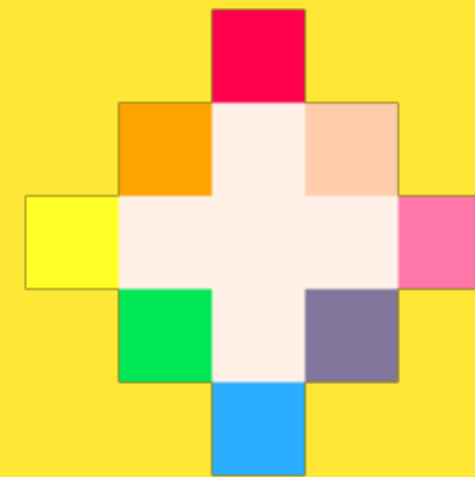


# PICO-8



**HACKERS WEEK WORKSHOP**

# WHAT'S PICO-8 ?

# LINKS

- ▶ PICO-8 Website
- ▶ PICO-8 Manual
- ▶ PICO-8 API Cheatsheet
- ▶ Sublime Text Plugin

# TOOLS



# SHELL

```
PICO-B+  
PICO-B 0.1.10C  
(C) 2014-16 LEXALOFFLE GAMES LLP  
TYPE HELP FOR HELP  
> ■
```

help	# print help
reboot	# reset PICO-8
shutdown	# closes PICO-8
dir	# file list
cd <dirname>	# go to directory
cd ..	# go up a directory
folder	# open folder in OS
load <cartridge>	# load a cartridge
save <cartridge>	# save a cartridge
run	# run the cartridge
resume	# resume execution

# SPLORE



# CODE

```

-- Ripples HTWEETJAN
-- ZEP

R=64
T=0

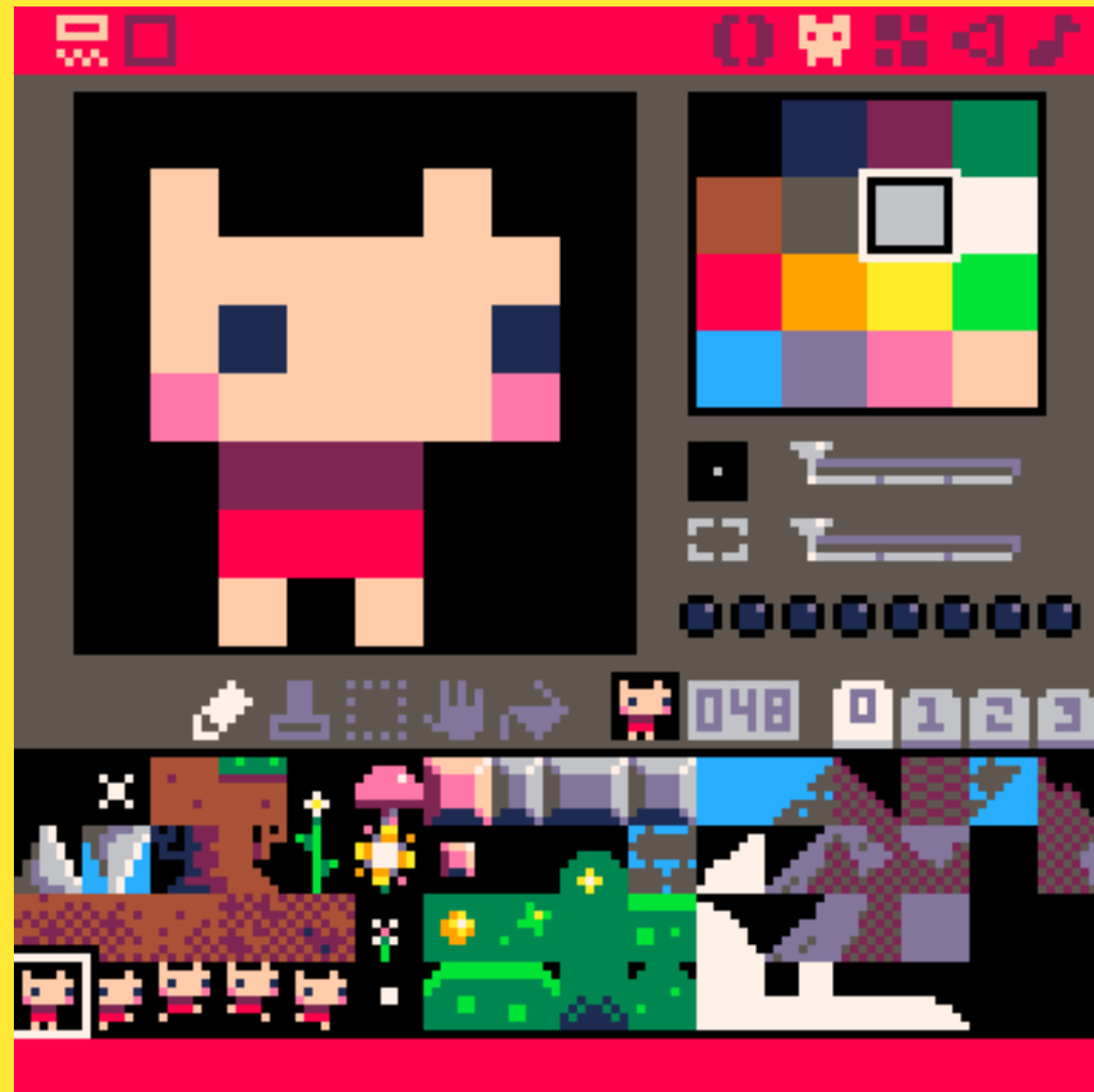
::R::
CLS()

FOR Y=-R,R,3 DO
  FOR X=-R,R,2 DO
    Z=COS(SQRT(X*X+Y*Y*2)/40-T)*6
    PSET(R+X,R+Y-Z,12)
  END
END

FLIP()
T+=2/R
DATA 0
LINE 1/20 66/8192
```



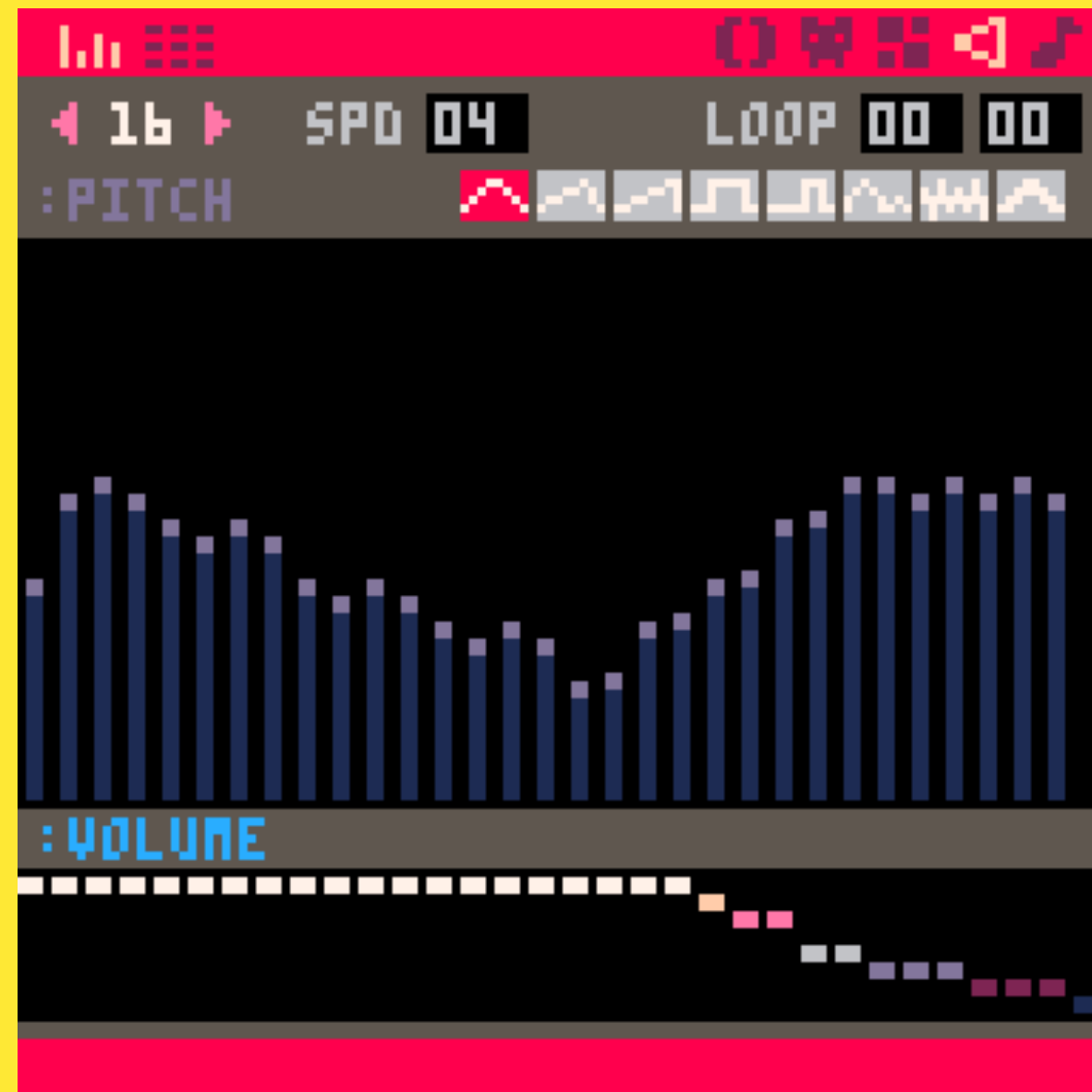
# SPRITES



# MAPS



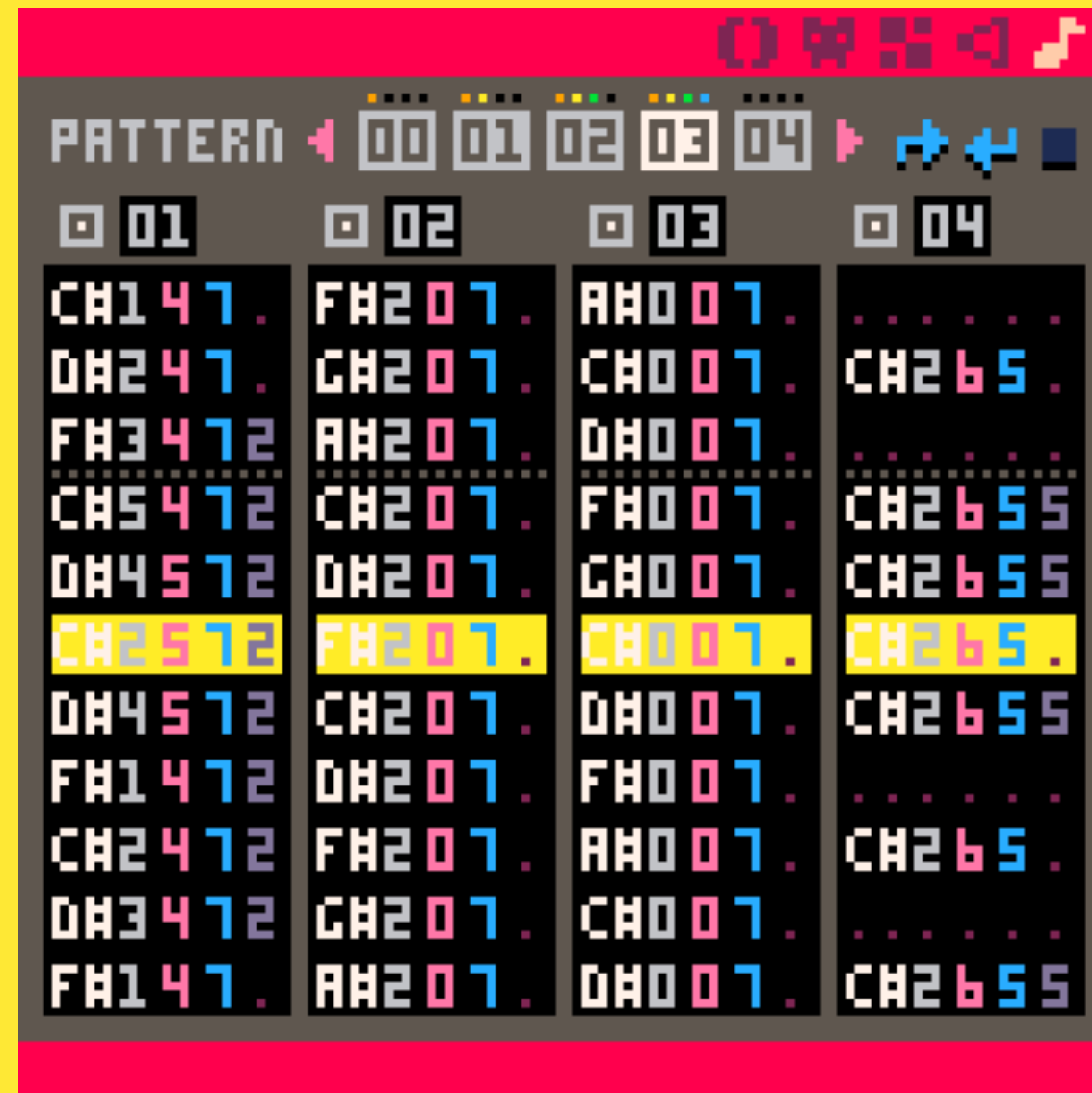
# AUDIO WAVE



# AUDIO TRACKER



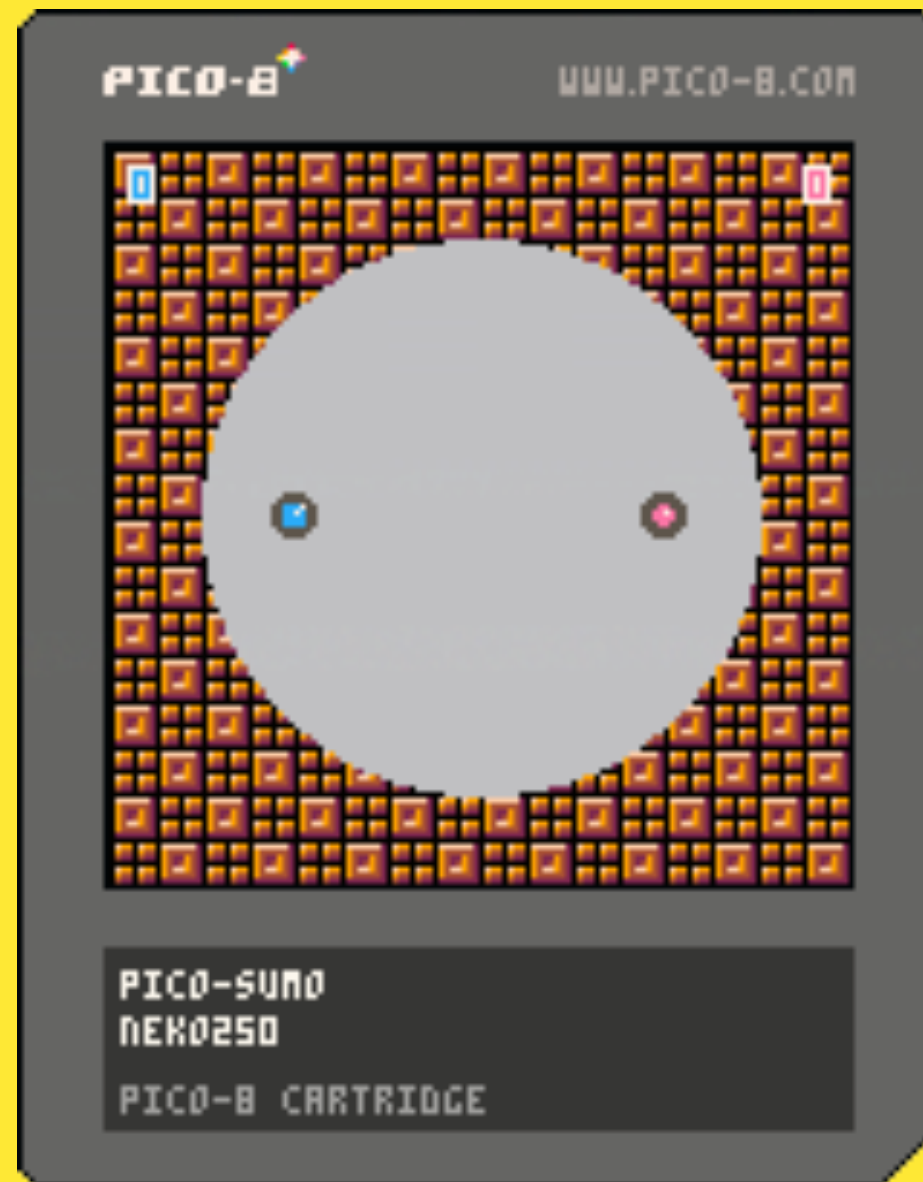
# MUSIC



# LET'S BEGIN !



# PICO-SUMO !



*Let's draw !*





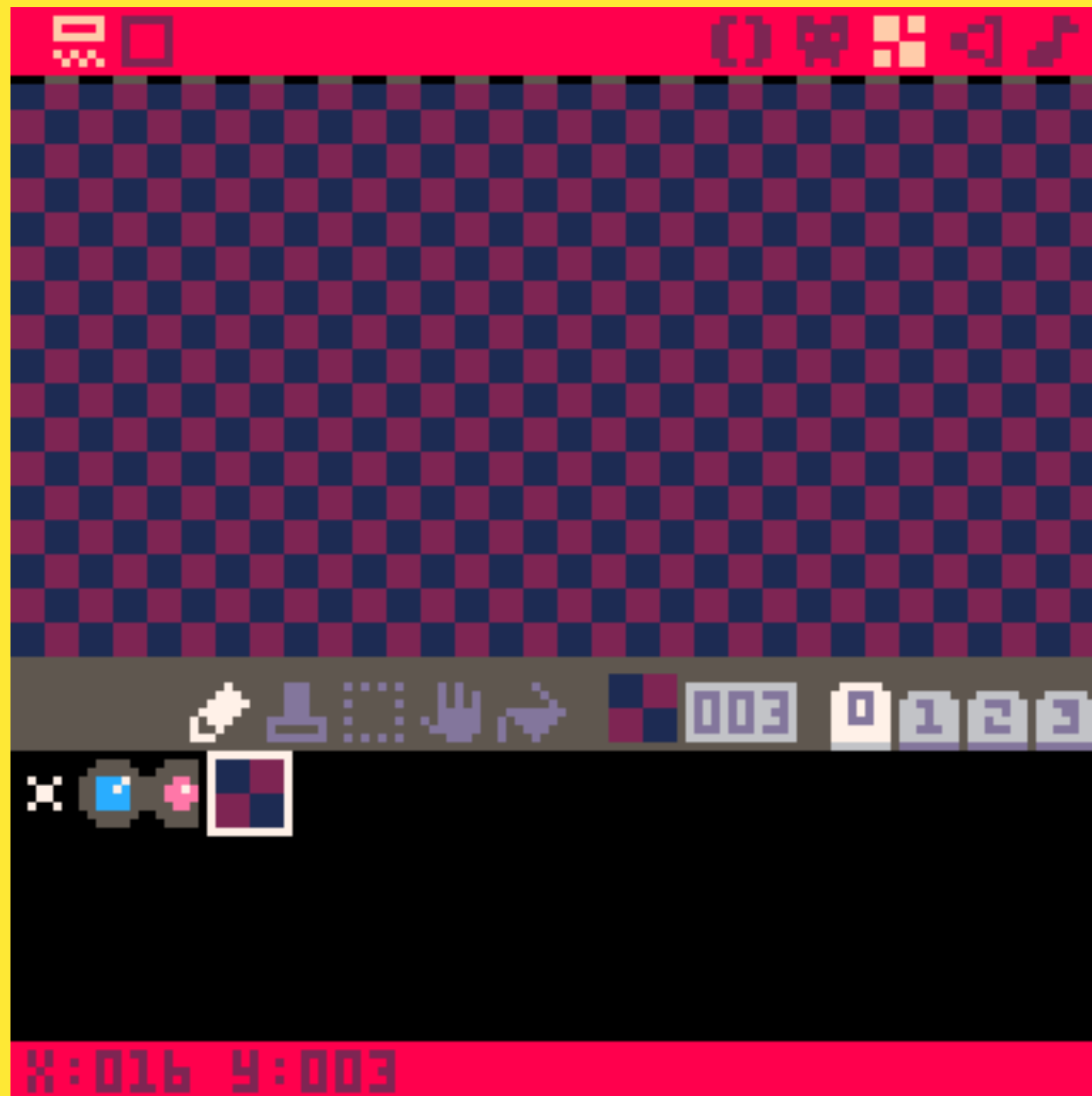






*Let's map !*

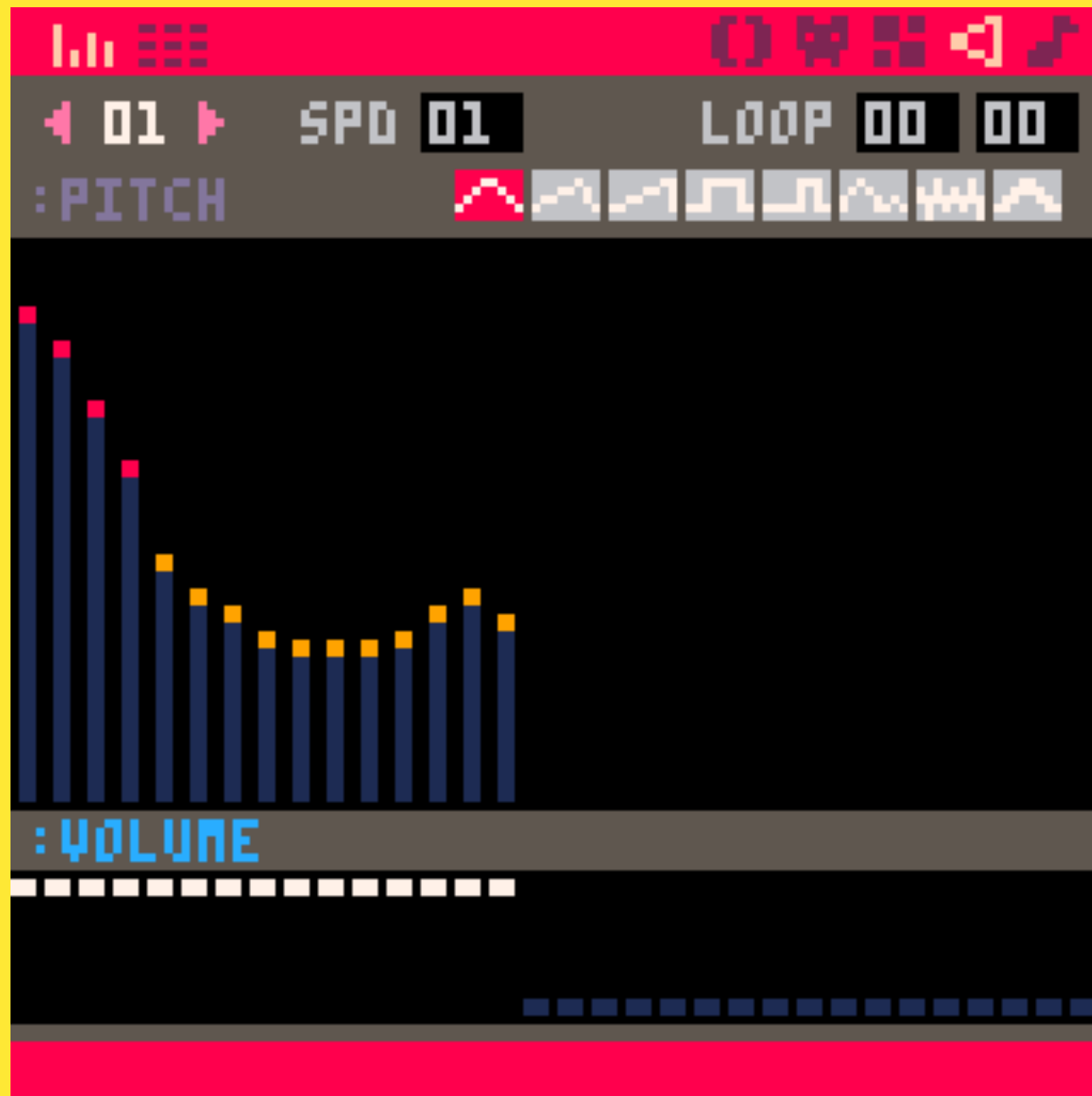




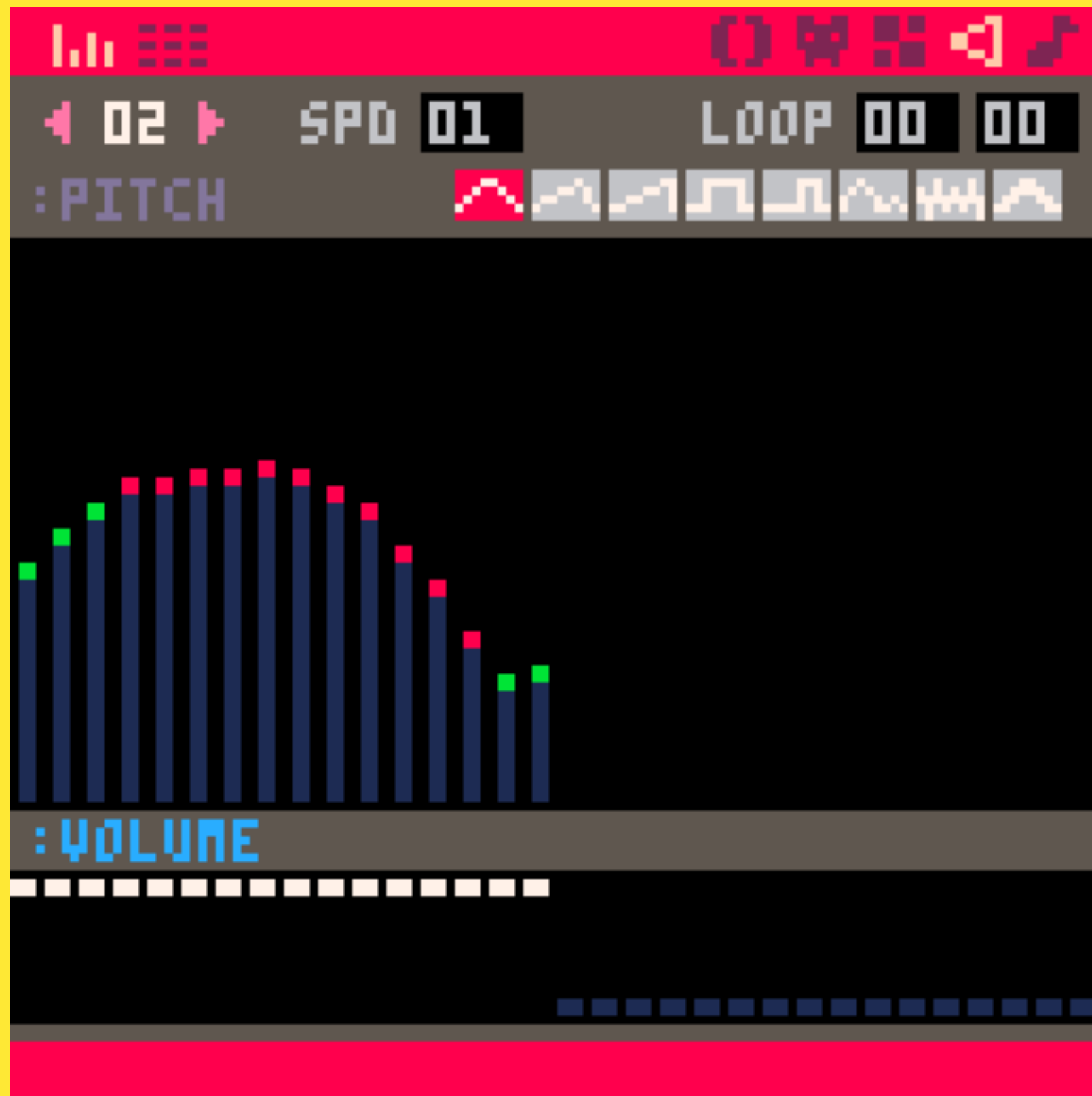
*Let's stx!*

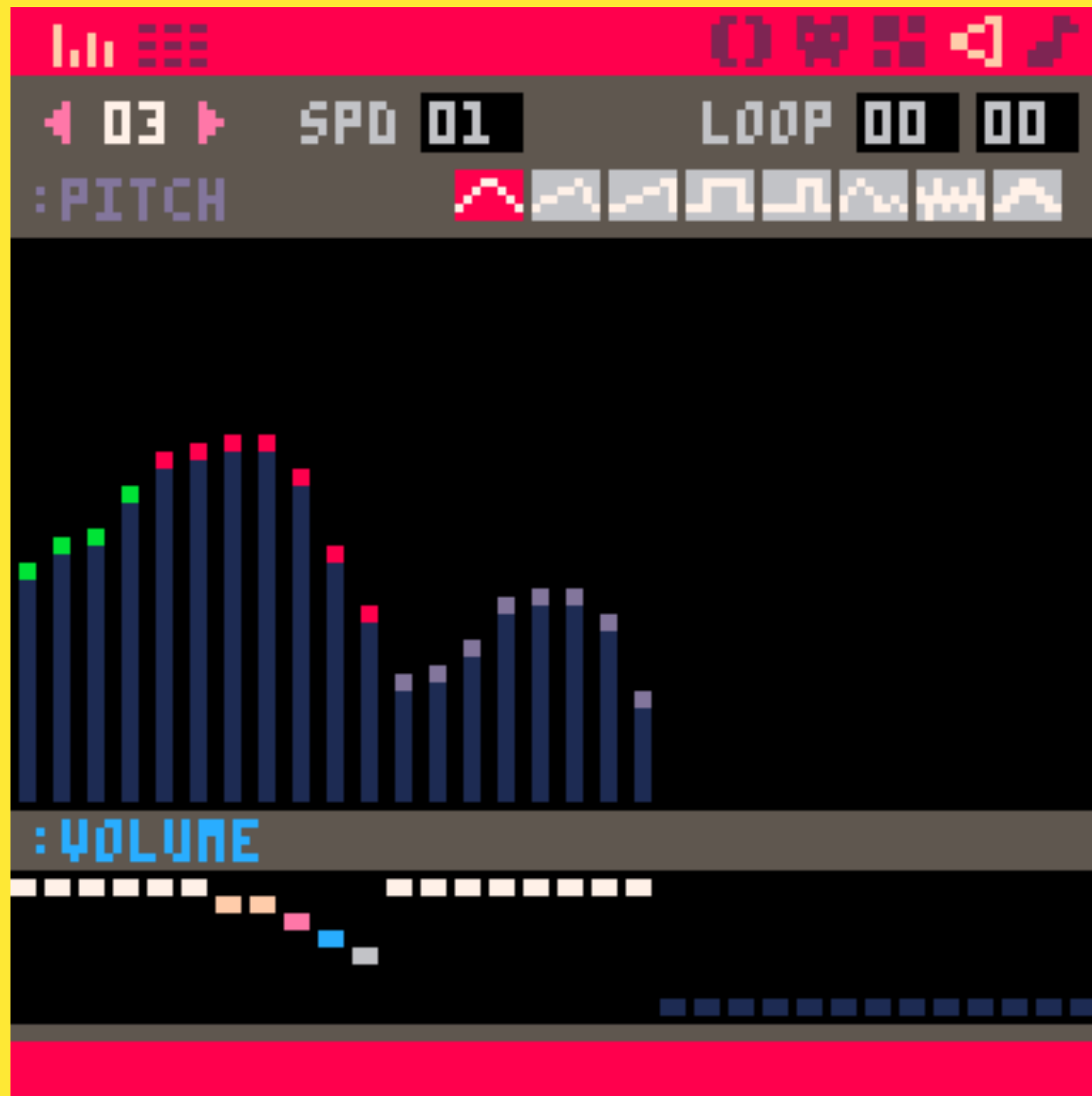












# **HOMework**

**LET'S MUSIC !**



*Let's code !*



# MAIN LOOP

```
-- titulo  
-- autor
```

```
function _init()  
end
```

```
function _update()  
end
```

```
function _draw()  
end
```

# VARIABLES

```
actors    = { }  
teams     = { 12 , 14 }  
state     = 0  
p1_score  = 0  
p2_score  = 0  
circ_col  = 6  
win_time  = 90
```

# CREATE PLAYER

```
function create_actor(x, y, n)
  local p = { }
  p.x = x
  p.y = y
  p.dx = 0
  p.dy = 0
  p.n = n
  p.col = teams[n]
  p.opcol = teams[n % 2 + 1]
  p.alive = true
  p.respawn = 0
  p.h = 3
  p.w = 3
  add(actors, p)
  return p
end
```

# INITIALISE

```
function _init()  
    p1 = create_actor(28, 60, 1)  
    p2 = create_actor(92, 60, 2)  
    music(0)  
end
```



# DRAW PLAYER

```
function draw_actor(p)
  if p.alive then
    spr(p.n, p.x, p.y)
  end
end
```

# CHECK INPUT

```
function check_buttons(p)
  if btn(0, p.n - 1) then
    p.dx -= (4 + p.dx) * 0.1
  end
  if btn(1, p.n - 1) then
    p.dx += (4 - p.dx) * 0.1
  end
  if btn(2, p.n - 1) then
    p.dy -= (4 + p.dy) * 0.1
  end
  if btn(3, p.n - 1) then
    p.dy += (4 - p.dy) * 0.1
  end
end
```

# MOVE PLAYER

```
function move_actor(p)
  p.dx -= p.dx * 0.05
  p.dy -= p.dy * 0.05
  check_buttons(p)
  collide_actor(p, p.dx, 0)
  collide_actor(p, 0, p.dy)
  p.x += p.dx
  p.y += p.dy
end
```

# DESTROY PLAYER

```
function destroy_player(p)
  p.alive = false
  p.respawn = 60
  circ_col = p.opcol
  if p.n == 1 then
    p2_score += 1
  else
    p1_score += 1
  end
  sfx(9, 3)
end
```

# DISTANCE FROM CENTER

```
function dist_from_center(p)
  if p.alive
    and sqrt((60 - p.x) ^ 2 + (60 - p.y) ^ 2) > 52 then
      destroy_player(p)
    end
  end
end
```

# RESPAWN

```
function respawn_clock(p)
  if not p.alive then
    if p.respawn > 0 then
      p.respawn -= 1
    else
      circ_col = 6
      del(actors, p)
      if p.n == 1 then
        p1 = create_actor(28, 60, 1)
      else
        p2 = create_actor(92, 60, 2)
      end
    end
  end
end
end
end
```

# SCORES

```
function draw_score()  
  rectfill(3, 3, 7, 9, 7)  
  print(p1_score, 4, 4, p1.col)  
  rectfill(120, 3, 124, 9, 7)  
  print(p2_score, 121, 4, p2.col)  
end
```

# CHECK WINNER

```
function check_score()  
    if p1_score >= 10 then  
        state = p1.n  
        sfx(11, 3)  
    elseif p2_score >= 10 then  
        state = p2.n  
        sfx(11, 3)  
    end  
end
```



# UPDATE

```
function _update()  
  if state == 0 then  
    foreach(actors, move_actor)  
    foreach(actors, dist_from_center)  
    check_score()  
    foreach(actors, respawn_clock)  
  else  
    if win_time > 0 then  
      win_time -= 1  
    else  
      run()  
    end  
  end  
end  
end
```

# DRAW

```
function _draw()  
  cls()  
  map(0, 0, 0, 0, 16, 16)  
  if state == 0 then  
    circfill(64, 64, 48, circ_col)  
    foreach(actors, draw_actor)  
    draw_score()  
  else  
    rectfill(41, 57, 85, 67, 7)  
    rectfill(42, 58, 84, 66, 1)  
    if state == 1 then  
      print("blue wins!", 44, 60, p1.col)  
    elseif state == 2 then  
      print("pink wins!", 44, 60, p2.col)  
    end  
  end  
end  
end
```

*Let's play !*



**THANKS FOR  
COMING !**



# QUESTIONS ?

