

## General Information

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Language: ACTION!

Compiler/Interpreter: ACTION!

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In case you are interested, this is the company logo for Action Computer Services (ACS).

- Clinton Parker 70435,625

PS: Hit ESC to exit program

```
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```

```
MODULE ; LOGO.ACT
```

```
DEFINE RTI = "$40",
        PHA = "$48",
        PLA = "$68",
        TXA = "$8A",
        TAX = "$AA",
        TYA = "$98",
        TAY = "$A8"
```

```
BYTE start
BYTE ARRAY display
CARD ARRAY yLoc(96)
```

```

PROC NMI()
  BYTE color, cnt
  BYTE COLPF1=$D017, WSYNC=$D40A,
        VCOUNT=$D40B, COLPF2=$D018,
        COLPF0=$D016
  BYTE ARRAY col(0)=[$68 $C $96 $38]

  [PHA TXA PHA TYA PHA]

  IF VCOUNT=7 THEN
    color = start
    start = start - 1
    IF (start&$1F)=0 THEN cnt = cnt + 1 FI
  FI

  color = color - 2
  WSYNC = 1
  COLPF0 = color
  COLPF1 = color
  COLPF2 = col((cnt + VCOUNT) & 3)
[PLA TAY PLA TAX PLA RTI]

```

```

PROC Background()
  BYTE COLBK=$D01A, VCOUNT=$D40B, WSYNC=$D40A

  [PHA TXA PHA TYA PHA]
  WSYNC = 0
  IF VCOUNT>50 THEN
    COLBK = 0
  ELSE
    COLBK = $D6
  FI
[PLA TAY PLA TAX PLA RTI]

```

```

PROC Init7()
  BYTE i
  CARD screen, scrloc=88

  Graphics(23)
  SetColor(0,2,10)
  SetColor(1,0,12)
  SetColor(2,0,12)

  display = scrloc
  screen = scrloc
  i = 0
  WHILE i<96 DO
    yLoc(i) = screen
    screen = screen + 40
    i = i + 1
  OD
RETURN

```

```

PROC Plot7(BYTE x, y)
  BYTE ARRAY pos, bm(0)=[$C0$30$C$3],

```

```
cm(0)=[$0 $55 $AA $FF]

pos = yLoc(y)

pos(x RSH 2) ==% (bm(x&3)&cm(color))
RETURN
```

```
PROC VLine(BYTE x, y1, y2)
  WHILE y1#y2 DO
    Plot7(x, y1)
    y1 = y1 + 1
  OD
RETURN
```

```
PROC HLine(BYTE x1, x2, y)
  WHILE x1#x2 DO
    Plot7(x1, y)
    x1 = x1 + 1
  OD
RETURN
```

```
PROC DLine(BYTE x1, x2, y1)
  BYTE incr

  incr = 1
  IF x2<x1 THEN incr = $FF FI

  WHILE x1#x2 DO
    Plot7(x1, y1)
    x1 = x1 + incr
    Plot7(x1, y1)
    y1 = y1 + 1
  OD
RETURN
```

```
PROC Dot(BYTE x, y)
  BYTE i

  i = 0
  WHILE i<4 DO
    Plot7(x+1, y) Plot7(x+2, y)
    IF i=1 OR i=2 THEN
      Plot7(x, y) Plot7(x+3, y)
    FI
    y = y + 1
    i = i + 1
  OD
RETURN
```

```
PROC Pad(BYTE x, y)
  BYTE i

  i = 0
  WHILE i<4 DO
```

```

    Plot7(x, y)
    Plot7(x+1, y)
    Plot7(x+2, y)
    y = y + 1
    i = i + 1
OD
RETURN

```

```

PROC LineX(BYTE x1, y1, x2, y2)
    Plot(x1, y1)
    DrawTo(x2, y2)
    Plot(x1+1, y1)
    DrawTo(x2+1, y2)
RETURN

```

```

PROC LineY(BYTE x1, y1, x2, y2)
    Plot(x1, y1)
    DrawTo(x2, y2)
; Plot(x1, y1+1)
; DrawTo(x2, y2+1)
RETURN

```

```

PROC Curve(BYTE x, y)
; Plot7(x-1, y-1)
VLine(x, y-1, y+2)
VLine(x+1, y-1, y+2)
VLine(x+2, y-2, y+1)
y = y - 4
VLine(x+3, y, y+5)
VLine(x+4, y, y+4)
VLine(x+5, y, y+3)
Plot7(x+6, y)
Plot7(x+6, y+1)
RETURN

```

```

PROC Draw()
    BYTE i, j, k
    CARD x

; draw fingers
    i = 0
    x = 160
    WHILE i<15 DO
        j = 0
        WHILE j<3 DO
            k = 0
            WHILE k<4 DO
                display(x+k) = $55
                k = k + 1
            OD
            x = x + 40
            j = j + 1
        OD
        x = x + 120
        i = i + 1
    OD

```

```

OD

; draw the pads
i = 64
WHILE i<112 DO
  Pad(i, 22)
  i = i + 6
OD
Pad(142, 22)
Pad(70, 62)
Pad(76, 62)
Pad(94, 62)
Pad(106, 62)
Pad(142, 62)

; finger 1, 15 connections
i = 0
WHILE i<4 DO
  display(204+i) = $AA
  display(3564+i) = $AA
  i = i + 1
OD
Dot(31, 3)
Dot(29, 88)

; finger 2 connection (A3)
LineX(16, 11, 44, 8)
HLine(44, 105, 8)
DLine(105, 107, 8)
VLine(107, 10, 23)

; finger 3 connection (A2)
LineX(16, 17, 48, 11)
HLine(48, 99, 11)
DLine(99, 101, 11)
VLine(101, 13, 23)

; finger 4 connection (A1)
LineX(16, 23, 52, 14)
HLine(52, 93, 14)
DLine(93, 95, 14)
VLine(95, 16, 23)

; finger 5 connection (A0)
LineX(16, 29, 56, 17)
HLine(56, 87, 17)
DLine(87, 89, 17)
VLine(89, 19, 23)

; finger 6 connection (D4)
HLine(16, 60, 35)
LineY(60, 35, 71, 62)

; finger 7 connection (D5)
HLine(16, 56, 41)
DLine(56, 58, 41)
VLine(58, 43, 66)
DLine(58, 60, 66)
HLine(60, 76, 68)

```

```

DLine(77, 75, 66)

; finger 8 connection (D2)
HLine(16, 34, 47)
DLine(34, 58, 47)
HLine(58, 79, 71)
DLine(80, 78, 70)
VLine(80, 60, 70)
LineY(80, 60, 71, 25)

; finger 9 connection (D1)
HLine(16, 34, 53)
DLine(34, 55, 53)
HLine(55, 85, 74)
DLine(86, 84, 73)
VLine(86, 60, 73)
LineY(86, 60, 77, 25)

; finger 10 connection (D0)
HLine(16, 20, 59)
DLine(23, 19, 56)
HLine(24, 32, 56)
DLine(32, 53, 56)
HLine(53, 91, 77)
DLine(92, 90, 76)
VLine(92, 60, 76)
LineY(92, 60, 83, 25)

; finger 11 connection (D6)
HLine(16, 24, 65)
DLine(27, 23, 62)
Dot(26, 60)

; finger 12 connection (CS)
DLine(107, 92, 66)
HLine(50, 92, 80)
DLine(40, 50, 71)
HLine(16, 40, 71)
VLine(95, 66, 78)

; finger 13 connection (+5)
Plot(16, 76)
DrawTo(50, 86)
Plot(16, 77)
DrawTo(50, 87)
Plot(16, 78)
DrawTo(50, 88)
HLine(50, 149, 86)
HLine(50, 149, 87)
HLine(50, 149, 88)
Curve(149, 86)
i = 0
WHILE i<4 DO
    VLine(153+i, 47, 82)
    DLine(143+i, 153+i, 37)
    VLine(143+i, 22, 37)

    HLine(142, 155, 62+i)

```

```

    VLine(153+i, 5, 17) ; ground pad

    i = i + 1
OD
HLine(143, 146, 21)
Plot7(141, 63)
Plot7(141, 64)
Curve(149, 62)
HLine(149, 153, 66)
VLine(152, 66, 70)
Plot7(151, 67)

; finger 14 connection (cart. select)
HLine(16, 35, 82)
HLine(16, 38, 83)
HLine(16, 41, 84)

; ground pads
Dot(153, 3)
Dot(153, 16)
HLine(62, 64, 23)
HLine(62, 64, 24)

RETURN

PROC Letter(BYTE ARRAY pts, BYTE x, y, delay)
    BYTE i, dx, dy

    WHILE 1 DO
        dx = pts^
        pts = pts + 1
        dy = pts^
        pts = pts + 1
        IF dx=$FF THEN EXIT FI
        Plot7(x+dx, y+dy)

;    i = 0
;    WHILE i<delay DO i==+1*1*1 OD
    OD
RETURN

PROC Logo()
    CHAR CH=$2FC
    BYTE x, NMIEN=$D40E, COLBK=$D01A
    CARD j, old, SDLST=$230, VDSLST=$200
    BYTE i
    BYTE ARRAY dlist
    BYTE ARRAY side(0)=[2 0 1 0 0 0 0 1
        0 2 1 2 2 2 3 2 4 1 4 0 4 4 0 4
        1 4 2 4 3 4 4 6 0 6 1 6 2 6 3 6 4
        7 0 8 1 8 2 8 3 7 4 10 0 10 1 10
        2 10 3 10 4 11 0 12 0 11 2 11 4 12
        4 18 4 18 3 19 2 19 1 20 0 21 1 21
        2 22 3 22 4 20 2 $FF]
    BYTE ARRAY copyright(0)=[5 0 4 0 3 0
        2 0 1 1 0 2 0 3 0 4 0 5 1 6 2 7 3
        7 4 7 5 7 6 6 7 5 7 4 7 3 7 2 6 1

```

```

    4 2 3 2 2 3 2 4 3 5 4 5 $FF]
BYTE ARRAY A(0)=[0 8 1 8 0 7 1 7 0 6
    1 6 2 6 1 5 2 5 1 4 2 4 1 3 2 3 3
    3 2 2 3 2 2 1 3 1 3 0 4 0 4 1 5 0
    5 1 6 1 5 2 6 2 5 3 6 3 7 3 6 4 7
    4 6 5 7 5 6 6 7 6 8 6 7 7 8 7 7 8
    8 8 3 5 4 5 5 5 $FF]
BYTE ARRAY C(0)=[7 2 6 2 6 1 5 1 5 0
    4 0 3 0 2 0 2 1 1 1 1 2 0 2 1 3 0
    3 1 4 0 4 0 5 1 5 0 6 1 6 1 7 2 7
    2 8 3 8 4 8 5 8 5 7 6 7 6 6 7 6
; hier fehlt das Ende
$FF]
BYTE ARRAY S(0)=[6 2 5 2 5 1 4 1 4 0
    3 0 2 0 2 1 1 1 0 2 1 2 1 3 2 3 2
    4 3 4 4 4 4 5 5 5 6 6 5 6 5 7 4 7
    4 8 3 8 2 8 2 7 1 7 1 6 0 6 $FF]
BYTE ARRAY rev(0)=[0 0 0 1 0 2 0 3 0
    4 0 5 0 6 1 6 1 5 1 4 1 3 1 2 1 1
    1 0 2 0 3 0 4 1 4 2 3 3 2 3 3 4 4
    5 4 6 7 0 8 0 7 1 8 1 7 2 8 2 7 3
    8 3 7 4 8 4 7 5 8 5 7 6 8 6 11 0
    10 0 9 0 10 3 9 3 11 6 10 6 9 6 14
    0 15 0 14 1 15 1 14 2 15 2 15 3 16
    3 15 4 16 4 16 5 16 6 17 6 17 5 18
    4 18 3 19 2 19 1 19 0 22 5 21 5 21
    6 22 6 27 6 28 6 27 5 28 5 27 4 28
    4 28 3 29 3 28 2 29 2 29 1 29 0 30
    0 30 1 31 2 31 3 32 4 32 5 32 6 29
    5 30 5 31 5 $FF]

```

```

Init7()
color = 2

```

```

NMIEN = $40
old = VDLSLST
VDLSLST = Background
dlist = SDLST
dlist(6) ==% $80
dlist(97) ==% $80
NMIEN = $C0

```

```

Draw()

```

```

; j = 0
; WHILE j<10000 DO j==+1 OD

```

```

color = 3
Letter(side, 120, 10, 50)
Letter(rev, 105, 75, 50)
Letter(copyright, 96, 41, 100)
Letter(A, 109, 41, 100)
Letter(C, 121, 41, 100)
Letter(S, 132, 41, 100)

```

```

j = 0
WHILE j<2000 AND CH=$FF DO
    i = 0
    WHILE i<100 DO i==+1 OD

```



```
    j = j + 1
OD

NMIEN = $40
VDSLST = NMI

start = 0

dlist(0) ==% $80
dlist(2) ==% $80
i = 3
WHILE i<101 DO
    x = dlist(i)
    dlist(i) = x % $80
    IF x#$D THEN
        i = i + 3
    ELSE
        i = i + 1
    FI
OD

NMIEN = $C0

; Draw()

CH = $FF
WHILE CH#$1C DO
;   SetColor(4, 0, 4)
;   COLBK = 4
OD

NMIEN = $40
VDSLST = old

GetD(7)
Graphics(0)
RETURN
```