WORD    ONE
        .WORD    TRAV
        .WORD    LIT,5
        .WORD    PLUS
        .WORD    EXIT

;      NOT

L8C04  .BYTE    $83,'NO',$D4
        .WORD    L8BF0
NOT    .WORD    DOCOL
        .WORD    ZEQU
        .WORD    EXIT

;      !CSP

L8C10  .BYTE    $84,'!CS',$D0
        .WORD    L8C04
SCSP   .WORD    DOCOL
        .WORD    SPAT
        .WORD    CSP

```

```

        .WORD    STORE
        .WORD    EXIT

;        ?ERROR

L8C21    .BYTE    $86, '?ERRO', $D2
        .WORD    L8C10
QERR     .WORD    DOCOL
        .WORD    SWAP
        .WORD    ZBRAN, 8
        .WORD    ERROR
        .WORD    BRAN, 4
        .WORD    DROP
        .WORD    EXIT

;        ?COMP

L8C3C    .BYTE    $85, '?COM', $D0
        .WORD    L8C21
QCOMP    .WORD    DOCOL
        .WORD    STATE
        .WORD    AT
        .WORD    ZEQU
        .WORD    LIT, 17
        .WORD    QERR
        .WORD    EXIT

;        ?EXEC

L8C54    .BYTE    $85, '?EXE', $C3
        .WORD    L8C3C
QEXEC    .WORD    DOCOL
        .WORD    STATE
        .WORD    AT
        .WORD    LIT, 18
        .WORD    QERR
        .WORD    EXIT

;        ?PAIRS

L8C6A    .BYTE    $86, '?PAIR', $D3
        .WORD    L8C54
QPAIR    .WORD    DOCOL
        .WORD    SUBB
        .WORD    LIT, 19
        .WORD    QERR
        .WORD    EXIT

;        ?CSP

L8C7F    .BYTE    $84, '?CS', $D0
        .WORD    L8C6A
QCSP     .WORD    DOCOL
        .WORD    SPAT
        .WORD    CSP
        .WORD    AT
        .WORD    SUBB
        .WORD    LIT, 20
        .WORD    QERR
        .WORD    EXIT

;        ?LOADING

L8C98    .BYTE    $88, '?LOADIN', $C7
        .WORD    L8C7F
QLOAD    .WORD    DOCOL

```

```

        .WORD    BLK
        .WORD    AT
        .WORD    ZEQU
        .WORD    LIT,22
        .WORD    QERR
        .WORD    EXIT

;      IMMEDIATE

L8CB3   .BYTE    $89,'IMMEDIAT',$C5
        .WORD    L8C98
IMMED   .WORD    DOCOL
        .WORD    LAST
        .WORD    LIT,$40
        .WORD    TOGGL
        .WORD    EXIT

;      COMPILE

L8CCB   .BYTE    $87,'COMPIL',$C5
        .WORD    L8CB3
COMP    .WORD    DOCOL
        .WORD    QCOMP
        .WORD    RFROM
        .WORD    DUPP
        .WORD    TWOP
        .WORD    TOR
        .WORD    AT
        .WORD    COMMA
        .WORD    EXIT

;      [

L8CE7   .BYTE    $C1,$DB
        .WORD    L8CCB
LBRAC   .WORD    DOCOL
        .WORD    ZERO
        .WORD    STATE
        .WORD    STORE
        .WORD    EXIT

;      ]

L8CF5   .BYTE    $81,$DD
        .WORD    L8CE7
RBRAC   .WORD    DOCOL
        .WORD    LIT,$C0
        .WORD    STATE
        .WORD    STORE
        .WORD    EXIT

;      NOOP

L8D05   .BYTE    $84,'NOO',$D0
        .WORD    L8CF5
NOOP    .WORD    DOCOL
        .WORD    EXIT

;      ?TAB

L8D10   .BYTE    $84,'?TA',$C2
        .WORD    L8D05
QTAB    .WORD    DOCOL
        .WORD    LIT,$FF9F
        .WORD    QKEY
        .WORD    ONE

```

```

        .WORD    ANDD
        .WORD    EXIT

;      HEX

L8D25   .BYTE    $83, 'HE', $D8
        .WORD    L8D10
HEX     .WORD    DOCOL
        .WORD    LIT, 16
        .WORD    BASE
        .WORD    STORE
        .WORD    EXIT

;      DECIMAL

L8D37   .BYTE    $87, 'DECIMA', $CC
        .WORD    L8D25
DECIM   .WORD    DOCOL
        .WORD    LIT, 10
        .WORD    BASE
        .WORD    STORE
        .WORD    EXIT

;      CR

L8D4D   .BYTE    $82, 'C', $D2
        .WORD    L8D37
CRR     .WORD    DOCOL
        .WORD    LIT, $A
        .WORD    EMIT
        .WORD    LIT, $D
        .WORD    EMIT
        .WORD    NEGTWO
        .WORD    OUT
        .WORD    PSTOR
        .WORD    EXIT

;      (;CODE)

L8D68   .BYTE    $87, ' (;CODE', $A9
        .WORD    L8D4D
PSCOD   .WORD    DOCOL
        .WORD    RFROM
        .WORD    LAST
        .WORD    PFA
        .WORD    CFA
        .WORD    STORE
        .WORD    EXIT

;      ;CODE

L8D80   .BYTE    $C5, ' ;COD', $C5
        .WORD    L8D68
L8D88   .WORD    DOCOL
        .WORD    QCSP
        .WORD    COMP
        .WORD    PSCOD
        .WORD    LBRAC
        .WORD    ASSEM
        .WORD    SCSP
        .WORD    EXIT

;      DOES>

L8D98   .BYTE    $C5, 'DOES', $BE
        .WORD    L8D80

```

```

DOES      .WORD    DOCOL
          .WORD    COMP
          .WORD    PSCOD
          .WORD    LIT,$20
          .WORD    CCOMM
          .WORD    COMP
          .WORD    DODOE
          .WORD    EXIT

DODOE     DEX
          DEX
          CLC
          LDA      W
          ADC      #2
          STA      0,X
          TYA
          ADC      W+1
          STA      1,X
          SEC
          PLA
          SBC      #1
          STA      W
          PLA
          SBC      #0
          STA      W+1
          JMP      DOCOL

;          0>

L8DCE     .BYTE    $82,'0',$BE
          .WORD    L8D98
ZGREAA    .WORD    DOCOL
          .WORD    NEGAT
          .WORD    ZLESS
          .WORD    EXIT

;          COUNT

L8DDB     .BYTE    $85,'COUN',$D4
          .WORD    L8DCE
COUNT    .WORD    DOCOL
          .WORD    DUPP
          .WORD    ONEP
          .WORD    SWAP
          .WORD    CAT
          .WORD    EXIT

;          TYPE

L8DEF     .BYTE    $84,'TYP',$C5
          .WORD    L8DDB
TYPE      .WORD    DOCOL
          .WORD    DUPP
          .WORD    ZGREAA
          .WORD    ZBRAN,$18
          .WORD    OVER
          .WORD    PLUS
          .WORD    SWAP
          .WORD    XDO
          .WORD    IDO
          .WORD    CAT
          .WORD    EMIT
          .WORD    XPULO,$FFF8
          .WORD    BRAN,4
          .WORD    TDROP
          .WORD    EXIT

```



```

;      -TRAILING

L8E1A  .BYTE    $89, '-TRAILIN', $C7
        .WORD    L8DEF
DTRAI  .WORD    DOCOL
        .WORD    DUPP
        .WORD    ZLESS
        .WORD    LIT, 5
        .WORD    QERR
        .WORD    DUPP
        .WORD    ZERO
        .WORD    XDO
        .WORD    TDUP
        .WORD    PLUS
        .WORD    ONESUB
        .WORD    CAT
        .WORD    BLL
        .WORD    SUBB
        .WORD    ZBRAN, 8
        .WORD    LEAV
        .WORD    BRAN, 4
        .WORD    ONESUB
        .WORD    XPULO, $FFE6
        .WORD    EXIT

;      TEXT,

L8E56  .BYTE    $85, 'TEXT', $AC
        .WORD    L8E1A
TXTCOM .WORD    DOCOL
        .WORD    DUPP
        .WORD    CCOMM
        .WORD    HERE
        .WORD    OVER
        .WORD    ALLOT
        .WORD    SWAP
        .WORD    CMOVE
        .WORD    EXIT

;      ( ". )

L8E70  .BYTE    $84, ' ( ". ', $A9
        .WORD    L8E56
PDOTQ  .WORD    DOCOL
        .WORD    RAT
        .WORD    COUNT
        .WORD    DUPP
        .WORD    ONEP
        .WORD    RFROM
        .WORD    PLUS
        .WORD    TOR
        .WORD    TYPE
        .WORD    EXIT

;      ."

L8E8B  .BYTE    $C2, ' . ', $A2
        .WORD    L8E70
DOTQ   .WORD    DOCOL
        .WORD    TRUE
        .WORD    INN
        .WORD    PSTOR
        .WORD    LIT, $22
        .WORD    PWORD
        .WORD    ONESUB

```

```

.WORD QDUP
.WORD ZBRAN,$20
.WORD SWAP
.WORD ONEP
.WORD SWAP
.WORD STATE
.WORD AT
.WORD ZBRAN,$C
.WORD COMP
.WORD PDOTQ
.WORD TXTCOM
.WORD BRAN,4
.WORD TYPE
.WORD BRAN,4
.WORD DROP
.WORD EXIT

```

```

;      (EXPECT)

```

```

L8EC8  .BYTE  $88,'(EXPECT',$A9
        .WORD  L8E8B
PEXPEC .WORD  *+2
        STX    XSAVE
        DEX
        LDA    3,X
        STA    0,X
        LDA    1,X
        STA    2,X
        LDA    4,X
        STA    1,X
        LDA    #$20
        STA    3,X
        LDA    #$FF
        STA    4,X
        LDA    #0
        JSR    $FFF1
        LDX    XSAVE
        STY    2,X
        LDA    #0
        STA    3,X
        JMP    POP

```

```

;      EXPECT

```

```

L8EFC  .BYTE  $86,'EXPEC',$D4
        .WORD  L8EC8
EXPECT .WORD  DOCOL
        .WORD  OVER
        .WORD  SWAP
        .WORD  PEXPEC
        .WORD  PLUS
        .WORD  ZERO
        .WORD  SWAP
        .WORD  STORE
        .WORD  EXIT

```

```

;      QUERY

```

```

L8F17  .BYTE  $85,'QUER',$D9
        .WORD  L8EFC
QUERY  .WORD  DOCOL
        .WORD  TIB
        .WORD  AT
        .WORD  LIT,80
        .WORD  EXPECT
        .WORD  ZERO

```

```

        .WORD    INN
        .WORD    STORE
        .WORD    EXIT

;        ASCII  NULL

L8F33    .BYTE    $C1,$80
        .WORD    L8F17
NULL     .WORD    DOCOL
        .WORD    BLK
        .WORD    AT
        .WORD    ZBRAN,$28
        .WORD    ONE
        .WORD    BLK
        .WORD    PSTOR
        .WORD    ZERO
        .WORD    INN
        .WORD    STORE
        .WORD    BLK
        .WORD    AT
        .WORD    BSCR
        .WORD    ONESUB
        .WORD    ANDD
        .WORD    ZEQU
        .WORD    ZBRAN,8
        .WORD    QEXEC
        .WORD    RFROM
        .WORD    DROP
        .WORD    BRAN,6
        .WORD    RFROM
        .WORD    DROP
        .WORD    EXIT

;        MOVE

L8F6D    .BYTE    $84,'MOV',$C5
        .WORD    L8F33
MOVE     .WORD    DOCOL
        .WORD    DUPP
        .WORD    PLUS
        .WORD    CMOVE
        .WORD    EXIT

;        FILL

L8F7E    .BYTE    $84,'FIL',$CC
        .WORD    L8F6D
FILL     .WORD    DOCOL
        .WORD    OVER
        .WORD    ONE
        .WORD    LESS
        .WORD    ZBRAN,$A
        .WORD    DROP
        .WORD    TDROP
        .WORD    BRAN,$14
        .WORD    SWAP
        .WORD    TOR
        .WORD    OVER
        .WORD    CSTOR
        .WORD    DUPP
        .WORD    ONEP
        .WORD    RFROM
        .WORD    ONESUB
        .WORD    CMOVE
        .WORD    EXIT

```

```

;          ERASE

L8FAD      .BYTE    $85, 'ERAS', $C5
           .WORD    L8F7E
ERASE      .WORD    DOCOL
           .WORD    ZERO
           .WORD    FILL
           .WORD    EXIT

;          BLANKS

L8FBD      .BYTE    $86, 'BLANK', $D3
           .WORD    L8FAD
BLANKS     .WORD    DOCOL
           .WORD    BLL
           .WORD    FILL
           .WORD    EXIT

;          HOLD

L8FCE      .BYTE    $84, 'HOL', $C4
           .WORD    L8FBD
HOLD       .WORD    DOCOL
           .WORD    TRUE
           .WORD    HLD
           .WORD    PSTOR
           .WORD    HLD
           .WORD    AT
           .WORD    CSTOR
           .WORD    EXIT

;          (WORD)  ( C -- ADR LEN )

L8FE5      .BYTE    $86, '(WORD', $A9
           .WORD    L8FCE
PWORD      .WORD    DOCOL
           .WORD    BLK
           .WORD    AT
           .WORD    QDUP
           .WORD    ZBRAN, 8
           .WORD    BLOCK
           .WORD    BRAN, 6
           .WORD    TIB
           .WORD    AT
           .WORD    INN
           .WORD    AT
           .WORD    PLUS
           .WORD    SWAP
           .WORD    ENCL
           .WORD    INN
           .WORD    PSTOR
           .WORD    OVER
           .WORD    SUBB
           .WORD    ROT
           .WORD    ROT
           .WORD    PLUS
           .WORD    SWAP
           .WORD    EXIT

;          WDSZ

L9020      .BYTE    $84, 'WDS', $DA
           .WORD    L8FE5
WDSZ       .WORD    DOCON
           .WORD    WBSIZ          ; WORD BUFFER SIZE

```

```

;      WBFR

L902B  .BYTE   $84, 'WBF', $D2
        .WORD   L9020
WBFR    .WORD   DOCON
        .WORD   WORDBU      ; WORD BUFFER ADDR

;      1WORD

L9036  .BYTE   $85, '1WOR', $C4
        .WORD   L902B
ONEWRD  .WORD   DOCOL
        .WORD   PWORD
        .WORD   WDSZ
        .WORD   MIN
        .WORD   WBFR
        .WORD   CSTOR
        .WORD   WBFR
        .WORD   COUNT
        .WORD   ONEP
        .WORD   CMOVE
        .WORD   WBFR
        .WORD   EXIT

;      WORD

L9056  .BYTE   $84, 'WOR', $C4
        .WORD   L9036
WORD    .WORD   DOCOL
        .WORD   ONEWRD
        .WORD   DUPP
        .WORD   ONEP
        .WORD   CAT
        .WORD   ZEQU
        .WORD   ZBRAN, 8
        .WORD   ZERO
        .WORD   OVER
        .WORD   CSTOR
        .WORD   EXIT

;      CONVERT

L9075  .BYTE   $87, 'CONVER', $D4
        .WORD   L9056
CONV    .WORD   DOCOL
        .WORD   ONEP
        .WORD   DUPP
        .WORD   TOR
        .WORD   CAT
        .WORD   BASE
        .WORD   AT
        .WORD   DIGIT
        .WORD   ZBRAN, $1C
        .WORD   SWAP
        .WORD   BASE
        .WORD   AT
        .WORD   USTAR
        .WORD   DROP
        .WORD   ROT
        .WORD   BASE
        .WORD   AT
        .WORD   USTAR
        .WORD   DPLUS
        .WORD   RFROM
        .WORD   BRAN, $FFD6
        .WORD   RFROM

```

```

        .WORD    EXIT

;      -FIND

L90B1  .BYTE     $85, '-FIN', $C4
        .WORD    L9075
DFIND  .WORD     DOCOL
        .WORD    BLL
        .WORD    ONEWRD
        .WORD    SWAP
        .WORD    PFIND
        .WORD    EXIT

;      FIND

L90C5  .BYTE     $84, 'FIN', $C4
        .WORD    L90B1
FIND   .WORD     DOCOL
        .WORD    CONT
        .WORD    AT
        .WORD    AT
        .WORD    DFIND
        .WORD    ZBRAN, 8
        .WORD    DROP
        .WORD    BRAN, 4
        .WORD    ZERO
        .WORD    EXIT

;      ERROR

L90E4  .BYTE     $85, 'ERRO', $D2
        .WORD    L90C5
ERROR  .WORD     DOCOL
        .WORD    WARN
        .WORD    AT
        .WORD    ZLESS
        .WORD    ZBRAN, 8
        .WORD    ABORT
        .WORD    BRAN, $1F
        .WORD    WBFR
        .WORD    COUNT
        .WORD    TYPE
        .WORD    PDOTQ
        .BYTE    4, ' ? '
        .WORD    MESS
        .WORD    SPSTO
        .WORD    TDROP
        .WORD    INN
        .WORD    AT
        .WORD    BLK
        .WORD    AT
        .WORD    QUIT
        .WORD    EXIT

;      ID.

L911D  .BYTE     $83, 'ID', $AE
        .WORD    L90E4
IDDOT  .WORD     DOCOL
        .WORD    PAD
        .WORD    BLL
        .WORD    LIT, '_'
        .WORD    FILL
        .WORD    DUPP
        .WORD    PFA
        .WORD    LFA

```

```
.WORD OVER
.WORD SUBB
.WORD PAD
.WORD SWAP
.WORD CMOVE
.WORD PAD
.WORD COUNT
.WORD LIT,$1F
.WORD ANDD
.WORD TYPE
.WORD SPACE
.WORD EXIT
```

```
; (CREATE)
```

```
L914F .BYTE $88,'(CREATE',$A9
.WORD L911D
PCREAT .WORD DOCOL
.WORD FIRST
.WORD HERE
.WORD LIT,$A0
.WORD PLUS
.WORD ULESS
.WORD TWO
.WORD QERR
.WORD BLL
.WORD WORD
.WORD DUPP
.WORD CAT
.WORD DUPP
.WORD ZEQU
.WORD LIT,10
.WORD QERR
.WORD OVER
.WORD CONT
.WORD AT
.WORD AT
.WORD PFIND
.WORD ZBRAN,$12
.WORD DROP
.WORD TWOP
.WORD NFA
.WORD IDDOT
.WORD LIT,4
.WORD MESS
.WORD SPACE
.WORD WIDTH
.WORD AT
.WORD MIN
.WORD DUPP
.WORD DP
.WORD CAT
.WORD PLUS
.WORD LIT,$FC
.WORD EQUAL
.WORD ALLOT
.WORD ONEP
.WORD DUPP
.WORD TOR
.WORD HERE
.WORD SWAP
.WORD CMOVE
.WORD HERE
.WORD RFROM
.WORD ALLOT
.WORD DUPP
```

```

.WORD    LIT,$80
.WORD    TOGGL
.WORD    HERE
.WORD    ONESUB
.WORD    LIT,$80
.WORD    TOGGL
.WORD    LAST
.WORD    COMMA
.WORD    CURR
.WORD    AT
.WORD    STORE
.WORD    LIT,DOVAR
.WORD    COMMA
.WORD    EXIT

```

```

;        [COMPILE]

```

```

L91E8    .BYTE    $C9,'[COMPILE'],$DD
          .WORD    LA028-REL
BCOMP    .WORD    DOCOL
          .WORD    CONT
          .WORD    AT
          .WORD    AT
          .WORD    DFIND
          .WORD    ZEQU
          .WORD    ZERO
          .WORD    QERR
          .WORD    DROP
          .WORD    COMMA
          .WORD    EXIT

```

```

;        LITERAL

```

```

L920A    .BYTE    $C7,'LITERA',$CC
          .WORD    L91E8
LITER    .WORD    DOCOL
          .WORD    STATE
          .WORD    AT
          .WORD    ZBRAN,8
          .WORD    COMP
          .WORD    LIT
          .WORD    COMMA
          .WORD    EXIT

```

```

;        DLITERAL

```

```

L9226    .BYTE    $C8,'DLITERA',$CC
          .WORD    L920A
DLITER    .WORD    DOCOL
          .WORD    STATE
          .WORD    AT
          .WORD    ZBRAN,8
          .WORD    SWAP
          .WORD    LITER
          .WORD    LITER
          .WORD    EXIT

```

```

;        ?STACK

```

```

L9243    .BYTE    $86,'?STAC',$CB
          .WORD    L9226
QSTAC    .WORD    DOCOL
          .WORD    SPAT
          .WORD    SZERO
          .WORD    AT
          .WORD    GREAT

```



```

.WORD ONE
.WORD QERR
.WORD SPAT
.WORD LIT,BOS
.WORD LESS
.WORD LIT,7
.WORD QERR
.WORD EXIT

```

```

;      :

```

```

L926A  .BYTE  $81,$BA
        .WORD  L9243
COLON  .WORD  DOCOL
        .WORD  RCOLON
        .WORD  SMUDG
        .WORD  EXIT

```

```

;      ;

```

```

L9276  .BYTE  $C1,$BB
        .WORD  L926A
SEMIS  .WORD  DOCOL
        .WORD  RSEMI
        .WORD  SMUDG
        .WORD  EXIT

```

```

;      NUMBER

```

```

L9282  .BYTE  $86,'NUMBE',$D2
        .WORD  L9276
NUMBER .WORD  DOCOL
        .WORD  DUPP
        .WORD  CAT
        .WORD  OVER
        .WORD  PLUS
        .WORD  TOR
        .WORD  ZERO
        .WORD  ZERO
        .WORD  ROT
        .WORD  DUPP
        .WORD  ONEP
        .WORD  CAT
        .WORD  LIT,'-'
        .WORD  EQUAL
        .WORD  DUPP
        .WORD  TOR
        .WORD  PLUS
        .WORD  CONV
        .WORD  RFROM
        .WORD  ZBRAN,8
        .WORD  TOR
        .WORD  DNEGAT
        .WORD  RFROM
        .WORD  RFROM
        .WORD  OVER
        .WORD  SUBB
        .WORD  DUPP
        .WORD  ZLESS
        .WORD  ZBRAN,8
        .WORD  TDROP
        .WORD  BRAN,$12
        .WORD  ZERO
        .WORD  QERR
        .WORD  CAT
        .WORD  LIT,'.'

```

```

        .WORD    SUBB
        .WORD    ZERO
        .WORD    QERR
        .WORD    EXIT

;      (

L92E3  .BYTE     $C1,$A8
        .WORD    L9282
PAREN  .WORD     DOCOL
        .WORD    TRUE
        .WORD    INN
        .WORD    PSTOR
        .WORD    LIT,' '
        .WORD    WORD
        .WORD    DROP
        .WORD    EXIT

;      (NUM)

L92F9  .BYTE     $85,'(NUM',$A9
        .WORD    L92E3
PNUM   .WORD     DOCOL
        .WORD    DUPP
        .WORD    CAT
        .WORD    OVER
        .WORD    PLUS
        .WORD    SWAP
        .WORD    NUMBER
        .WORD    ROT
        .WORD    CAT
        .WORD    LIT,'.'
        .WORD    SUBB
        .WORD    ZBRAN,$A
        .WORD    DROP
        .WORD    LITER
        .WORD    BRAN,4
        .WORD    DLITER
        .WORD    EXIT

;      INTERPRET

L9329  .BYTE     $89,'INTERPRE',$D4
        .WORD    LA035-REL
INTE   .WORD     DOCOL
        .WORD    CONT
        .WORD    AT
        .WORD    AT
        .WORD    DFIND
        .WORD    ZBRAN,$18
        .WORD    STATE
        .WORD    AT
        .WORD    LESS
        .WORD    ZBRAN,8
        .WORD    COMMA
        .WORD    BRAN,4
        .WORD    EXEC
        .WORD    BRAN,6
        .WORD    WBFR
        .WORD    NUM
        .WORD    QSTAC
        .WORD    BRAN,$FFD6
        .WORD    EXIT

;      VOCABULARY

```

```

L9365      .BYTE      $8A, 'VOCABULAR', $D9
           .WORD      L9329
VOC        .WORD      DOCOL
           .WORD      CREAT
           .WORD      LIT, $A081
           .WORD      COMMA
           .WORD      CURR
           .WORD      AT
           .WORD      CFA
           .WORD      COMMA
           .WORD      HERE
           .WORD      VOCL
           .WORD      AT
           .WORD      COMMA
           .WORD      VOCL
           .WORD      STORE
           .WORD      PSCOD
DOVOC      JSR        DODOE
           .WORD      TWOP
           .WORD      CONT
           .WORD      STORE
           .WORD      EXIT

;          QUIT

L939D      .BYTE      $84, 'QUI', $D4
           .WORD      LA03F-REL
QUIT       .WORD      DOCOL
           .WORD      ZERO
           .WORD      BLK
           .WORD      STORE
           .WORD      LBRAC
           .WORD      RPSTO
           .WORD      CRR
           .WORD      QUERY
           .WORD      INTE
           .WORD      STATE
           .WORD      AT
           .WORD      ZEQU
           .WORD      ZBRAN, 7
           .WORD      PDOTQ
           .BYTE      2, 'OK'
           .WORD      BRAN, $FFE7
           .WORD      EXIT

;          DEFINITIONS

L93CB      .BYTE      $8B, 'DEFINITION', $D3
           .WORD      L939D
DEFIN      .WORD      DOCOL
           .WORD      CONT
           .WORD      AT
           .WORD      CURR
           .WORD      STORE
           .WORD      EXIT

;          (WARM)

L93E5      .BYTE      $86, ' (WARM', $A9
           .WORD      L93CB
PWARM      .WORD      DOCOL
           .WORD      SPSTO
           .WORD      CRR
           .WORD      PDOTQ
           .BYTE      2, 'OK'
           .WORD      DECIM

```

```

        .WORD    FORTH
        .WORD    DEFIN
        .WORD    QUIT
        .WORD    EXIT

;      (ABORT)

L9403   .BYTE    $87, '(ABORT', $A9
        .WORD    L93E5
PABOR   .WORD    DOCOL
        .WORD    SPSTO
        .WORD    CRR
        .WORD    CRR
        .WORD    PDOTQ
        .BYTE    5, 'FORTH'
        .WORD    PWARM
        .WORD    EXIT

;      ESCAPE

L9421   .BYTE    $86, 'ESCAP', $C5
        .WORD    LA04F-REL
ESCAPE  .WORD    DOCOL
        .WORD    SPSTO
        .WORD    CRR
        .WORD    PDOTQ
        .BYTE    6, 'Escape'
        .WORD    QUIT
        .WORD    EXIT

;      OSERROR

L943D   .BYTE    $87, 'OSERRO', $D2
        .WORD    L9421
OSERR   .WORD    DOCOL
        .WORD    SPSTO
        .WORD    CRR
        .WORD    PDOTQ
        .BYTE    10, 'O.S.Error '
        .WORD    LIT, $FD
        .WORD    AT
        .WORD    DUPP
        .WORD    CAT
        .WORD    DECDOT
        .WORD    ZERO
        .WORD    CLOSE
        .WORD    SPACE
        .WORD    ONEP
        .WORD    DUPP
        .WORD    CAT
        .WORD    DUPP
        .WORD    ZBRAN, 8
        .WORD    EMIT
        .WORD    BRAN, $FFF0
        .WORD    TDROP
        .WORD    PWARM
        .WORD    EXIT

;      MODE

L9484   .BYTE    $84, 'MOD', $C5
        .WORD    L943D
MODE     .WORD    DOCOL
        .WORD    HIADR
        .WORD    TRUE
        .WORD    EQUAL

```

```

        .WORD    ZBRAN,8
        .WORD    DUPP
        .WORD    MODADR
        .WORD    MOVBUF
        .WORD    LIT,$16
        .WORD    TOVDU
        .WORD    TOVDU
        .WORD    EXIT

;      START

L94A7   .BYTE    $85,'STAR',$D4
        .WORD    L9484
START   .WORD    DOCOL
        .WORD    SPSTO
        .WORD    LIT,L9FFB
        .WORD    LIT,RAM
        .WORD    LIT,LA19F-L9FFB
        .WORD    CMOVE
        .WORD    INIVEC
        .WORD    INIBUF
        .WORD    ZERO
        .WORD    OFFSE
        .WORD    STORE
        .WORD    LIT,$1E
        .WORD    PORIG
        .WORD    AT
        .WORD    PRUNE
        .WORD    LIT,3
        .WORD    TOVDU
        .WORD    PAGE
        .WORD    TWOP
        .WORD    DUPP
        .WORD    DP
        .WORD    STORE
        .WORD    FENCE
        .WORD    STORE
        .WORD    PABOR
        .WORD    EXIT

L94ED   LDA      #$7E
        JSR      $FFF4
        LDA      L812C+1
        STA      IP+1
        LDA      L812C
        STA      IP
        LDY      #$F
        JMP      L8130

L9501   LDA      L812E+1
        STA      IP+1
        LDA      L812E
        STA      IP
        LDY      #$F
        JMP      L8130

;      COLD

L9510   .BYTE    $84,'COL',$C4
        .WORD    L94A7
COLD    .WORD    *+2
        LDA      L812A+1          ; SET BRKVEC
        STA      $203
        LDA      L812A
        STA      $202
        LDA      L8108+1          ; POINT TO START

```

```

        STA      IP+1
        LDA      L8108
        STA      IP
        LDY      #$15
        JMP      L8130

;        WARM

L9534    .BYTE    $84, 'WAR', $CD
        .WORD    L9510
WARM     .WORD    *+2
        LDA      L810A+1
        STA      IP+1
        LDA      L810A
        STA      IP
        LDA      L812A+1
        STA      $203
        LDA      L812A
        STA      $202
        LDY      #$F
        JMP      L8130

;        S->D

L9558    .BYTE    $84, 'S->', $C4
        .WORD    L9534
STOD     .WORD    *+2
        LDA      1,X
        BPL      L9566
        DEY
L9566    TYA
        PHA
        JMP      PUSH

;        +-

L956B    .BYTE    $82, '+', $AD
        .WORD    L9558
PM       .WORD    DOCOL
        .WORD    ZLESS
        .WORD    ZBRAN, 4
        .WORD    NEGAT
        .WORD    EXIT

;        D+-

L957C    .BYTE    $83, 'D+', $AD
        .WORD    L956B
DPM      .WORD    DOCOL
        .WORD    ZLESS
        .WORD    ZBRAN, 4
        .WORD    DNEGAT
        .WORD    EXIT

;        ABS

L958E    .BYTE    $83, 'AB', $D3
        .WORD    L957C
ABS      .WORD    DOCOL
        .WORD    DUPP
        .WORD    PM
        .WORD    EXIT

;        DABS

L959C    .BYTE    $84, 'DAB', $D3

```

	.WORD	L958E
DABS	.WORD	DOCOL
	.WORD	DUPP
	.WORD	DPM
	.WORD	EXIT

; MIN

L95AB	.BYTE	\$83, 'MI', \$CE
	.WORD	L959C
MIN	.WORD	DOCOL
	.WORD	TDUP
	.WORD	GREAT
	.WORD	ZBRAN, 4
	.WORD	SWAP
	.WORD	DROP
	.WORD	EXIT

; MAX

L95C1	.BYTE	\$83, 'MA', \$D8
	.WORD	L95AB
MAX	.WORD	DOCOL
	.WORD	TDUP
	.WORD	LESS
	.WORD	ZBRAN, 4
	.WORD	SWAP
	.WORD	DROP
	.WORD	EXIT

; U/MOD

L95D7	.BYTE	\$85, 'U/MO', \$C4
	.WORD	L95C1
USMOD	.WORD	DOCOL
	.WORD	QDUP
	.WORD	ZBRAN, 8
	.WORD	USLAS
	.WORD	BRAN, 8
	.WORD	LIT, 11
	.WORD	ERROR
	.WORD	EXIT

; M*

L95F5	.BYTE	\$82, 'M', \$AA
	.WORD	L95D7
MSTAR	.WORD	DOCOL
	.WORD	TDUP
	.WORD	XORR
	.WORD	TOR
	.WORD	ABS
	.WORD	SWAP
	.WORD	ABS
	.WORD	USTAR
	.WORD	RFROM
	.WORD	DPM
	.WORD	EXIT

; M/

L9610	.BYTE	\$82, 'M', \$AF
	.WORD	L95F5
MSLAS	.WORD	DOCOL
	.WORD	OVER
	.WORD	TOR

```

        .WORD    TOR
        .WORD    DABS
        .WORD    RAT
        .WORD    ABS
        .WORD    USMOD
        .WORD    RFROM
        .WORD    RAT
        .WORD    XORR
        .WORD    PM
        .WORD    SWAP
        .WORD    RFROM
        .WORD    PM
        .WORD    SWAP
        .WORD    EXIT

;      *

L9637   .BYTE    $81,$AA
        .WORD    L9610
STAR    .WORD    DOCOL
        .WORD    USTAR
        .WORD    DROP
        .WORD    EXIT

;      /MOD

L9643   .BYTE    $84,'/MO',$C4
        .WORD    L9637
SLMOD   .WORD    DOCOL
        .WORD    TOR
        .WORD    STOD
        .WORD    RFROM
        .WORD    MSLAS
        .WORD    EXIT

;      /

L9656   .BYTE    $81,$AF
        .WORD    L9643
SLASH   .WORD    DOCOL
        .WORD    SLMOD
        .WORD    SWAP
        .WORD    DROP
        .WORD    EXIT

;      MOD

L9664   .BYTE    $83,'MO',$C4
        .WORD    L9656
MOD      .WORD    DOCOL
        .WORD    SLMOD
        .WORD    DROP
        .WORD    EXIT

;      */MOD

L9672   .BYTE    $85,'*/MO',$C4
        .WORD    L9664
SSLMOD  .WORD    DOCOL
        .WORD    TOR
        .WORD    MSTAR
        .WORD    RFROM
        .WORD    MSLAS
        .WORD    EXIT

;      */

```



```

L9686      .BYTE      $82, '*', $AF
           .WORD      L9672
SSLASH     .WORD      DOCOL
           .WORD      SSLMOD
           .WORD      SWAP
           .WORD      DROP
           .WORD      EXIT

;          M/MOD

L9695      .BYTE      $85, 'M/MO', $C4
           .WORD      L9686
MSLMOD     .WORD      DOCOL
           .WORD      TOR
           .WORD      ZERO
           .WORD      RAT
           .WORD      USMOD
           .WORD      RFROM
           .WORD      SWAP
           .WORD      TOR
           .WORD      USMOD
           .WORD      RFROM
           .WORD      EXIT

;          SPACES

L96B3      .BYTE      $86, 'SPACE', $D3
           .WORD      L9695
SPACS      .WORD      DOCOL
           .WORD      ZERO
           .WORD      MAX
           .WORD      QDUP
           .WORD      ZBRAN, $C
           .WORD      ZERO
           .WORD      XDO
           .WORD      SPACE
           .WORD      XPULO, $FFFC
           .WORD      EXIT

;          <#

L96D4      .BYTE      $82, '<', $A3
           .WORD      L96B3
BDIG       .WORD      DOCOL
           .WORD      PAD
           .WORD      HLD
           .WORD      STORE
           .WORD      EXIT

;          #>

L96E3      .BYTE      $82, '#', $BE
           .WORD      L96D4
EDIG       .WORD      DOCOL
           .WORD      TDROP
           .WORD      HLD
           .WORD      AT
           .WORD      PAD
           .WORD      OVER
           .WORD      SUBB
           .WORD      EXIT

           .BYTE      $66

;          SIGN

```

```

L96F9 .BYTE $84,'SIG',$CE
      .WORD L96E3
SIGN  .WORD DOCOL
      .WORD ROT
      .WORD ZLESS
      .WORD ZBRAN,8
      .WORD LIT,'-'
      .WORD HOLD
      .WORD EXIT

```

```
; #
```

```

L9712 .BYTE $81,$A3
      .WORD L96F9
DIG   .WORD DOCOL
      .WORD BASE
      .WORD AT
      .WORD MSLMOD
      .WORD ROT
      .WORD LIT,9
      .WORD OVER
      .WORD LESS
      .WORD ZBRAN,8
      .WORD LIT,7
      .WORD PLUS
      .WORD LIT,'0'
      .WORD PLUS
      .WORD HOLD
      .WORD EXIT

```

```
; #S
```

```

L973C .BYTE $82,'#',$D3
      .WORD L9712
DIGS  .WORD DOCOL
      .WORD DIG
      .WORD TDUP
      .WORD ORR
      .WORD ZEQU
      .WORD ZBRAN,$FFF6
      .WORD EXIT

```

```
; D.R
```

```

L9751 .BYTE $83,'D.', $D2
      .WORD L973C
DDOTR .WORD DOCOL
      .WORD TOR
      .WORD SWAP
      .WORD OVER
      .WORD DABS
      .WORD BDIG
      .WORD DIGS
      .WORD SIGN
      .WORD EDIG
      .WORD RFROM
      .WORD OVER
      .WORD SUBB
      .WORD SPACS
      .WORD TYPE
      .WORD EXIT

```

```
; D.
```

```

L9775 .BYTE $82,'D',$AE

```

```

DDOT      .WORD    L9751
          .WORD    DOCOL
          .WORD    ZERO
          .WORD    DDOTR
          .WORD    SPACE
          .WORD    EXIT

;          .R

L9784     .BYTE    $82, '.', $D2
          .WORD    L9775
DOTR      .WORD    DOCOL
          .WORD    TOR
          .WORD    STOD
          .WORD    RFROM
          .WORD    DDOTR
          .WORD    EXIT

;          .

L9795     .BYTE    $81, $AE
          .WORD    L9784
DOT       .WORD    DOCOL
          .WORD    STOD
          .WORD    DDOT
          .WORD    EXIT

;          U.

L97A1     .BYTE    $82, 'U', $AE
          .WORD    L9795
UDOT      .WORD    DOCOL
          .WORD    ZERO
          .WORD    DDOT
          .WORD    EXIT

;          ?

L97AE     .BYTE    $81, $BF
          .WORD    L97A1
QUES      .WORD    DOCOL
          .WORD    AT
          .WORD    DOT
          .WORD    EXIT

;          DEC.

L97BA     .BYTE    $84, 'DEC', $AE
          .WORD    L97AE
DECDOT    .WORD    DOCOL
          .WORD    BASE
          .WORD    AT
          .WORD    SWAP
          .WORD    DECIM
          .WORD    DOT
          .WORD    BASE
          .WORD    STORE
          .WORD    EXIT

;          H.

L97D3     .BYTE    $82, 'H', $AE
          .WORD    L97BA
HDOT      .WORD    DOCOL
          .WORD    BASE
          .WORD    AT

```

```

        .WORD    SWAP
        .WORD    HEX
        .WORD    DOT
        .WORD    BASE
        .WORD    STORE
        .WORD    EXIT

;      MSG#

L97EA   .BYTE    $84,'MSG',$A3
        .WORD    L97D3
MSGNUM  .WORD    DOCOL
        .WORD    QDUP
        .WORD    ZBRAN,$D
        .WORD    PDOTQ
        .BYTE    6,'MSG # '
        .WORD    DECDOT
        .WORD    EXIT

;      2*

L9806   .BYTE    $82,'2',$AA
        .WORD    LA05B-REL
TSTAR   .WORD    *+2
        ASL      0,X
        ROL      1,X
        JMP      NEXT

;      2/

L9814   .BYTE    $82,'2',$AF
        .WORD    L9806
TSLAS   .WORD    *+2
        CLC
        LDA      1,X
        BPL      L9829
        INC      0,X
        BNE      L9826
        INC      1,X
L9826   BEQ      L9829
        SEC
L9829   ROR      1,X
        ROR      0,X
        JMP      NEXT

;      J

L9830   .BYTE    $81,$CA
        .WORD    L9814
JDO     .WORD    DOCOL
        .WORD    RPAT
        .WORD    LIT,7
        .WORD    PLUS
        .WORD    AT
        .WORD    EXIT

;      BACK

L9842   .BYTE    $84,'BAC',$CB
        .WORD    L9830
BACK    .WORD    DOCOL
        .WORD    HERE
        .WORD    SUBB
        .WORD    COMMA
        .WORD    EXIT

```

```

;      DO
L9853  .BYTE    $C2,'D',$CF
        .WORD    L9842
DO      .WORD    DOCOL
        .WORD    COMP
        .WORD    XDO
        .WORD    HERE
        .WORD    LIT,3
        .WORD    EXIT

;      LOOP
L9866  .BYTE    $C4,'LOO',$D0
        .WORD    L9853
LOOP    .WORD    DOCOL
        .WORD    LIT,3
        .WORD    QPAIR
        .WORD    COMP
        .WORD    XLOOP
        .WORD    BACK
        .WORD    EXIT

;      +LOOP
L987D  .BYTE    $C5,'+LOO',$D0
        .WORD    L9866
PLOOP  .WORD    DOCOL
        .WORD    LIT,3
        .WORD    QPAIR
        .WORD    COMP
        .WORD    XPLOO
        .WORD    BACK
        .WORD    EXIT

;      IF
L9895  .BYTE    $C2,'I',$C6
        .WORD    L987D
IFF     .WORD    DOCOL
        .WORD    COMP
        .WORD    ZBRAN
        .WORD    HERE
        .WORD    ZERO
        .WORD    COMMA
        .WORD    TWO
        .WORD    EXIT

;      THEN
L98AA  .BYTE    $C4,'THE',$CE
        .WORD    L9895
THEN    .WORD    DOCOL
        .WORD    QCOMP
        .WORD    TWO
        .WORD    QPAIR
        .WORD    HERE
        .WORD    OVER
        .WORD    SUBB
        .WORD    SWAP
        .WORD    STORE
        .WORD    EXIT

;      ELSE
L98C5  .BYTE    $C4,'ELS',$C5

```

```

ELSE      .WORD    L98AA
          .WORD    DOCOL
          .WORD    TWO
          .WORD    QPAIR
          .WORD    COMP
          .WORD    BRAN
          .WORD    HERE
          .WORD    ZERO
          .WORD    COMMA
          .WORD    SWAP
          .WORD    TWO
          .WORD    THEN
          .WORD    TWO
          .WORD    EXIT

;         BEGIN

L98E6     .BYTE    $C5, 'BEGI ', $CE
          .WORD    L98C5
BEGIN     .WORD    DOCOL
          .WORD    QCOMP
          .WORD    HERE
          .WORD    ONE
          .WORD    EXIT

;         UNTIL

L98F8     .BYTE    $C5, 'UNTI ', $CC
          .WORD    L98E6
UNTIL     .WORD    DOCOL
          .WORD    ONE
          .WORD    QPAIR
          .WORD    COMP
          .WORD    ZBRAN
          .WORD    BACK
          .WORD    EXIT

;         AGAIN

L990E     .BYTE    $C5, 'AGAI ', $CE
          .WORD    L98F8
AGAIN     .WORD    DOCOL
          .WORD    ONE
          .WORD    QPAIR
          .WORD    COMP
          .WORD    BRAN
          .WORD    BACK
          .WORD    EXIT

;         WHILE

L9924     .BYTE    $C5, 'WHIL ', $C5
          .WORD    L990E
WHILE     .WORD    DOCOL
          .WORD    IFF
          .WORD    TWOP
          .WORD    EXIT

;         REPEAT

L9934     .BYTE    $C6, 'REPEA ', $D4
          .WORD    L9924
REPEAT    .WORD    DOCOL
          .WORD    TOR
          .WORD    TOR
          .WORD    AGAIN

```

```
.WORD RFROM
.WORD RFROM
.WORD TWO
.WORD SUBB
.WORD THEN
.WORD EXIT
```

```
; '
```

```
L9951 .BYTE $C1,$A7
.WORD L9934
TICK .WORD DOCOL
.WORD FIND
.WORD DUPP
.WORD ZEQU
.WORD ZERO
.WORD QERR
.WORD TWOP
.WORD LITER
.WORD EXIT
```

```
; VLIST
```

```
L9967 .BYTE $85,'VLIS',$D4
.WORD L9951
VLIST .WORD DOCOL
.WORD LIT,128
.WORD OUT
.WORD STORE
.WORD CONT
.WORD AT
.WORD AT
.WORD OUT
.WORD AT
.WORD CSLL
.WORD GREAT
.WORD ZBRAN,$A
.WORD CRR
.WORD ZERO
.WORD OUT
.WORD STORE
.WORD DUPP
.WORD IDDOT
.WORD SPACE
.WORD SPACE
.WORD PFA
.WORD LFA
.WORD AT
.WORD DUPP
.WORD QTAB
.WORD ZBRAN,$1E
.WORD QTAB
.WORD NOT
.WORD ZBRAN,$FFFA
.WORD KEY
.WORD BLL
.WORD EQUAL
.WORD ZBRAN,8
.WORD TRUE
.WORD BRAN,4
.WORD ZERO
.WORD ANDD
.WORD ZEQU
.WORD ZBRAN,$FFB6
.WORD DROP
.WORD EXIT
```

```

;      NOVEC

L99CF  .BYTE    $85, 'NOVE', $C3
        .WORD    L9967
NOVEC  .WORD    DOCOL
        .WORD    LIT, 12
        .WORD    ERROR
        .WORD    EXIT

;      EXVEC:

L99E1  .BYTE    $86, 'EXVEC', $BA
        .WORD    L99CF
XVEC   .WORD    DOCOL
        .WORD    CREAT
        .WORD    LIT, NOVEC
        .WORD    COMMA
        .WORD    PSCOD
DOXVEC .JSR     DODOE
        .WORD    ATEXEC
        .WORD    EXIT

;      ASSIGN

L99FD  .BYTE    $C6, 'ASSIG', $CE
        .WORD    L99E1
ASSIGN .WORD    DOCOL
        .WORD    TICK
        .WORD    EXIT

;      DOVEC

L9A0C  .BYTE    $85, 'DOVE', $C3
        .WORD    L99FD
DOVEC  .WORD    DOCOL
        .WORD    CFA
        .WORD    SWAP
        .WORD    STORE
        .WORD    EXIT

;      TO-DO

L9A1E  .BYTE    $C5, 'TO-D', $CF
        .WORD    L9A0C
TODO   .WORD    DOCOL
        .WORD    TICK
        .WORD    STATE
        .WORD    AT
        .WORD    ZBRAN, 4
        .WORD    COMP
        .WORD    DOVEC
        .WORD    EXIT

;      INITVECS

L9A38  .BYTE    $88, 'INITVEC', $D3
        .WORD    L9A1E
INIVEC .WORD    DOCOL
        .WORD    QRSW
        .WORD    LIT, PUPDA
        .WORD    LIT, UPDAT+2
        .WORD    STORE
        .WORD    LIT, PELIT
        .WORD    LIT, EMIT+2
        .WORD    STORE

```



```

        .WORD    LIT,PKEY
        .WORD    LIT,KEY+2
        .WORD    STORE
        .WORD    LIT,PCREAT
        .WORD    LIT,CREAT+2
        .WORD    STORE
        .WORD    LIT,PNUM
        .WORD    LIT,NUM+2
        .WORD    STORE
        .WORD    LIT,PABOR
        .WORD    LIT,ABORT+2
        .WORD    STORE
        .WORD    LIT,MSG
        .WORD    LIT,MESS+2
        .WORD    STORE
        .WORD    EXIT

;      PRUNE

L9A8F  .BYTE    $85,'PRUN',$C5
        .WORD    L9A38
PRUNE  .WORD    DOCOL
        .WORD    VOCL
        .WORD    AT
        .WORD    DUPP
        .WORD    ZBRAN,$5A
        .WORD    DUPP
        .WORD    TWOSUB
        .WORD    CURR
        .WORD    STORE
        .WORD    SWAP
        .WORD    DUPP
        .WORD    ONESUB
        .WORD    TOR
        .WORD    LAST
        .WORD    RAT
        .WORD    OVER
        .WORD    ULESS
        .WORD    OVER
        .WORD    LIT,$8000
        .WORD    ULESS
        .WORD    ANDD
        .WORD    ZBRAN,$C
        .WORD    PFA
        .WORD    LFA
        .WORD    AT
        .WORD    BRAN,$FFE4
        .WORD    CURR
        .WORD    AT
        .WORD    STORE
        .WORD    RFROM
        .WORD    DROP
        .WORD    OVER
        .WORD    AT
        .WORD    SWAP
        .WORD    ROT
        .WORD    OVER
        .WORD    SWAP
        .WORD    ULESS
        .WORD    ZBRAN,8
        .WORD    OVER
        .WORD    VOCL
        .WORD    STORE
        .WORD    SWAP
        .WORD    BRAN,$FFA4
        .WORD    TDROP

```

```

        .WORD    FORTH
        .WORD    DEFIN
        .WORD    EXIT

;        FORGET

L9B03    .BYTE    $86, 'FORGE', $D4
        .WORD    L9A8F
FORG     .WORD    DOCOL
        .WORD    CURR
        .WORD    AT
        .WORD    AT
        .WORD    DFIND
        .WORD    ZEQU
        .WORD    LIT, 24
        .WORD    QERR
        .WORD    DROP
        .WORD    TWOP
        .WORD    NFA
        .WORD    ZERO
        .WORD    PORIG
        .WORD    OVER
        .WORD    ULESS
        .WORD    OVER
        .WORD    FENCE
        .WORD    AT
        .WORD    ULESS
        .WORD    ORR
        .WORD    LIT, 21
        .WORD    QERR
        .WORD    DUPP
        .WORD    DP
        .WORD    STORE
        .WORD    PRUNE
        .WORD    EXIT

;        DEPTH

L9B46    .BYTE    $85, 'DEPT', $C8
        .WORD    L9B03
DEPTH    .WORD    DOCOL
        .WORD    SPAT
        .WORD    SZERO
        .WORD    AT
        .WORD    SUBB
        .WORD    NEGAT
        .WORD    TSLAS
        .WORD    EXIT

;        .S

L9B5E    .BYTE    $82, ' . ', $D3
        .WORD    L9B46
DOTS     .WORD    DOCOL
        .WORD    CRR
        .WORD    DEPTH
        .WORD    ZBRAN, $1A
        .WORD    SPAT
        .WORD    SZERO
        .WORD    AT
        .WORD    TWOSUB
        .WORD    XDO
        .WORD    IDO
        .WORD    QUES
        .WORD    NEG TWO
        .WORD    XPLOO, $FFF8

```

```

        .WORD   BRAN,$B
        .WORD   PDOTQ
        .BYTE   6,'EMPTY '
        .WORD   EXIT

;      PICK

L9B90   .BYTE   $84,'PIC',$CB
        .WORD   L9B5E
PICK    .WORD   *+2
        SEC
        TYA
        SBC     0,X
        TYA
        SBC     1,X
        BPL     L9BB6
        ASL     0,X
        ROL     1,X
        CLC
        TXA
        ADC     0,X
        TAY
        LDA     0,Y
        PHA
        INY
        LDA     0,Y
        JMP     PUT

L9BB6   JMP     POP

;      ROLL

L9BB9   .BYTE   $84,'ROL',$CC
        .WORD   L9B90
ROLL    .WORD   *+2
        SEC
        TYA
        SBC     0,X
        TYA
        SBC     1,X
        BPL     L9BF3
        ASL     0,X
        ROL     1,X
        CLC
        TXA
        ADC     0,X
        TAY
        LDA     0,Y
        PHA
        INY
        LDA     0,Y
        PHA
        STX     XSAVE
        TYA
        TAX
        DEX
L9BE2   DEX
        LDA     0,X
        STA     0,Y
        DEY
        CPX     XSAVE
        BNE     L9BE2
        INX
        INX
        PLA
        JMP     PUT

```

```

L9BF3    JMP      POP

;        OSCLI

L9BF6    .BYTE    $85,'OSCL',$C9
         .WORD    L9BB9
OSCLI    .WORD    *+2
         STX      XSAVE
         LDY      1,X
         LDA      0,X
         TAX
         JSR      $FFF7
         LDX      XSAVE
         JMP      POP

;        STRING

L9C0F    .BYTE    $86,'STRIN',$C7
         .WORD    L9BF6
STRING   .WORD    DOCOL
         .WORD    TRUE
         .WORD    INN
         .WORD    PSTOR
         .WORD    PWORD
         .WORD    ONESUB
         .WORD    SWAP
         .WORD    OVER
         .WORD    ZBRAN,$A
         .WORD    ONEP
         .WORD    SWAP
         .WORD    BRAN,4
         .WORD    DROP
         .WORD    EXIT

;        ($+)

L9C38    .BYTE    $84,'($+',$A9
         .WORD    L9C0F
PSA      .WORD    DOCOL
         .WORD    SWAP
         .WORD    TOR
         .WORD    SWAP
         .WORD    OVER
         .WORD    COUNT
         .WORD    DUPP
         .WORD    RAT
         .WORD    PLUS
         .WORD    LIT,5
         .WORD    ROLL
         .WORD    CSTOR
         .WORD    PLUS
         .WORD    RFROM
         .WORD    CMOVE
         .WORD    EXIT

;        (CLI)

L9C61    .BYTE    $85,'(CLI',$A9
         .WORD    L9C38
PCLI     .WORD    DOCOL
         .WORD    RAT
         .WORD    COUNT
         .WORD    ONEP
         .WORD    RFROM
         .WORD    PLUS

```

```

        .WORD    TOR
        .WORD    OSCLI
        .WORD    EXIT

;        >CLI

L9C7B    .BYTE    $C4,'>CL', $C9
        .WORD    L9C61
TOCLI    .WORD    DOCOL
        .WORD    STATE
        .WORD    AT
        .WORD    ZBRAN, $C
        .WORD    COMP
        .WORD    PCLI
        .WORD    TXTCOM
        .WORD    BRAN, 6
        .WORD    DROP
        .WORD    OSCLI
        .WORD    EXIT

;        OS'

L9C9C    .BYTE    $C3,'OS', $A7
        .WORD    L9C7B
OSTIC    .WORD    DOCOL
        .WORD    LIT, $27
        .WORD    STRING
        .WORD    QDUP
        .WORD    ZBRAN, $20
        .WORD    PAD
        .WORD    ZERO
        .WORD    OVER
        .WORD    STORE
        .WORD    PSA
        .WORD    LIT, $D
        .WORD    SPAT
        .WORD    ONE
        .WORD    PAD
        .WORD    PSA
        .WORD    DROP
        .WORD    PAD
        .WORD    COUNT
        .WORD    TOCLI
        .WORD    EXIT

;        KEY'

L9CD0    .BYTE    $C4,'KEY', $A7
        .WORD    L9C9C
KEYTIC    .WORD    DOCOL
        .WORD    STATE
        .WORD    AT
        .WORD    ZBRAN, $2A
        .WORD    LIT, $FFFC
        .WORD    ALLOT
        .WORD    HERE
        .WORD    AT
        .WORD    LIT, LIT+2
        .WORD    CFA
        .WORD    SUBB
        .WORD    ZBRAN, $E
        .WORD    TWO
        .WORD    ALLOT
        .WORD    HERE
        .WORD    ATEEXEC
        .WORD    BRAN, 8

```

```

.WORD    HERE
.WORD    TWOP
.WORD    CAT
.WORD    ZERO
.WORD    BDIG
.WORD    LIT, '"'
.WORD    HOLD
.WORD    DIG
.WORD    DIG
.WORD    LIT, 'Y'
.WORD    HOLD
.WORD    LIT, 'E'
.WORD    HOLD
.WORD    LIT, 'K'
.WORD    HOLD
.WORD    EDIG
.WORD    PAD
.WORD    TDUP
.WORD    CSTOR
.WORD    ONEP
.WORD    SWAP
.WORD    CMOVE
.WORD    LIT, $27
.WORD    STRING
.WORD    QDUP
.WORD    ZBRAN, 6
.WORD    PAD
.WORD    PSA
.WORD    LIT, $D22
.WORD    SPAT
.WORD    TWO
.WORD    PAD
.WORD    PSA
.WORD    DROP
.WORD    PAD
.WORD    COUNT
.WORD    TOCLI
.WORD    EXIT

```

```

;      (OPEN)

```

```

L9D5D    .BYTE    $86, '(OPEN', $A9
          .WORD    L9CD0
POPEN    .WORD    *+2
          STX      XSAVE
          LDY      1, X
          LDA      0, X
          TAX
          LDA      #$C0
          JSR      $FFCE
          LDX      XSAVE
          STA      0, X
          LDY      #0
          STY      1, X
          JMP      NEXT

```

```

;      CLOSE

```

```

L9D7F    .BYTE    $85, 'CLOS', $C5
          .WORD    L9D5D
CLOSE    .WORD    *+2
          TYA
          LDY      0, X
          JSR      $FFCE
          JMP      POP

```

```

;      (R/W)

L9D92  .BYTE   $85, ' (R/W', $A9
      .WORD   L9D7F
PRSW   .WORD   *+2
      LDA     0,X
      INX
      INX
      INX
      STX     XSAVE
      JSR     $FFD1
      LDX     XSAVE
      INX
      JMP     POPTWO

```

```

;      OPEN

L9DAC  .BYTE   $84, 'OPE', $CE
      .WORD   LA093-REL
OPEN   .WORD   DOCOL
      .WORD   POPEN
      .WORD   DUPP
      .WORD   ZEQU
      .WORD   ZBRAN, $C
      .WORD   ZERO
      .WORD   CLOSE
      .WORD   LIT, 8
      .WORD   ERROR
      .WORD   CHANNE
      .WORD   CSTOR
      .WORD   EXIT

```

```

;      DR/W

L9DCF  .BYTE   $84, 'DR/', $D7
      .WORD   L9DAC
DRSW   .WORD   DOCOL
      .WORD   TOR
      .WORD   SWAP
      .WORD   TOR
      .WORD   DUPP
      .WORD   ZLESS
      .WORD   LIT, 6
      .WORD   QERR
      .WORD   SFILE
      .WORD   SLMOD
      .WORD   DUPP
      .WORD   MAXFIL
      .WORD   ONESUB
      .WORD   GREAT
      .WORD   LIT, 6
      .WORD   QERR
      .WORD   LIT, '0'
      .WORD   PLUS
      .WORD   DUPP
      .WORD   LIT, '9'
      .WORD   GREAT
      .WORD   ZBRAN, 8
      .WORD   LIT, 7
      .WORD   PLUS
      .WORD   FNAME
      .WORD   CSTOR
      .WORD   FNAME
      .WORD   OPEN
      .WORD   ZERO
      .WORD   SWAP

```

```

.WORD    BBUF
.WORD    STAR
.WORD    ZERO
.WORD    BBUF
.WORD    HIADR
.WORD    RFROM
.WORD    CHANNE
.WORD    CAT
.WORD    BSWAP
.WORD    RFROM
.WORD    TSTAR
.WORD    ONEP
.WORD    PRSW
.WORD    CHANNE
.WORD    CAT
.WORD    CLOSE
.WORD    LIT,9
.WORD    QERR
.WORD    DROP
.WORD    TDROP
.WORD    EXIT

```

```

;        EMPTY-BUFFERS

```

```

L9E4A    .BYTE    $8D,'EMPTY-BUFFER',$D3
          .WORD    LA0DD-REL
MTBUF    .WORD    DOCOL
          .WORD    FIRST
          .WORD    LIMIT
          .WORD    OVER
          .WORD    SUBB
          .WORD    ERASE
          .WORD    FIRST
          .WORD    DUPP
          .WORD    USE
          .WORD    STORE
          .WORD    PREV
          .WORD    STORE
          .WORD    EXIT

```

```

;        SETBUF

```

```

L9E74    .BYTE    $86,'SETBU',$C6
          .WORD    L9E4A
SETBUF    .WORD    DOCOL
          .WORD    LIMIT
          .WORD    BUFSZ
          .WORD    NBUF
          .WORD    AT
          .WORD    STAR
          .WORD    SUBB
          .WORD    LIT,FIRST+2
          .WORD    STORE
          .WORD    EXIT

```

```

;        INITBUF

```

```

L9E93    .BYTE    $87,'INITBU',$C6
          .WORD    L9E74
INIBUF    .WORD    DOCOL
          .WORD    HIADR
          .WORD    TRUE
          .WORD    EQUAL
          .WORD    ZBRAN,8
          .WORD    HIMEM
          .WORD    BRAN,6

```



```

        .WORD    LIT,$8000
        .WORD    LIT,LIMIT+2
        .WORD    STORE
        .WORD    MINBUF
        .WORD    NBUF
        .WORD    STORE
        .WORD    SETBUF
        .WORD    MTBUF
        .WORD    EXIT

;        +BUF

L9EC5    .BYTE    $84,'+BU',$C6
        .WORD    L9E93
PBUF     .WORD    DOCOL
        .WORD    BUFSZ
        .WORD    PLUS
        .WORD    DUPP
        .WORD    LIMIT
        .WORD    EQUAL
        .WORD    ZBRAN,6
        .WORD    DROP
        .WORD    FIRST
        .WORD    DUPP
        .WORD    PREV
        .WORD    AT
        .WORD    SUBB
        .WORD    EXIT

;        (UPDATE)

L9EEA    .BYTE    $88,'(UPDATE',$A9
        .WORD    L9EC5
PUPDA    .WORD    DOCOL
        .WORD    PREV
        .WORD    AT
        .WORD    AT
        .WORD    LIT,$8000
        .WORD    ORR
        .WORD    PREV
        .WORD    AT
        .WORD    STORE
        .WORD    EXIT

;        BUFFER

L9F0B    .BYTE    $86,'BUFFE',$D2
        .WORD    LA0E8-REL
BUFFE    .WORD    DOCOL
        .WORD    USE
        .WORD    AT
        .WORD    DUPP
        .WORD    TOR
        .WORD    PBUF
        .WORD    ZBRAN,$FFFC
        .WORD    USE
        .WORD    STORE
        .WORD    RAT
        .WORD    AT
        .WORD    ZLESS
        .WORD    ZBRAN,$14
        .WORD    RAT
        .WORD    TWOP
        .WORD    RAT
        .WORD    AT
        .WORD    LIT,$7FFF

```

```

        .WORD    ANDD
        .WORD    ZERO
        .WORD    RSW
        .WORD    RAT
        .WORD    STORE
        .WORD    RAT
        .WORD    PREV
        .WORD    STORE
        .WORD    RFROM
        .WORD    TWOP
        .WORD    EXIT

;      BLOCK

L9F54  .BYTE     $85, 'BLOC', $CB
      .WORD     L9F0B
BLOCK  .WORD     DOCOL
      .WORD     OFFSE
      .WORD     AT
      .WORD     PLUS
      .WORD     TOR
      .WORD     PREV
      .WORD     AT
      .WORD     DUPP
      .WORD     AT
      .WORD     RAT
      .WORD     SUBB
      .WORD     TSTAR
      .WORD     ZBRAN, $30
      .WORD     PBUF
      .WORD     ZEQU
      .WORD     ZBRAN, $12
      .WORD     DROP
      .WORD     RAT
      .WORD     BUFFE
      .WORD     DUPP
      .WORD     RAT
      .WORD     ONE
      .WORD     RSW
      .WORD     TWOSUB
      .WORD     DUPP
      .WORD     AT
      .WORD     RAT
      .WORD     SUBB
      .WORD     TSTAR
      .WORD     ZEQU
      .WORD     ZBRAN, $FFDA
      .WORD     DUPP
      .WORD     PREV
      .WORD     STORE
      .WORD     RFROM
      .WORD     DROP
      .WORD     TWOP
      .WORD     USE
      .WORD     AT
      .WORD     PREV
      .WORD     AT
      .WORD     EQUAL
      .WORD     ZBRAN, $E
      .WORD     USE
      .WORD     AT
      .WORD     PBUF
      .WORD     DROP
      .WORD     USE
      .WORD     STORE
      .WORD     EXIT

```

```

;      LOAD

L9FC8  .BYTE   $84, 'LOA', $C4
        .WORD   L9F54
LOAD    .WORD   DOCOL
        .WORD   BLK
        .WORD   AT
        .WORD   TOR
        .WORD   INN
        .WORD   AT
        .WORD   TOR
        .WORD   ZERO
        .WORD   INN
        .WORD   STORE
        .WORD   BSCR
        .WORD   STAR
        .WORD   BLK
        .WORD   STORE
        .WORD   INTE
        .WORD   RFROM
        .WORD   INN
        .WORD   STORE
        .WORD   RFROM
        .WORD   BLK
        .WORD   STORE
        .WORD   EXIT

; START OF BLOCK RELOCATED TO RAM

REL      =      *-RAM

;      EMIT

L9FFB  .BYTE   $84, 'EMI', $D4
        .WORD   L846A
XEMIT   .WORD   DOXVEC
        .WORD   Pemit

EMIT     =      XEMIT-REL

;      KEY

LA006   .BYTE   $83, 'KE', $D9
        .WORD   L85D7
XKEY    .WORD   DOXVEC
        .WORD   PKEY

KEY      =      XKEY-REL

;      FIRST

LA010   .BYTE   $85, 'FIRS', $D4
        .WORD   L89D6
XFIRS   .WORD   DOCON
        .WORD   BUF1

FIRST   =      XFIRS-REL

;      LIMIT

LA01C   .BYTE   $85, 'LIMI', $D4
        .WORD   LA010-REL
XLIMI   .WORD   DOCON
        .WORD   EM

```

```

LIMIT      =          XLIMI-REL

;          CREATE

LA028      .BYTE      $86, 'CREAT', $C5
           .WORD      L914F
XCREA      .WORD      DOXVEC
           .WORD      PCREAT

CREAT      =          XCREA-REL

;          NUM

LA035      .BYTE      $83, 'NU', $CD
           .WORD      L92F9
XNUM       .WORD      DOXVEC
           .WORD      PNUM

NUM        =          XNUM-REL

;          FORTH

LA03F      .BYTE      $C5, 'FORT', $C8
           .WORD      L9365
XFORT      .WORD      DOVOC
           .WORD      $A081
           .WORD      TOPNFA
VL0        .WORD      0

FORTH      =          XFORT-REL

;          ABORT

LA04F      .BYTE      $85, 'ABOR', $D4
           .WORD      L9403
XABOR      .WORD      DOXVEC
           .WORD      PABOR

ABORT      =          XABOR-REL

;          MESSAGE

LA05B      .BYTE      $87, 'MESSAG', $C5
           .WORD      L97EA
XMES       .WORD      DOXVEC
           .WORD      SMSG

MESS       =          XMES-REL

;          S/FILE

LA069      .BYTE      $86, 'S/FIL', $C5
           .WORD      L9D92
XSFIL      .WORD      DOCON
           .WORD      9

SFILE      =          XSFIL-REL

;          MAXFILES

LA076      .BYTE      $88, 'MAXFILE', $D3
           .WORD      LA069-REL
XMAXFI     .WORD      DOCON
           .WORD      20

MAXFIL     =          XMAXFI-REL

```

```

;      CHANNEL

LA085  .BYTE   $87, 'CHANNE', $CC
        .WORD   LA076-REL
XCHANN .WORD   DOVAR
        .WORD   18

CHANNE =      XCHANN-REL

;      FNAME

LA093  .BYTE   $85, 'FNAM', $C5
        .WORD   LA085-REL
XFNAM  .WORD   DOVAR
        .BYTE   '1SCREEN', $D

FNAME  =      XFNAM-REL

;      R/W

LA0A5  .BYTE   $83, 'R/', $D7
        .WORD   L9DCF
XRSW   .WORD   DOXVEC
        .WORD   DRSW

RSW    =      XRSW-REL

;      MINBUF

LA0AF  .BYTE   $86, 'MINBU', $C6
        .WORD   LA0A5-REL
XMINBU .WORD   DOCON
        .WORD   NOBUF

MINBUF =      XMINBU-REL

;      BUFSZ

LA0BC  .BYTE   $85, 'BUFS', $DA
        .WORD   LA0AF-REL
XBUFS  .WORD   DOCON
        .WORD   HDBT

BUFSZ  =      XBUFS-REL

;      USE

LA0C8  .BYTE   $83, 'US', $C5
        .WORD   LA0BC-REL
XUSE   .WORD   DOVAR
        .WORD   BUF1

USE    =      XUSE-REL

;      PREV

LA0D2  .BYTE   $84, 'PRE', $D6
        .WORD   LA0C8-REL
XPRES  .WORD   DOVAR
        .WORD   BUF1+HDBT

PREV   =      XPRES-REL

;      #BUF

```

```

LA0DD .BYTE $84, '#BU', $C6
        .WORD LA0D2-REL
XNBU   .WORD DOVAR
        .WORD NOBUF

NBUF   =      XNBU-REL

;      UPDATE

LA0E8 .BYTE $86, 'UPDAT', $C5
        .WORD L9EEA
XUPDA .WORD DOXVEC
        .WORD PUPDA

UPDAT  =      XUPDA-REL

;      (DISK)

LA0F5 .BYTE $86, '(DISK', $A9
        .WORD L9FC8
XPDIS .WORD DOCOL
        .WORD PCLI
        .BYTE 5, 'DISK', $D
        .WORD EXIT

PDISK  =      XPDIS-REL

;      TLD

LA10A .BYTE $83, 'TL', $C4
        .WORD LA274
XTLD .WORD DOCOL
        .WORD PCLI
        .BYTE 16
        .BYTE 'LOAD" '
LA11A .BYTE 'XXXX" '
LA120 .BYTE 'YYYY', $D
        .WORD EXIT

TLD    =      XTLD-REL

;      TSV

LA127 .BYTE $83, 'TS', $D6
        .WORD LA10A-REL
XTSV .WORD DOCOL
        .WORD PCLI
        .BYTE 21, 'SAVE"XXXX" YYYY ZZZZ', $D
        .WORD EXIT

TSV    =      XTSV-REL

;      SSV

LA149 .BYTE $83, 'SS', $D6
        .WORD LA127-REL
XSSV .WORD DOCOL
        .WORD PCLI
        .BYTE 24
        .BYTE 'SAVE" '
LA159 .BYTE 'XSCREEN" '
LA162 .BYTE 'XXXX'
LA167 .BYTE 'YYYY', $D
        .WORD EXIT

SSV    =      XSSV-REL

```

```

;      ASSEMBLER

LA16E  .BYTE   $C9, 'ASSEMBLE', $D2
        .WORD   LA4F6
XASSE  .WORD   DOVOC
        .WORD   $A081
        .WORD   LAB1C
LA180  .WORD   VL0-REL

ASSEM  =      XASSE-REL

;      MODE

LA182  .BYTE   $84, 'MOD', $C5
        .WORD   LA5C7
XMOD   .WORD   DOVAR
        .WORD   2

AMODE  =      XMOD-REL

;      EDITOR

LA18D  .BYTE   $C6, 'EDITO', $D2
        .WORD   LAB39
XEDIT  .WORD   DOVOC
        .WORD   $A081
        .WORD   LAFEC
        .WORD   LA180-REL
        .BYTE   0

EDITOR =      XEDIT-REL

; END OF BLOCK RELOCATED TO RAM

;      DISK

LA19F  .BYTE   $84, 'DIS', $CB
        .WORD   LA0F5-REL
DISK   .WORD   DOCOL
        .WORD   HIADR
        .WORD   TRUE
        .WORD   EQUAL
        .WORD   ZBRAN, $10
        .WORD   PAGE
        .WORD   LIT, $1900
        .WORD   ULESS
        .WORD   LIT, 25
        .WORD   QERR
        .WORD   LIT, RSW+2
        .WORD   LIT, DRSW+2
        .WORD   DOVEC
        .WORD   PDISK
        .WORD   EXIT

;      SAVE-BUFFERS

LA1CE  .BYTE   $8C, 'SAVE-BUFFER', $D3
        .WORD   LA19F
SAVBUF .WORD   DOCOL
        .WORD   FIRST
        .WORD   LIMIT
        .WORD   FIRST
        .WORD   SUBB
        .WORD   BUFSZ
        .WORD   SLASH

```

```

        .WORD    ZERO
        .WORD    XDO
        .WORD    DUPP
        .WORD    AT
        .WORD    ZLESS
        .WORD    ZBRAN,$1C
        .WORD    DUPP
        .WORD    AT
        .WORD    LIT,$7FFF
        .WORD    ANDD
        .WORD    OVER
        .WORD    STORE
        .WORD    DUPP
        .WORD    TWOP
        .WORD    OVER
        .WORD    AT
        .WORD    ZERO
        .WORD    RSW
        .WORD    BUFSZ
        .WORD    PLUS
        .WORD    XLOOP,$FFD6
        .WORD    DROP
        .WORD    EXIT

;        FLUSH

LA21F    .BYTE    $85,'FLUS',$C8
        .WORD    LA1CE
FLUSH    .WORD    DOCOL
        .WORD    SAVBUF
        .WORD    MTBUF
        .WORD    EXIT

;        -->

LA22F    .BYTE    $C3,'--',$BE
        .WORD    LA21F
ARROW    .WORD    DOCOL
        .WORD    QLOAD
        .WORD    ZERO
        .WORD    INN
        .WORD    STORE
        .WORD    BSCR
        .WORD    BLK
        .WORD    AT
        .WORD    OVER
        .WORD    MOD
        .WORD    SUBB
        .WORD    BLK
        .WORD    PSTOR
        .WORD    EXIT

;        (LINE)

LA251    .BYTE    $86,'(LINE',$A9
        .WORD    LA22F
PLINE    .WORD    DOCOL
        .WORD    TOR
        .WORD    CSLL
        .WORD    BBUF
        .WORD    SSLMOD
        .WORD    RFROM
        .WORD    BSCR
        .WORD    STAR
        .WORD    PLUS
        .WORD    BLOCK

```



```

        .WORD    PLUS
        .WORD    CSLL
        .WORD    EXIT

;        .LINE

LA274    .BYTE    $85, '.LIN', $C5
        .WORD    LA251
DOTLIN   .WORD    DOCOL
        .WORD    PLINE
        .WORD    DTRAI
        .WORD    TYPE
        .WORD    EXIT

;        4HEX

LA286    .BYTE    $84, '4HE', $D8
        .WORD    LA149-REL
FHEX     .WORD    DOCOL
        .WORD    BASE
        .WORD    AT
        .WORD    HEX
        .WORD    SWAP
        .WORD    ZERO
        .WORD    BDIG
        .WORD    DIG
        .WORD    DIG
        .WORD    DIG
        .WORD    DIG
        .WORD    EDIG
        .WORD    ROT
        .WORD    BASE
        .WORD    STORE
        .WORD    EXIT

;        TR

LA2AD    .BYTE    $82, 'T', $D2
        .WORD    LA286
TR        .WORD    DOCOL
        .WORD    FHEX
        .WORD    LIT, TLD+2
        .WORD    LIT, 8
        .WORD    PLUS
        .WORD    SWAP
        .WORD    CMOVE
        .WORD    FHEX
        .WORD    LIT, TLD+2
        .WORD    LIT, $E
        .WORD    PLUS
        .WORD    SWAP
        .WORD    CMOVE
        .WORD    TLD
        .WORD    EXIT

;        TW

LA2D8    .BYTE    $82, 'T', $D7
        .WORD    LA2AD
TW        .WORD    DOCOL
        .WORD    FHEX
        .WORD    LIT, TSV+2
        .WORD    LIT, 8
        .WORD    PLUS
        .WORD    SWAP
        .WORD    CMOVE

```

```

        .WORD    DUPP
        .WORD    FHEX
        .WORD    LIT,TSV+2
        .WORD    LIT,$E
        .WORD    PLUS
        .WORD    SWAP
        .WORD    CMOVE
        .WORD    BBUF
        .WORD    PLUS
        .WORD    FHEX
        .WORD    LIT,TSV+2
        .WORD    LIT,$13
        .WORD    PLUS
        .WORD    SWAP
        .WORD    CMOVE
        .WORD    TSV
        .WORD    EXIT

;      TR/W

LA319   .BYTE    $84,'TR/',$D7
        .WORD    LA2D8
TRSW    .WORD    DOCOL
        .WORD    ZBRAN,8
        .WORD    TR
        .WORD    BRAN,4
        .WORD    TW
        .WORD    EXIT

;      ?R/W

LA330   .BYTE    $84,'?R/',$D7
        .WORD    LA319
QRSW    .WORD    DOCOL
        .WORD    QFILE
        .WORD    LIT,3
        .WORD    LESS
        .WORD    ZBRAN,$10
        .WORD    LIT,RSW+2
        .WORD    LIT,TRSW+2
        .WORD    DOVEC
        .WORD    BRAN,$C
        .WORD    LIT,RSW+2
        .WORD    LIT,DRSW+2
        .WORD    DOVEC
        .WORD    EXIT

;      TAPE

LA35F   .BYTE    $84,'TAP',$C5
        .WORD    LA330
TAPE    .WORD    DOCOL
        .WORD    PCLI
        .BYTE    5,'TAPE',$D
        .WORD    LIT,RSW+2
        .WORD    LIT,TRSW+2
        .WORD    DOVEC
        .WORD    EXIT

;      CREATE-SCREENS

LA37C   .BYTE    $8E,'CREATE-SCREEN',$D3
        .WORD    LA35F
CRESCR  .WORD    DOCOL
        .WORD    QFILE
        .WORD    LIT,4

```

```

.WORD LESS
.WORD ZBRAN,$E
.WORD PDOTQ
.BYTE 7,'No disk'
.WORD ABORT
.WORD HERE
.WORD DUPP
.WORD BBUF
.WORD BSCR
.WORD SFILE
.WORD STAR
.WORD STAR
.WORD TDUP
.WORD PLUS
.WORD FIRST
.WORD OVER
.WORD ULESS
.WORD LIT,25
.WORD QERR
.WORD PDOTQ
.BYTE 20,'Are you sure (Y/N)? '
.WORD KEY
.WORD LIT,'Y'
.WORD EQUAL
.WORD ZBRAN,$6A
.WORD FHEX
.WORD LIT,LA167-REL
.WORD SWAP
.WORD CMOVE
.WORD BLANKS
.WORD FHEX
.WORD LIT,LA162-REL
.WORD SWAP
.WORD CMOVE
.WORD CRR
.WORD PDOTQ
.BYTE 17,'Creating screens '
.WORD LIT,$2F
.WORD FNAME
.WORD CSTOR
.WORD MAXFIL
.WORD ZERO
.WORD XDO
.WORD FNAME
.WORD CAT
.WORD ONEP
.WORD DUPP
.WORD LIT,$3A
.WORD EQUAL
.WORD ZBRAN,8
.WORD LIT,7
.WORD PLUS
.WORD DUPP
.WORD FNAME
.WORD CSTOR
.WORD LIT,LA159-REL
.WORD CSTOR
.WORD SSV
.WORD XLOOP,$FFD8
.WORD BRAN,6
.WORD TDROP
.WORD TDROP
.WORD EXIT

```

```

; LIST

```

```

LA456      .BYTE      $84,'LIS',$D4
           .WORD      LA37C
LIST       .WORD      DOCOL
           .WORD      DECIM
           .WORD      CRR
           .WORD      DUPP
           .WORD      SCR
           .WORD      STORE
           .WORD      DUPP
           .WORD      BLOCK
           .WORD      DROP
           .WORD      PDOTQ
           .BYTE      6,'SCR # '
           .WORD      DUPP
           .WORD      DOT
           .WORD      LIT,5
           .WORD      SPACS
           .WORD      HDOT
           .WORD      PDOTQ
           .BYTE      1,'H'
           .WORD      LIT,16
           .WORD      ZERO
           .WORD      XDO
           .WORD      CRR
           .WORD      IDO
           .WORD      LIT,3
           .WORD      DOTR
           .WORD      SPACE
           .WORD      IDO
           .WORD      SCR
           .WORD      AT
           .WORD      DOTLIN
           .WORD      XLOOP,$FFEA
           .WORD      CRR
           .WORD      EXIT

;          79-STANDARD

LA4AC      .BYTE      $8B,'79-STANDAR',$C4
           .WORD      LA456
STD79      .WORD      DOCOL
           .WORD      EXIT

;          INDEX

LA4BE      .BYTE      $85,'INDE',$D8
           .WORD      LA4AC
INDEX      .WORD      DOCOL
           .WORD      LIT,$C
           .WORD      EMIT
           .WORD      CRR
           .WORD      ONEP
           .WORD      SWAP
           .WORD      XDO
           .WORD      CRR
           .WORD      IDO
           .WORD      LIT,3
           .WORD      DOTR
           .WORD      SPACE
           .WORD      ZERO
           .WORD      IDO
           .WORD      DOTLIN
           .WORD      QTAB
           .WORD      ZBRAN,4
           .WORD      LEAV
           .WORD      XLOOP,$FFE4

```

```

        .WORD    EXIT
;      TRIAD
LA4F6   .BYTE    $85, 'TRIA', $C4
        .WORD    LA4BE
TRIAD   .WORD    DOCOL
        .WORD    LIT, $C
        .WORD    EMIT
        .WORD    LIT, 3
        .WORD    SLASH
        .WORD    LIT, 3
        .WORD    STAR
        .WORD    LIT, 3
        .WORD    OVER
        .WORD    PLUS
        .WORD    SWAP
        .WORD    XDO
        .WORD    CRR
        .WORD    IDO
        .WORD    LIST
        .WORD    XLOOP, $FFF8
        .WORD    CRR
        .WORD    EXIT
;      ?CURRENT
LA52C   .BYTE    $88, '?CURREN', $D4
        .WORD    LA16E-REL
QCURR   .WORD    DOCOL
        .WORD    TWOP
        .WORD    CURR
        .WORD    AT
        .WORD    SUBB
        .WORD    LIT, 14
        .WORD    QERR
        .WORD    EXIT
;      N
LA549   .BYTE    $81, $CE
        .WORD    FORTH+2
ANN      .WORD    DOCON
        .WORD    N
;      XSAVE
LA551   .BYTE    $85, 'XSAV', $C5
        .WORD    LA549
XSAV    .WORD    DOCON
        .WORD    XSAVE
;      W
LA55D   .BYTE    $81, $D7
        .WORD    LA551
AWW     .WORD    DOCON
        .WORD    W
;      IP
LA565   .BYTE    $82, 'I', $D0
        .WORD    LA55D
AIP     .WORD    DOCON
        .WORD    IP

```

```

;      UP
LA56E  .BYTE    $82, 'U', $D0
        .WORD    LA565
AUP     .WORD    DOCON
        .WORD    UP

;      PUSH
LA577   .BYTE    $84, 'PUS', $C8
        .WORD    LA56E
APUSH   .WORD    DOCON
        .WORD    PUSH

;      PUT
LA582   .BYTE    $83, 'PU', $D4
        .WORD    LA577
APUT    .WORD    DOCON
        .WORD    PUT

;      NEXT
LA58C   .BYTE    $84, 'NEX', $D4
        .WORD    LA582
ANEXT   .WORD    DOCON
        .WORD    NEXT

;      SETUP
LA597   .BYTE    $85, 'SETU', $D0
        .WORD    LA58C
ASETU   .WORD    DOCON
        .WORD    SETUP

;      POPTWO
LA5A3   .BYTE    $86, 'POPTW', $CF
        .WORD    LA597
APOPTW  .WORD    DOCON
        .WORD    POPTWO

;      POP
LA5B0   .BYTE    $83, 'PO', $D0
        .WORD    LA5A3
APOP    .WORD    DOCON
        .WORD    POP

;      PUSH0
LA5BA   .BYTE    $86, 'PUSH0', $C1
        .WORD    LA5B0
APUSH0  .WORD    DOCON
        .WORD    L842B

;      BASE-ADDR
LA5C7   .BYTE    $89, 'BASE-ADD', $D2
        .WORD    LA5BA
BASADR  .WORD    DOVAR
        .BYTE    $09, $09, $05, $15, $15, $01, $11, $80
        .BYTE    $09, $80, $0D, $1D, $19, $80, $80, $80
        .BYTE    $80, $00, $04, $14, $14, $80, $80, $80
        .BYTE    $80, $80, $0C, $1C, $1C, $80, $80, $2C

```

```

;      .A

LA5F5  .BYTE   $82, '.', $C1
        .WORD  LA182-REL
DOTA    .WORD  DOCOL
        .WORD  ZERO
        .WORD  AMODE
        .WORD  STORE
        .WORD  EXIT

;      #

LA604   .BYTE   $81, $A3
        .WORD  LA5F5
ANUM    .WORD  DOCOL
        .WORD  ONE
        .WORD  AMODE
        .WORD  STORE
        .WORD  EXIT

;      MEM

LA612   .BYTE   $83, 'ME', $CD
        .WORD  LA604
AMEM    .WORD  DOCOL
        .WORD  TWO
        .WORD  AMODE
        .WORD  STORE
        .WORD  EXIT

;      ,X

LA622   .BYTE   $82, ', ', $D8
        .WORD  LA612
COMX    .WORD  DOCOL
        .WORD  LIT, 3
        .WORD  AMODE
        .WORD  STORE
        .WORD  EXIT

;      ,Y

LA633   .BYTE   $82, ', ', $D9
        .WORD  LA622
COMY    .WORD  DOCOL
        .WORD  LIT, 4
        .WORD  AMODE
        .WORD  STORE
        .WORD  EXIT

;      X)

LA644   .BYTE   $82, 'X', $A9
        .WORD  LA633
XPAR    .WORD  DOCOL
        .WORD  LIT, 5
        .WORD  AMODE
        .WORD  STORE
        .WORD  EXIT

;      )Y

LA655   .BYTE   $82, ') ', $D9
        .WORD  LA644
PARY    .WORD  DOCOL
        .WORD  LIT, 6

```

```

        .WORD    AMODE
        .WORD    STORE
        .WORD    EXIT

;    )

LA666   .BYTE    $81,$A9
        .WORD    LA655
APAR    .WORD    DOCOL
        .WORD    LIT,$F
        .WORD    AMODE
        .WORD    STORE
        .WORD    EXIT

;    BOT

LA676   .BYTE    $83,'BO',$D4
        .WORD    LA666
ABOT    .WORD    DOCOL
        .WORD    COMX
        .WORD    ZERO
        .WORD    EXIT

;    SEC

LA684   .BYTE    $83,'SE',$C3
        .WORD    LA676
ASEC    .WORD    DOCOL
        .WORD    COMX
        .WORD    TWO
        .WORD    EXIT

;    RP)

LA692   .BYTE    $83,'RP',$A9
        .WORD    LA684
RPP     .WORD    DOCOL
        .WORD    COMX
        .WORD    LIT,$101
        .WORD    EXIT

;    CHKMODE

LA6A2   .BYTE    $87,'CHKMOD',$C5
        .WORD    LA692
CHKMOD  .WORD    DOCOL
        .WORD    ZBRAN,$1A
        .WORD    AMODE
        .WORD    AT
        .WORD    LIT,8
        .WORD    ANDD
        .WORD    ZEQU
        .WORD    ZBRAN,$A
        .WORD    LIT,8
        .WORD    AMODE
        .WORD    PSTOR
        .WORD    ONE
        .WORD    AMODE
        .WORD    AT
        .WORD    LIT,$F
        .WORD    ANDD
        .WORD    QDUP
        .WORD    ZBRAN,$E
        .WORD    ZERO
        .WORD    XDO
        .WORD    DUPP

```



```

        .WORD    PLUS
        .WORD    XLOOP,$FFFA
        .WORD    OVER
        .WORD    ONEP
        .WORD    AT
        .WORD    ANDD
        .WORD    ZEQU
        .WORD    EXIT

;      SOP

LA6F4   .BYTE    $83,'SO',$D0
        .WORD    LA6A2
SOP     .WORD    DOCOL
        .WORD    CREAT
        .WORD    CCOMM
        .WORD    PSCOD
DOSOP   JSR      DODOE
        .WORD    CAT
        .WORD    CCOMM
        .WORD    AMEM
        .WORD    EXIT

;      BRK,

LA70D   .BYTE    $84,'BRK',$AC
        .WORD    LA6F4
        .WORD    DOSOP
        .BYTE    0

;      CLC,

LA717   .BYTE    $84,'CLC',$AC
        .WORD    LA70D
        .WORD    DOSOP
        .BYTE    $18

;      CLD,

LA721   .BYTE    $84,'CLD',$AC
        .WORD    LA717
        .WORD    DOSOP
        .BYTE    $D8

;      CLI,

LA72B   .BYTE    $84,'CLI',$AC
        .WORD    LA721
        .WORD    DOSOP
        .BYTE    $58

;      CLV,

LA735   .BYTE    $84,'CLV',$AC
        .WORD    LA72B
        .WORD    DOSOP
        .BYTE    $B8

;      DEX,

LA73F   .BYTE    $84,'DEX',$AC
        .WORD    LA735
        .WORD    DOSOP
        .BYTE    $CA

;      DEY,

```

LA749	.BYTE	\$84,'DEY',\$AC
	.WORD	LA73F
	.WORD	DOSOP
	.BYTE	\$88
;		
	INX,	
LA753	.BYTE	\$84,'INX',\$AC
	.WORD	LA749
	.WORD	DOSOP
	.BYTE	\$E8
;		
	INY,	
LA75D	.BYTE	\$84,'INY',\$AC
	.WORD	LA753
	.WORD	DOSOP
	.BYTE	\$C8
;		
	NOP,	
LA767	.BYTE	\$84,'NOP',\$AC
	.WORD	LA75D
	.WORD	DOSOP
	.BYTE	\$EA
;		
	PHA,	
LA771	.BYTE	\$84,'PHA',\$AC
	.WORD	LA767
	.WORD	DOSOP
	.BYTE	\$48
;		
	PHP,	
LA77B	.BYTE	\$84,'PHP',\$AC
	.WORD	LA771
	.WORD	DOSOP
	.BYTE	8
;		
	PLA,	
LA785	.BYTE	\$84,'PLA',\$AC
	.WORD	LA77B
	.WORD	DOSOP
	.BYTE	\$68
;		
	PLP,	
LA78F	.BYTE	\$84,'PLP',\$AC
	.WORD	LA785
	.WORD	DOSOP
	.BYTE	\$28
;		
	RTI,	
LA799	.BYTE	\$84,'RTI',\$AC
	.WORD	LA78F
	.WORD	DOSOP
	.BYTE	\$40
;		
	RTS,	
LA7A3	.BYTE	\$84,'RTS',\$AC
	.WORD	LA799

```

        .WORD    DOSOP
        .BYTE    $60

;      SEC,

LA7AD   .BYTE    $84,'SEC',$AC
        .WORD    LA7A3
        .WORD    DOSOP
        .BYTE    $38

;      SED,

LA7B7   .BYTE    $84,'SED',$AC
        .WORD    LA7AD
        .WORD    DOSOP
        .BYTE    $F8

;      SEI,

LA7C1   .BYTE    $84,'SEI',$AC
        .WORD    LA7B7
        .WORD    DOSOP
        .BYTE    $78

;      TAX,

LA7CB   .BYTE    $84,'TAX',$AC
        .WORD    LA7C1
        .WORD    DOSOP
        .BYTE    $AA

;      TAY,

LA7D5   .BYTE    $84,'TAY',$AC
        .WORD    LA7CB
        .WORD    DOSOP
        .BYTE    $A8

;      TSX,

LA7DF   .BYTE    $84,'TSX',$AC
        .WORD    LA7D5
        .WORD    DOSOP
        .BYTE    $BA

;      TXA,

LA7E9   .BYTE    $84,'TXA',$AC
        .WORD    LA7DF
        .WORD    DOSOP
        .BYTE    $8A

;      TXS,

LA7F3   .BYTE    $84,'TXS',$AC
        .WORD    LA7E9
        .WORD    DOSOP
        .BYTE    $9A

;      TYA,

LA7FD   .BYTE    $84,'TYA',$AC
        .WORD    LA7F3
        .WORD    DOSOP
        .BYTE    $98

```

```

;      MOP

LA807  .BYTE    $83, 'MO', $D0
        .WORD    LA7FD
MOP     .WORD    DOCOL
        .WORD    CREAT
        .WORD    CCOMM
        .WORD    COMMA
        .WORD    PSCOD
DOMOP   JSR      DODOE
        .WORD    DUPP
        .WORD    ONEP
        .WORD    AT
        .WORD    LIT, $80
        .WORD    ANDD
        .WORD    ZBRAN, $A
        .WORD    LIT, $10
        .WORD    AMODE
        .WORD    PSTOR
        .WORD    OVER
        .WORD    LIT, $FF00
        .WORD    ANDD
        .WORD    CHKMOD
        .WORD    CHKMOD
        .WORD    ZBRAN, $10
        .WORD    AMEM
        .WORD    CRR
        .WORD    LAST
        .WORD    IDDOT
        .WORD    LIT, 3
        .WORD    ERROR
        .WORD    CAT
        .WORD    AMODE
        .WORD    CAT
        .WORD    BASADR
        .WORD    PLUS
        .WORD    CAT
        .WORD    PLUS
        .WORD    CCOMM
        .WORD    AMODE
        .WORD    CAT
        .WORD    LIT, 7
        .WORD    ANDD
        .WORD    ZBRAN, $1E
        .WORD    AMODE
        .WORD    CAT
        .WORD    LIT, $F
        .WORD    ANDD
        .WORD    LIT, 7
        .WORD    LESS
        .WORD    ZBRAN, 8
        .WORD    CCOMM
        .WORD    BRAN, 4
        .WORD    COMMA
        .WORD    AMEM
        .WORD    EXIT

;      ADC,

LA88E   .BYTE    $84, 'ADC', $AC
        .WORD    LA807
        .WORD    DOMOP
        .BYTE    $60, $6E, $1C

;      AND,

```

```

LA89A  .BYTE  $84, 'AND', $AC
        .WORD  LA88E
        .WORD  DOMOP
        .BYTE  $20, $6E, $1C

;      CMP,

LA8A6  .BYTE  $84, 'CMP', $AC
        .WORD  LA89A
        .WORD  DOMOP
        .BYTE  $C0, $6E, $1C

;      EOR,

LA8B2  .BYTE  $84, 'EOR', $AC
        .WORD  LA8A6
        .WORD  DOMOP
        .BYTE  $40, $6E, $1C

;      LDA,

LA8BE  .BYTE  $84, 'LDA', $AC
        .WORD  LA8B2
        .WORD  DOMOP
        .BYTE  $A0, $6E, $1C

;      ORA,

LA8CA  .BYTE  $84, 'ORA', $AC
        .WORD  LA8BE
        .WORD  DOMOP
        .BYTE  0, $6E, $1C

;      SBC,

LA8D6  .BYTE  $84, 'SBC', $AC
        .WORD  LA8CA
        .WORD  DOMOP
        .BYTE  $E0, $6E, $1C

;      STA,

LA8E2  .BYTE  $84, 'STA', $AC
        .WORD  LA8D6
        .WORD  DOMOP
        .BYTE  $80, $6C, $1C

;      ASL,

LA8EE  .BYTE  $84, 'ASL', $AC
        .WORD  LA8E2
        .WORD  DOMOP
        .BYTE  1, $D, $D

;      DEC,

LA8FA  .BYTE  $84, 'DEC', $AC
        .WORD  LA8EE
        .WORD  DOMOP
        .BYTE  $C1, $C, $C

;      INC,

LA906  .BYTE  $84, 'INC', $AC
        .WORD  LA8FA
        .WORD  DOMOP

```

```

        .BYTE    $E1,$C,$C
;      LSR,
LA912  .BYTE    $84,'LSR',$AC
        .WORD    LA906
        .WORD    DOMOP
        .BYTE    $41,$D,$D
;      ROL,
LA91E  .BYTE    $84,'ROL',$AC
        .WORD    LA912
        .WORD    DOMOP
        .BYTE    $21,$D,$D
;      ROR,
LA92A  .BYTE    $84,'ROR',$AC
        .WORD    LA91E
        .WORD    DOMOP
        .BYTE    $61,$D,$D
;      STX,
LA936  .BYTE    $84,'STX',$AC
        .WORD    LA92A
        .WORD    DOMOP
        .BYTE    $81,$14,4
;      CPX,
LA942  .BYTE    $84,'CPX',$AC
        .WORD    LA936
        .WORD    DOMOP
        .BYTE    $E0,$86,4
;      CPY,
LA94E  .BYTE    $84,'CPY',$AC
        .WORD    LA942
        .WORD    DOMOP
        .BYTE    $C0,$86,4
;      LDX,
LA95A  .BYTE    $84,'LDX',$AC
        .WORD    LA94E
        .WORD    DOMOP
        .BYTE    $A2,$96,$14
;      LDY,
LA966  .BYTE    $84,'LDY',$AC
        .WORD    LA95A
        .WORD    DOMOP
        .BYTE    $A0,$8E,$C
;      STY,
LA972  .BYTE    $84,'STY',$AC
        .WORD    LA966
        .WORD    DOMOP
        .BYTE    $80,$8C,4
;      JSR,

```

```

LA97E    .BYTE    $84,'JSR',$AC
          .WORD    LA972
          .WORD    DOMOP
          .BYTE    $14,$80,4

;        JMP,

LA98A    .BYTE    $84,'JMP',$AC
          .WORD    LA97E
JMPP     .WORD    DOMOP
          .BYTE    $40,$80,$84

;        BIT,

LA996    .BYTE    $84,'BIT',$AC
          .WORD    LA98A
          .WORD    DOMOP
          .BYTE    $20,$84,4

;        >BRANGE

LA9A2    .BYTE    $87,'>BRANG',$C5
          .WORD    LA996
LA9AC    .WORD    DOCOL
          .WORD    DUPP
          .WORD    ZLESS
          .WORD    OVER
          .WORD    LIT,$7F
          .WORD    GREAT
          .WORD    ORR
          .WORD    LIT,13
          .WORD    QERR
          .WORD    EXIT

;        <BRANGE

LA9C4    .BYTE    $87,'<BRANG',$C5
          .WORD    LA9A2
LA9CE    .WORD    DOCOL
          .WORD    DUPP
          .WORD    ZGREA
          .WORD    OVER
          .WORD    LIT,$FF80
          .WORD    LESS
          .WORD    ORR
          .WORD    LIT,13
          .WORD    QERR
          .WORD    EXIT

;        0<

LA9E6    .BYTE    $82,'0',$BC
          .WORD    LA9C4
LA9EB    .WORD    DOCON
          .WORD    $10

;        VS

LA9EF    .BYTE    $82,'V',$D3
          .WORD    LA9E6
LA9F4    .WORD    DOCON
          .WORD    $50

;        CS

```

```

LA9F8      .BYTE    $82,'C',$D3
           .WORD    LA9EF
LA9FD      .WORD    DOCON
           .WORD    $90

;          0=

LAA01      .BYTE    $82,'0',$BD
           .WORD    LA9F8
LAA06      .WORD    DOCON
           .WORD    $D0

;          NOT

LAA0A      .BYTE    $83,'NO',$D4
           .WORD    LAA01
LAA10      .WORD    DOCOL
           .WORD    LIT,$20
           .WORD    PLUS
           .WORD    EXIT

;          IF,

LAA1A      .BYTE    $83,'IF',$AC
           .WORD    LAA0A
AIF        .WORD    DOCOL
           .WORD    CCOMM
           .WORD    HERE
           .WORD    ZERO
           .WORD    CCOMM
           .WORD    TWO
           .WORD    EXIT

;          THEN,

LAA2E      .BYTE    $85,'THEN',$AC
           .WORD    LAA1A
ATHEN      .WORD    DOCOL
           .WORD    QEXEC
           .WORD    TWO
           .WORD    QPAIR
           .WORD    HERE
           .WORD    OVER
           .WORD    CAT
           .WORD    ZBRAN,$A
           .WORD    SWAP
           .WORD    STORE
           .WORD    BRAN,$E
           .WORD    OVER
           .WORD    ONEP
           .WORD    SUBB
           .WORD    LA9AC
           .WORD    SWAP
           .WORD    CSTOR
           .WORD    EXIT

;          ELSE,

LAA5E      .BYTE    $85,'ELSE',$AC
           .WORD    LAA2E
AELSE      .WORD    DOCOL
           .WORD    TWO
           .WORD    QPAIR
           .WORD    HERE
           .WORD    ONEP
           .WORD    ONE

```



```

        .WORD    JMPP
        .WORD    SWAP
        .WORD    HERE
        .WORD    OVER
        .WORD    ONEP
        .WORD    SUBB
        .WORD    LA9AC
        .WORD    SWAP
        .WORD    CSTOR
        .WORD    TWO
        .WORD    EXIT

;        BEGIN,

LAA88    .BYTE    $86, 'BEGIN', $AC
        .WORD    LAA5E
ABEGIN   .WORD    DOCOL
        .WORD    HERE
        .WORD    ONE
        .WORD    EXIT

;        UNTIL,

LAA99    .BYTE    $86, 'UNTIL', $AC
        .WORD    LAA88
AUNTIL   .WORD    DOCOL
        .WORD    QEXEC
        .WORD    SWAP
        .WORD    ONE
        .WORD    QPAIR
        .WORD    CCOMM
        .WORD    HERE
        .WORD    ONEP
        .WORD    SUBB
        .WORD    LA9CE
        .WORD    CCOMM
        .WORD    EXIT

;        AGAIN,

LAABA    .BYTE    $86, 'AGAIN', $AC
        .WORD    LAA99
AAGAIN   .WORD    DOCOL
        .WORD    QEXEC
        .WORD    ONE
        .WORD    QPAIR
        .WORD    JMPP
        .WORD    EXIT

;        WHILE,

LAACF    .BYTE    $86, 'WHILE', $AC
        .WORD    LAABA
AWHIL    .WORD    DOCOL
        .WORD    OVER
        .WORD    ONE
        .WORD    QPAIR
        .WORD    AIF
        .WORD    EXIT

;        REPEAT,

LAAE4    .BYTE    $87, 'REPEAT', $AC
        .WORD    LAACF
AREPEA   .WORD    DOCOL
        .WORD    QEXEC

```

```

        .WORD    TWO
        .WORD    QPAIR
        .WORD    HERE
        .WORD    TWOP
        .WORD    OVER
        .WORD    SUBB
        .WORD    LA9AC
        .WORD    SWAP
        .WORD    CSTOR
        .WORD    AAGAIN
        .WORD    EXIT

;        MACRO

LAB08    .BYTE    $85, 'MACR', $CF
        .WORD    LAAE4
MACRO    .WORD    DOCOL
        .WORD    LIT, ASSEM+2
        .WORD    QCURR
        .WORD    COLON
        .WORD    EXIT

;        END-CODE

LAB1C    .BYTE    $C8, 'END-COD', $C5
        .WORD    LAB08
ENDCOD    .WORD    DOCOL
        .WORD    CURR
        .WORD    AT
        .WORD    CONT
        .WORD    STORE
        .WORD    QEXEC
        .WORD    QCSP
        .WORD    SMUDG
        .WORD    EXIT

;        CODE

LAB39    .BYTE    $C4, 'COD', $C5
        .WORD    LA52C
CODE    .WORD    DOCOL
        .WORD    QEXEC
        .WORD    CREAT
        .WORD    HERE
        .WORD    HERE
        .WORD    TWOSUB
        .WORD    STORE
        .WORD    SMUDG
        .WORD    ASSEM
        .WORD    AMEM
        .WORD    SCSP
        .WORD    EXIT

;        LOCATE

LAB58    .BYTE    $86, 'LOCAT', $C5
        .WORD    LA18D-REL
LOCATE    .WORD    DOCOL
        .WORD    QFILE
        .WORD    LIT, 4
        .WORD    LESS
        .WORD    ZBRAN, $28
        .WORD    ONESUB
        .WORD    HIADR
        .WORD    TRUE
        .WORD    EQUAL

```

```

        .WORD    ZBRAN,$A
        .WORD    LIT,$8000
        .WORD    BRAN,4
        .WORD    HERE
        .WORD    SWAP
        .WORD    ONE
        .WORD    RSW
        .WORD    LIT,7
        .WORD    TOVDU
        .WORD    BRAN,4
        .WORD    DROP
        .WORD    EXIT

;      SAVE

LAB99   .BYTE    $84,'SAV',$C5
        .WORD    LAB58
SAVE    .WORD    DOCOL
        .WORD    SCR
        .WORD    AT
        .WORD    LIST
        .WORD    CRR
        .WORD    PDOTQ
        .BYTE    4,'OK? '
        .WORD    KEY
        .WORD    LIT,$59
        .WORD    EQUAL
        .WORD    ZBRAN,$A
        .WORD    PUPDA
        .WORD    SAVBUF
        .WORD    BRAN,4
        .WORD    QUIT
        .WORD    EXIT

;      CLRSCR

LABC9   .BYTE    $86,'CLRSC',$D2
        .WORD    LAB99
CLRSCR  .WORD    DOCOL
        .WORD    SCR
        .WORD    AT
        .WORD    DUPP
        .WORD    LIT,$8000
        .WORD    ANDD
        .WORD    LIT,6
        .WORD    QERR
        .WORD    DUPP
        .WORD    PREV
        .WORD    AT
        .WORD    DUPP
        .WORD    BUFSZ
        .WORD    TWOSUB
        .WORD    TDUP
        .WORD    PLUS
        .WORD    ZERO
        .WORD    SWAP
        .WORD    STORE
        .WORD    BLANKS
        .WORD    STORE
        .WORD    LIST
        .WORD    EXIT

;      PROGRAM

LAC04   .BYTE    $87,'PROGRA',$CD
        .WORD    LABC9

```

```

PROGRA  .WORD  DOCOL
        .WORD  CRR
        .WORD  PDOTQ
        .BYTE  19,'1st screen number? '
        .WORD  QUERY
        .WORD  INTE
        .WORD  SCR
        .WORD  STORE
        .WORD  CLRSCR
        .WORD  EDITOR
        .WORD  EXIT

;      ANOTHER

LAC36   .BYTE  $87,'ANOTHE',$D2
        .WORD  LAC04
ANOTHR  .WORD  DOCOL
        .WORD  ONE
        .WORD  SCR
        .WORD  PSTOR
        .WORD  CLRSCR
        .WORD  EXIT

;      MORE

LAC4C   .BYTE  $84,'MOR',$C5
        .WORD  LAC36
MORE    .WORD  DOCOL
        .WORD  SAVE
        .WORD  ANOTHR
        .WORD  EXIT

;      TEXT

LAC5B   .BYTE  $84,'TEX',$D4
        .WORD  LAC4C
TEXT    .WORD  DOCOL
        .WORD  PAD
        .WORD  CSLL
        .WORD  TWOP
        .WORD  BLANKS
        .WORD  PWORD
        .WORD  CSLL
        .WORD  MIN
        .WORD  PAD
        .WORD  CSTOR
        .WORD  PAD
        .WORD  COUNT
        .WORD  CMOVE
        .WORD  EXIT

;      LINE

LAC7E   .BYTE  $84,'LIN',$C5
        .WORD  LAC5B
LINE    .WORD  DOCOL
        .WORD  DUPP
        .WORD  LIT,$FFF0
        .WORD  ANDD
        .WORD  LIT,23
        .WORD  QERR
        .WORD  SCR
        .WORD  AT
        .WORD  PLINE
        .WORD  DROP
        .WORD  EXIT

```

```

;      WHERE

LAC9F  .BYTE    $85, 'WHER', $C5
        .WORD    LAC7E
WHERE  .WORD    DOCOL
        .WORD    DUPP
        .WORD    BSCR
        .WORD    SLASH
        .WORD    DUPP
        .WORD    SCR
        .WORD    STORE
        .WORD    PDOTQ
        .BYTE    6, 'SCR # '
        .WORD    DECDOT
        .WORD    SWAP
        .WORD    CSLL
        .WORD    SLMOD
        .WORD    CSLL
        .WORD    STAR
        .WORD    ROT
        .WORD    BLOCK
        .WORD    PLUS
        .WORD    CRR
        .WORD    CSLL
        .WORD    TYPE
        .WORD    CRR
        .WORD    WBFR
        .WORD    CAT
        .WORD    SUBB
        .WORD    SPACS
        .WORD    LIT, $5E
        .WORD    EMIT
        .WORD    EDITOR
        .WORD    SPSTO
        .WORD    QUIT
        .WORD    EXIT

;      #LOCATE

LACEE  .BYTE    $87, '#LOCAT', $C5
        .WORD    FORTH+2
NLOCAT .WORD    DOCOL
        .WORD    RNUM
        .WORD    AT
        .WORD    CSLL
        .WORD    SLMOD
        .WORD    EXIT

;      #LEAD

LAD04  .BYTE    $85, '#LEA', $C4
        .WORD    LACEE
NLEAD  .WORD    DOCOL
        .WORD    NLOCAT
        .WORD    LINE
        .WORD    SWAP
        .WORD    EXIT

;      #LAG

LAD16  .BYTE    $84, '#LA', $C7
        .WORD    LAD04
LAG     .WORD    DOCOL
        .WORD    NLEAD
        .WORD    DUPP

```

```

        .WORD    TOR
        .WORD    PLUS
        .WORD    CSLL
        .WORD    RFROM
        .WORD    SUBB
        .WORD    EXIT

;        -MOVE

LAD2F    .BYTE    $85, '-MOV', $C5
        .WORD    LAD16
DMOVE    .WORD    DOCOL
        .WORD    LINE
        .WORD    CSLL
        .WORD    CMOVE
        .WORD    UPDAT
        .WORD    EXIT

;        H

LAD43    .BYTE    $81, $C8
        .WORD    LAD2F
HH        .WORD    DOCOL
        .WORD    LINE
        .WORD    PAD
        .WORD    ONEP
        .WORD    CSLL
        .WORD    DUPP
        .WORD    PAD
        .WORD    CSTOR
        .WORD    CMOVE
        .WORD    EXIT

;        E

LAD5B    .BYTE    $81, $C5
        .WORD    LAD43
EE        .WORD    DOCOL
        .WORD    LINE
        .WORD    CSLL
        .WORD    BLANKS
        .WORD    UPDAT
        .WORD    EXIT

;        S

LAD6B    .BYTE    $81, $D3
        .WORD    LAD5B
SS        .WORD    DOCOL
        .WORD    DUPP
        .WORD    LIT, $FFF0
        .WORD    ANDD
        .WORD    NOT
        .WORD    ZBRAN, $1A
        .WORD    DUPP
        .WORD    LIT, $E
        .WORD    XDO
        .WORD    IDO
        .WORD    LINE
        .WORD    IDO
        .WORD    ONEP
        .WORD    DMOVE
        .WORD    TRUE
        .WORD    XPLOO, $FFF2
        .WORD    EE
        .WORD    EXIT

```

```

;      D

LAD9B  .BYTE    $81,$C4
        .WORD    LAD6B
DD      .WORD    DOCOL
        .WORD    DUPP
        .WORD    HH
        .WORD    DUPP
        .WORD    LIT,$F
        .WORD    SUBB
        .WORD    ZBRAN,$1A
        .WORD    LIT,$F
        .WORD    DUPP
        .WORD    ROT
        .WORD    XDO
        .WORD    IDO
        .WORD    ONEP
        .WORD    LINE
        .WORD    IDO
        .WORD    DMOVE
        .WORD    XLOOP,$FFF4
        .WORD    EE
        .WORD    EXIT

;      M

LADCD  .BYTE    $81,$CD
        .WORD    LAD9B
EMM     .WORD    DOCOL
        .WORD    RNUM
        .WORD    PSTOR
        .WORD    CRR
        .WORD    SPACE
        .WORD    NLEAD
        .WORD    TYPE
        .WORD    LIT,$7C
        .WORD    EMIT
        .WORD    LAG
        .WORD    TYPE
        .WORD    NLOCAT
        .WORD    DOT
        .WORD    DROP
        .WORD    EXIT

;      T

LADF1  .BYTE    $81,$D4
        .WORD    LADCD
TT      .WORD    DOCOL
        .WORD    DUPP
        .WORD    CSLL
        .WORD    STAR
        .WORD    RNUM
        .WORD    STORE
        .WORD    HH
        .WORD    ZERO
        .WORD    EMM
        .WORD    EXIT

;      L

LAE09  .BYTE    $81,$CC
        .WORD    LADF1
LL      .WORD    DOCOL
        .WORD    SCR

```

```

        .WORD    AT
        .WORD    LIST
        .WORD    ZERO
        .WORD    EMM
        .WORD    EXIT

;      R

LAE1B   .BYTE    $81,$D2
        .WORD    LAE09
RR      .WORD    DOCOL
        .WORD    PAD
        .WORD    ONEP
        .WORD    SWAP
        .WORD    DMOVE
        .WORD    EXIT

;      P

LAE2B   .BYTE    $81,$D0
        .WORD    LAE1B
PP      .WORD    DOCOL
        .WORD    ONE
        .WORD    TEXT
        .WORD    RR
        .WORD    EXIT

;      I

LAE39   .BYTE    $81,$C9
        .WORD    LAE2B
II      .WORD    DOCOL
        .WORD    DUPP
        .WORD    SS
        .WORD    RR
        .WORD    EXIT

;      TOP

LAE47   .BYTE    $83,'TO',$D0
        .WORD    LAE39
TOPP    .WORD    DOCOL
        .WORD    ZERO
        .WORD    RNUM
        .WORD    STORE
        .WORD    EXIT

;      CLEAR

LAE57   .BYTE    $85,'CLEA',$D2
        .WORD    LAE47
CLEAR   .WORD    DOCOL
        .WORD    SCR
        .WORD    STORE
        .WORD    LIT,16
        .WORD    ZERO
        .WORD    XDO
        .WORD    IDO
        .WORD    EE
        .WORD    XLOOP,$FFFA
        .WORD    EXIT

;      COPY

LAE77   .BYTE    $84,'COP',$D9
        .WORD    LAE57

```


COPY	.WORD	DOCOL
	.WORD	BSCR
	.WORD	STAR
	.WORD	OFFSE
	.WORD	AT
	.WORD	PLUS
	.WORD	SWAP
	.WORD	BSCR
	.WORD	STAR
	.WORD	BSCR
	.WORD	OVER
	.WORD	PLUS
	.WORD	SWAP
	.WORD	XDO
	.WORD	DUPP
	.WORD	IDO
	.WORD	BLOCK
	.WORD	TWOSUB
	.WORD	STORE
	.WORD	ONEP
	.WORD	UPDAT
	.WORD	XLOOP,\$FFF0
	.WORD	DROP
	.WORD	SAVBUF
	.WORD	EXIT
;		
	MATCH	
LAEB2	.BYTE	\$85,'MATC',\$C8
	.WORD	LAE77
MATCH	.WORD	*+2
	LDA	#4
	JSR	SETUP
	DEX	
	DEX	
	DEX	
	DEX	
	STY	0,X
	STY	1,X
LAEC9	LDY	#\$FF
LAECB	INY	
	CPY	N
	BCS	LAEFC
	LDA	(N+2),Y
	CMP	(\$66),Y
	BEQ	LAECB
	INC	\$66
	BNE	LAEDC
	INC	\$67
LAEDC	INC	0,X
	BNE	LAEE2
	INC	1,X
LAEE2	LDA	N+4
	BNE	LAEE8
	DEC	N+5
LAEE8	DEC	N+4
	LDA	N+4
	CMP	N
	LDA	N+5
	SBC	N+1
	BCS	LAEC9
	LDA	#0
	STA	2,X
	STA	3,X
	LDY	N+4
LAEFC	CLC	

```

        TYA
        ADC      0,X
        PHA
        LDA      #0
        ADC      1,X
        JMP      PUT

;      1LINE

LAF08   .BYTE    $85,'1LIN',$C5
        .WORD    LAEB2
ONELIN  .WORD    DOCOL
        .WORD    LAG
        .WORD    PAD
        .WORD    COUNT
        .WORD    MATCH
        .WORD    RNUM
        .WORD    PSTOR
        .WORD    EXIT

;      $FIND

LAF20   .BYTE    $85,'$FIN',$C4
        .WORD    LAF08
SFIND   .WORD    DOCOL
        .WORD    LIT,$3FF
        .WORD    RNUM
        .WORD    AT
        .WORD    LESS
        .WORD    ZBRAN,$12
        .WORD    TOPP
        .WORD    PAD
        .WORD    HERE
        .WORD    CSLL
        .WORD    ONEP
        .WORD    CMOVE
        .WORD    ZERO
        .WORD    ERROR
        .WORD    ONELIN
        .WORD    ZBRAN,$FFDE
        .WORD    EXIT

;      DELETE

LAF50   .BYTE    $86,'DELET',$C5
        .WORD    LAF20
DELETE  .WORD    DOCOL
        .WORD    TOR
        .WORD    LAG
        .WORD    PLUS
        .WORD    RAT
        .WORD    SUBB
        .WORD    LAG
        .WORD    RAT
        .WORD    NEGAT
        .WORD    RNUM
        .WORD    PSTOR
        .WORD    NLEAD
        .WORD    PLUS
        .WORD    SWAP
        .WORD    CMOVE
        .WORD    RFROM
        .WORD    BLANKS
        .WORD    UPDAT
        .WORD    EXIT

```

```

;      N

LAF7F  .BYTE   $81,$CE
        .WORD   LAF50
NN      .WORD   DOCOL
        .WORD   SFIND
        .WORD   ZERO
        .WORD   EMM
        .WORD   EXIT

;      F

LAF8D  .BYTE   $81,$C6
        .WORD   LAF7F
FF      .WORD   DOCOL
        .WORD   ONE
        .WORD   TEXT
        .WORD   NN
        .WORD   EXIT

;      B

LAF9B  .BYTE   $81,$C2
        .WORD   LAF8D
BB      .WORD   DOCOL
        .WORD   PAD
        .WORD   CAT
        .WORD   NEGAT
        .WORD   EMM
        .WORD   EXIT

;      X

LAFAB  .BYTE   $81,$D8
        .WORD   LAF9B
XX      .WORD   DOCOL
        .WORD   ONE
        .WORD   TEXT
        .WORD   SFIND
        .WORD   PAD
        .WORD   CAT
        .WORD   DELETE
        .WORD   ZERO
        .WORD   EMM
        .WORD   EXIT

;      TILL

LAFC3  .BYTE   $84,'TIL',$CC
        .WORD   LAFAB
TILL   .WORD   DOCOL
        .WORD   NLEAD
        .WORD   PLUS
        .WORD   ONE
        .WORD   TEXT
        .WORD   ONELIN
        .WORD   ZEQU
        .WORD   ZERO
        .WORD   QERR
        .WORD   NLEAD
        .WORD   PLUS
        .WORD   SWAP
        .WORD   SUBB
        .WORD   DELETE
        .WORD   ZERO
        .WORD   EMM

```

```

        .WORD    EXIT

;      C

LAFEC   .BYTE    $81,$C3
        .WORD    LAFC3
CC      .WORD    DOCOL
        .WORD    ONE
        .WORD    TEXT
        .WORD    PAD
        .WORD    COUNT
        .WORD    LAG
        .WORD    ROT
        .WORD    OVER
        .WORD    MIN
        .WORD    TOR
        .WORD    RAT
        .WORD    RNUM
        .WORD    PSTOR
        .WORD    RAT
        .WORD    SUBB
        .WORD    TOR
        .WORD    DUPP
        .WORD    WBFR
        .WORD    RAT
        .WORD    CMOVE
        .WORD    WBFR
        .WORD    NLEAD
        .WORD    PLUS
        .WORD    RFROM
        .WORD    CMOVE
        .WORD    RFROM
        .WORD    CMOVE
        .WORD    UPDAT
        .WORD    ZERO
        .WORD    EMM
        .WORD    EXIT

;      <CMOVE

LB02E   .BYTE    $86,'<CMOV', $C5
        .WORD    LAC9F
CMOVU   .WORD    *+2
        LDA      #3
        JSR      SETUP
        LDA      N+1
        BMI      LB068
        CLC
        ADC      N+3
        STA      N+3
        LDA      N+1
        CLC
        ADC      N+5
        STA      N+5
        LDY      N

LB050   TYA
        BNE      LB060
        LDA      N+1
        BNE      LB05A
        JMP      NEXT

LB05A   DEC      N+1
        DEC      N+3
        DEC      N+5
LB060   DEY

```

```

        LDA      (N+4),Y
        STA      (N+2),Y
        JMP      LB050

LB068    JMP      NEXT

;        MOVE-BUFFERS

LB06B    .BYTE    $8C,'MOVE-BUFFER',$D3
        .WORD    LB02E
MOVBUF   .WORD    DOCOL
        .WORD    LIMIT
        .WORD    TDUP
        .WORD    SUBB
        .WORD    QDUP
        .WORD    ZBRAN,$56
        .WORD    FIRST
        .WORD    OVER
        .WORD    PLUS
        .WORD    DUPP
        .WORD    HERE
        .WORD    ULESS
        .WORD    LIT,25
        .WORD    QERR
        .WORD    ROT
        .WORD    FIRST
        .WORD    SUBB
        .WORD    TOR
        .WORD    SWAP
        .WORD    DUPP
        .WORD    PREV
        .WORD    PSTOR
        .WORD    DUPP
        .WORD    USE
        .WORD    PSTOR
        .WORD    TOR
        .WORD    FIRST
        .WORD    OVER
        .WORD    LIT,FIRST+2
        .WORD    STORE
        .WORD    SWAP
        .WORD    RFROM
        .WORD    RFROM
        .WORD    SWAP
        .WORD    ZLESS
        .WORD    ZBRAN,8
        .WORD    CMOVE
        .WORD    BRAN,4
        .WORD    CMOVU
        .WORD    LIT,LIMIT+2
        .WORD    STORE
        .WORD    BRAN,4
        .WORD    TDROP
        .WORD    EXIT

;        PLOT

LB0E0    .BYTE    $84,'PLO',$D4
        .WORD    LB06B
PLOT     .WORD    DOCOL
        .WORD    LIT,$19
        .WORD    TOVDU
        .WORD    SWAP
        .WORD    ROT
        .WORD    TOVDU
        .WORD    DUPP

```

```

        .WORD    TOVDU
        .WORD    BSWAP
        .WORD    TOVDU
        .WORD    DUPP
        .WORD    TOVDU
        .WORD    BSWAP
        .WORD    TOVDU
        .WORD    EXIT

TOPNFA  =        *

;        $MSG

LB107   .BYTE    $84,'$MS', $C7
        .WORD    LB0E0
MSG     .WORD    DOCOL
        .WORD    DUPP
        .WORD    DUPP
        .WORD    ZGREA
        .WORD    SWAP
        .WORD    LIT,26
        .WORD    LESS
        .WORD    ANDD
        .WORD    ZBRAN,$20
        .WORD    LIT,LB47E
        .WORD    SWAP
        .WORD    ZERO
        .WORD    XDO
        .WORD    DUPP
        .WORD    CAT
        .WORD    PLUS
        .WORD    ONEP
        .WORD    XLOOP,$FFF6
        .WORD    COUNT
        .WORD    TYPE
        .WORD    BRAN,4
        .WORD    MSGNUM
        .WORD    EXIT

;        MM

LB146   .BYTE    $82,'M', $CD
        .WORD    LB107
MM      .WORD    DOCOL
        .WORD    TWOP
        .WORD    SWAP
        .WORD    DUPP
        .WORD    ROT
        .WORD    DUPP
        .WORD    ROT
        .WORD    OVER
        .WORD    CAT
        .WORD    ONEP
        .WORD    CMOVE
        .WORD    CAT
        .WORD    ONEP
        .WORD    PLUS
        .WORD    EXIT

;        M1

LB169   .BYTE    $82,'M', $B1
        .WORD    LB146
M1      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    11,'Stack empty'

```

```

        .WORD    EXIT

;      M2
LB180   .BYTE    $82,'M',$B2
        .WORD    LB169
M2      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    15,'Dictionary full'
        .WORD    EXIT

;      M3
LB19B   .BYTE    $82,'M',$B3
        .WORD    LB180
M3      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    26,'Has incorrect address mode'
        .WORD    EXIT

;      M4
LB1C1   .BYTE    $82,'M',$B4
        .WORD    LB19B
M4      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    12,'Isn',$27,'t unique'
        .WORD    EXIT

;      M5
LB1D9   .BYTE    $82,'M',$B5
        .WORD    LB1C1
M5      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    29,'Parameter outside valid range'
        .WORD    EXIT

;      M6
LB202   .BYTE    $82,'M',$B6
        .WORD    LB1D9
M6      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    26,'Screen number out of range'
        .WORD    EXIT

;      M7
LB228   .BYTE    $82,'M',$B7
        .WORD    LB202
M7      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    10,'Stack full'
        .WORD    EXIT

;      M8
LB23E   .BYTE    $82,'M',$B8
        .WORD    LB228
M8      .WORD    DOCOL
        .WORD    PDOTQ
        .BYTE    25,'Can',$27,'t open or extend file'
        .WORD    EXIT

;      M9

```

```

LB263      .BYTE      $82,'M',$B9
           .WORD      LB23E
M9          .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      24,'Read/Write not completed'
           .WORD      EXIT

;          M10

LB287      .BYTE      $83,'M1',$B0
           .WORD      LB263
M10         .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      26,'Can',$27,'t redefine end-of-line'
           .WORD      EXIT

;          M11

LB2AE      .BYTE      $83,'M1',$B1
           .WORD      LB287
M11         .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      20,'Can',$27,'t divide by zero'
           .WORD      EXIT

;          M12

LB2CF      .BYTE      $83,'M1',$B2
           .WORD      LB2AE
M12         .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      26,'Undefined execution vector'
           .WORD      EXIT

;          M13

LB2F6      .BYTE      $83,'M1',$B3
           .WORD      LB2CF
M13         .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      15,'Branch too long'
           .WORD      EXIT

;          M14

LB312      .BYTE      $83,'M1',$B4
           .WORD      LB2F6
M14         .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      28,'Incorrect CURRENT vocabulary'
           .WORD      EXIT

;          M15

LB33B      .BYTE      $83,'M1',$B5
           .WORD      LB312
M15         .WORD      DOCOL
           .WORD      PDOTQ
           .BYTE      1,' '
           .WORD      EXIT

;          M16

LB349      .BYTE      $83,'M1',$B6
           .WORD      LB33B

```



```

M16      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   1, ' '
          .WORD   EXIT

;        M17

LB357    .BYTE   $83, 'M1', $B7
          .WORD   LB349
M17      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   16, 'Compilation only'
          .WORD   EXIT

;        M18

LB374    .BYTE   $83, 'M1', $B8
          .WORD   LB357
M18      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   14, 'Execution only'
          .WORD   EXIT

;        M19

LB38F    .BYTE   $83, 'M1', $B9
          .WORD   LB374
M19      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   23, 'Conditionals not paired'
          .WORD   EXIT

;        M20

LB3B3    .BYTE   $83, 'M2', $B0
          .WORD   LB38F
M20      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   23, 'Definition not finished'
          .WORD   EXIT

;        M21

LB3D7    .BYTE   $83, 'M2', $B1
          .WORD   LB3B3
M21      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   23, 'In protected dictionary'
          .WORD   EXIT

;        M22

LB3FB    .BYTE   $83, 'M2', $B2
          .WORD   LB3D7
M22      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   21, 'Use only when LOADING'
          .WORD   EXIT

;        M23

LB41D    .BYTE   $83, 'M2', $B3
          .WORD   LB3FB
M23      .WORD   DOCOL
          .WORD   PDOTQ
          .BYTE   26, 'Off current editing screen'

```

[illegible]

[illegible]

[illegible]

[illegible]