



PuLse in Action!

16K Cassette or 24K Disk

by Joel Gluck

It's not easy to write an article to accompany a simple graphic demo, and it's probably just as tough to read one. But before you race to your computer, plug in your Action! cartridge, type in **puLse** and run it, why not take a few seconds to read what it's taken a few hours for me to write?

For starters, I'll admit that what **puLse** does is beautiful. The program draws several brightly-colored horizontal lines on the screen and makes them expand and contract at various rates. This sounds simple, but the combinations are almost infinite—and frequently complex. When I first wrote **puLse** and ran it, I shut off the room lights and spent a good long time staring at the screen. No, the effect is not hypnotic, and, no, I wasn't on drugs at the time—the fact is that, as a human being, I appreciate beauty, and **puLse** gave me a sizable dose.

Despite its beauty, however, **puLse** is not a work of art. To me, a work of art must relate to the human experience, and **puLse** is merely a random and abstract visual creation. It does not affect me deeply, the way a good novel, play or piece of music can. The best way to describe it is "emptiness"—**puLse** is empty. Rated as art, it is bad art.

I'm not saying that I'm going to stop fooling around with graphic demos on my Atari 800. All I'm saying is that there is more to art than beauty or simple emotional effects, and this fact is a challenge to myself and to all creators of "computer art." Translation: I'm still thinking. I hope you are, too.

Using the program.

Plug in an Action! cartridge and type the source code as written into the editor. Save it to disk or tape and then run.

PuLse is a simple graphic demo. For the greatest effect, run the program with all room lights extinguished. Press RETURN to exit the program. Press any other keyboard key for new patterns. The program will automatically display a new pattern every 15-20 seconds. □

Action! listing.

```
; puLse - joel gluck - analog
BYTE ARRAY x(192),y(192),c(192)
BYTE NUM=101
INT ARRAY xd(192)
CARD ARRAY linept(192)
```

```
PROC pauz(CARD n)
CARD i
FOR i=0 TO n+n
DO OD
RETURN
```

```
PROC intro()
BYTE i,COLOR1=709
```

```
Graphics(0)
Poke(710,0)
Poke(752,1)
Print(" ")
pauz(30000)
Position(17,9)
Print("puLse")
```

```

paуз(30000)
Position(13,11)
Print("by joel gLuck")
paуз(30000)
Position(9,13)
Print("from ANALOG COMPUTING")
paуз(60000)
FOR i=0 TO 15 DO
  COLOR1=15-i
  paуз(2000)
OD
RETURN

```

```

PROC gr10init()
CARD line,reg,col,lum,scrn=88
BYTE ARRAY gtiacol(8)=705

```

```

Graphics(10)
Poke(704,0)
FOR reg=0 TO 7 DO
  col=Rand(16)
  lum=Rand(9)+4
  gtiacol(reg)=col*16+lum
OD
FOR line = 0 TO 191 DO
  linept(line)=scrn+40*line
OD
RETURN

```

```

PROC plot10(BYTE x,y,col)
BYTE POINTER pixel
BYTE ARRAY
  colfil= [0 17 34 51 68 85 102
           119 136 0 0 0 0 0 0],
  mask= [15 240],
  mask2= [240 15]

```

```

pixel=linept(y)+(x RSH 1)
pixel^=pixel^ & mask(x & 1)
  % (colfil(col)
  & mask2(x & 1))
RETURN

```

```

BYTE FUNC locate10(BYTE x,y)
BYTE POINTER pixel
BYTE ARRAY mask= [240 15]

```

```

pixel= linept(y)+(x RSH 1)
RETURN((pixel^ & mask(x & 1)) RSH
  ((x & 1) XOR 1) LSH 2))

```

```

PROC drawline(BYTE a,b,c)
BYTE i

```

```

FOR i=a TO 79-a DO
  plot10(i,b,c)
  plot10(i,191-b,c)
OD
RETURN

```

```

PROC init()
BYTE i,j,s

```

```

gr10init()
FOR i=0 TO num-1 DO
  x(i)=Rand(40)
  DO
    y(i)=Rand(96)
    s=0
    IF i=0 THEN
      EXIT
    FI
    FOR j=0 TO i-1 DO
      IF y(i)=y(j) THEN
        s=1
        EXIT
      FI
    OD
    UNTIL s=0
  OD
  c(i)=(i MOD 8)+1
  drawline(x(i),y(i),c(i))

```

```

  xd(i)=(Rand(2)*2-1)*(Rand(3)+1)
OD
RETURN

```

```

PROC squeeze(BYTE n)
BYTE a,i
INT d

```

```

d=xd(n)
IF d<0 THEN
  d=-1
ELSE
  d=1
FI
FOR i=1 TO (xd(n)/d) DO
  a=x(n)+d
  IF a>39 THEN
    xd(n)=-xd(n)
    EXIT
  FI
  IF d>0 THEN
    plot10(x(n),y(n),0)
    plot10(79-x(n),y(n),0)
    plot10(x(n),191-y(n),0)
    plot10(79-x(n),191-y(n),0)
  ELSE
    plot10(x(n),y(n),c(n))
    plot10(79-x(n),y(n),c(n))
    plot10(x(n),191-y(n),c(n))
    plot10(79-x(n),191-y(n),c(n))
  FI
  x(n)=a
  plot10(x(n),y(n),c(n))
  plot10(79-x(n),y(n),c(n))
  plot10(x(n),191-y(n),c(n))
  plot10(79-x(n),191-y(n),c(n))
OD
RETURN

```

```

PROC pulse()
BYTE i,CH=764,AT=77,M5=19,L5=20

```

```

intro()
DO
  num=Rand(6)+5
  init()
  CH=255
  AT=77
  L5=0
  M5=0
  DO
    FOR i=0 TO num-1 DO
      squeeze(i)
    OD
    UNTIL CH<>255 OR M5=4
  OD
  UNTIL CH=12
OD
CH=255
Graphics(0)
RETURN

```

Next issue:
Bounce
 in Action!