

```
mkdir -p build
```

```
sdcc -mz80 --allow-unsafe-read -I . -I ../../arch/include -I ../../drivers/include -DDEBUG -c main.c
-o build/main.rel
```

```
sdcc -mz80 --no-std-crt0 build/crt0.rel -L ../../drivers/build -l drivers.a -pedantic
build/main.rel -o build/pio_test.hex
```

```
makebin -s 8192 -yo 1 build/pio_test.hex build/pio_test.bin
```

```
#dz80 -b -n build/pio_test.bin
```

```
r2 -a z80 build/pio_test.bin -A \
```

```
-c 'afr main 0x200; \
    pd 0x10; \
    s 0x100; \
    pd 10; \
    s 0x200; \
    pd 0x90' \
```

```
/ (fcn) fcn.00000000 13
```

```
| fcn.00000000 ();
|           ; XREFS: DATA 0x00000202 DATA 0x00000204 DATA 0x00000209 DATA 0x0000020c DATA
0x00000216 DATA 0x00000219 DATA 0x00000220 DATA 0x00000221
```

```
|           ; XREFS: DATA 0x00000226 DATA 0x00000256
\      ,=< 0x00000000    c30001    jp loc.00000100
|      | 0x00000003    ff        rst 0x38
|      | 0x00000004    ff        rst 0x38
|      | 0x00000005    ff        rst 0x38
|      | 0x00000006    ff        rst 0x38
|      | 0x00000007    ff        rst 0x38
|      | 0x00000008    ff        rst 0x38
|      | 0x00000009    ff        rst 0x38
|      | 0x0000000a    ff        rst 0x38
|      | 0x0000000b    ff        rst 0x38
|      | 0x0000000c    ff        rst 0x38
|      | 0x0000000d    ff        rst 0x38
|      | 0x0000000e    ff        rst 0x38
|      | 0x0000000f    ff        rst 0x38
|      | 0x00000010    ff        rst 0x38
|      | 0x00000011    ff        rst 0x38
```

```
|- loc.00000100 10
```

```
| loc.00000100 ();
|           ; JMP XREF from 0x00000000 (fcn.00000000)
|           ; JMP XREF from 0x00000106 (loc.00000100)
|      0x00000100    31ffff    ld sp, 0xffff
|      0x00000103    cd0002    call main
|      ,=< 0x00000106    c30901    jp 0x0109
|      |           ; JMP XREF from 0x00000106 (loc.00000100)
\      `-> 0x00000109    76        halt
|      | 0x0000010a    ff        rst 0x38
|      | 0x0000010b    ff        rst 0x38
|      | 0x0000010c    ff        rst 0x38
|      | 0x0000010d    ff        rst 0x38
|      | 0x0000010e    ff        rst 0x38
|      | 0x0000010f    ff        rst 0x38
```

```
/ (fcn) main 50
```

```
| main ();
|           ; CALL XREF from 0x00000103 (loc.00000100)
|           ; CALL XREF from 0x00000200 (main)
```

```

|         0x0000200      0600      ld b, 0x00
|         0x0000202      c5        push bc
|         0x0000203      af        xor a
|         0x0000204      f5        push af
|         0x0000205      33        inc sp
|         0x0000206      210000    ld hl, 0x0000
|         0x0000209      e5        push hl
|         0x000020a      2e00     ld l, 0x00
|         0x000020c      e5        push hl
|         0x000020d      cd5502    call fcn.0000255
|         0x0000210      f1        pop af
|         0x0000211      f1        pop af
|         0x0000212      33        inc sp
|         0x0000213      210000    ld hl, 0x0000
|         0x0000216      e5        push hl
|         0x0000217      2e00     ld l, 0x00
|         0x0000219      e5        push hl
|         0x000021a      cd8d02    call fcn.000028d
|         0x000021d      f1        pop af
|         0x000021e      f1        pop af
|         0x000021f      c1        pop bc
|
|         ; JMP XREF from 0x0000230 (main)
.-> 0x0000220      c5        push bc
|         0x0000221      c5        push bc
|         0x0000222      33        inc sp
|         0x0000223      210000    ld hl, 0x0000
|         0x0000226      e5        push hl
|         0x0000227      cdd702    call fcn.00002d7
|         0x000022a      f1        pop af
|         0x000022b      33        inc sp
|         0x000022c      c1        pop bc
|         0x000022d      78        ld a, b
|         0x000022e      2f        cpl
|         0x000022f      47        ld b, a
|=< 0x0000230      18ee     jr 0xee
|         0x0000232      210200    ld hl, 0x0002
|         0x0000235      39        add hl, sp
|         0x0000236      4e        ld c, [hl]
|         0x0000237      0600     ld b, 0x00
|         0x0000239      210042    ld hl, 0x4200
|         0x000023c      09        add hl, bc
|         0x000023d      fd210300 ld iy, 0x0003
|         0x0000241      fd39     add iy, sp
|         0x0000243      fd7e00   ld a, [iy+0x00]
|         0x0000246      77        ld [hl], a
|         0x0000247      c9        ret
|         0x0000248      210200    ld hl, 0x0002
|         0x000024b      39        add hl, sp
|         0x000024c      4e        ld c, [hl]
|         0x000024d      0600     ld b, 0x00
|         0x000024f      210042    ld hl, 0x4200
|         0x0000252      09        add hl, bc
|         0x0000253      6e        ld l, [hl]
|         0x0000254      c9        ret
/ (fcn) fcn.0000255 8
| fcn.0000255 ();

```

```

|           ; CALL XREF from 0x0000020d (main)
| 0x00000255      dde5      push ix
| 0x00000257      dd210000    ld ix, 0x0000
\ 0x0000025b      dd39      add ix, sp
| 0x0000025d      dd7e06    ld a, [ix+0x06]
| 0x00000260      0f      rrca
| 0x00000261      0f      rrca
| 0x00000262      e6c0    and 0xc0
| 0x00000264      f60f    or 0xf
| 0x00000266      57      ld d, a
| 0x00000267      dd5e04    ld e, [ix+0x04]
| 0x0000026a      1c      inc e
| 0x0000026b      6b      ld l, e
| 0x0000026c      2600    ld h, 0x00
| 0x0000026e      010042  ld bc, 0x4200
| 0x00000271      09      add hl, bc
| 0x00000272      72      ld [hl], d
| 0x00000273      dd7e06    ld a, [ix+0x06]
| 0x00000276      d603    sub 0x03
| ,=< 0x00000278      2010    jr nz, 0x10
| | 0x0000027a      dd7e07    ld a, [ix+0x07]
| | 0x0000027d      b7      or a
| ,==< 0x0000027e      200a    jr nz, 0x0a
| || 0x00000280      dd4e08    ld c, [ix+0x08]
| || 0x00000283      1600    ld d, 0x00
| || 0x00000285      210042  ld hl, 0x4200
| || 0x00000288      19      add hl, de
| || 0x00000289      71      ld [hl], c
| ``-> 0x0000028a      dde1    pop ix
| 0x0000028c      c9      ret

```

```

/ (fcn) fcn.0000028d 22

```

```

| fcn.0000028d ();
|           ; CALL XREF from 0x0000021a (main)
| 0x0000028d      210400  ld hl, 0x0004
| 0x00000290      39      add hl, sp
| 0x00000291      7e      ld a, [hl]
| 0x00000292      f607    or 0x07
| 0x00000294      4f      ld c, a
| 0x00000295      210200  ld hl, 0x0002
| 0x00000298      39      add hl, sp
| 0x00000299      5e      ld e, [hl]
| 0x0000029a      1c      inc e
| 0x0000029b      1600    ld d, 0x00
| 0x0000029d      210042  ld hl, 0x4200
| 0x000002a0      19      add hl, de
| 0x000002a1      71      ld [hl], c
\ 0x000002a2      c9      ret
| 0x000002a3      dde5    push ix
| 0x000002a5      dd210000  ld ix, 0x0000
| 0x000002a9      dd39      add ix, sp
| 0x000002ab      dd7e06    ld a, [ix+0x06]
| 0x000002ae      f617    or 0x17
| 0x000002b0      57      ld d, a
| 0x000002b1      dd5e04    ld e, [ix+0x04]
| 0x000002b4      1c      inc e
| 0x000002b5      6b      ld l, e

```

```
0x000002b6    2600    ld h, 0x00
0x000002b8    010042  ld bc, 0x4200
0x000002bb    09      add hl, bc
0x000002bc    72      ld [hl], d
0x000002bd    dd4e08  ld c, [ix+0x08]
0x000002c0    1600    ld d, 0x00
0x000002c2    210042  ld hl, 0x4200
0x000002c5    19      add hl, de
0x000002c6    71      ld [hl], c
0x000002c7    dde1    pop ix
0x000002c9    c9      ret
0x000002ca    210200  ld hl, 0x0002
0x000002cd    39      add hl, sp
0x000002ce    4e      ld c, [hl]
0x000002cf    0600    ld b, 0x00
0x000002d1    210042  ld hl, 0x4200
0x000002d4    09      add hl, bc
0x000002d5    6e      ld l, [hl]
0x000002d6    c9      ret
```

```
/ (fcn) fcn.000002d7 18
```

```
| fcn.000002d7 ();
```

```
| ; CALL XREF from 0x00000227 (main)
```

```
| 0x000002d7    210400  ld hl, 0x0004
| 0x000002da    39      add hl, sp
| 0x000002db    4e      ld c, [hl]
| 0x000002dc    210200  ld hl, 0x0002
| 0x000002df    39      add hl, sp
| 0x000002e0    5e      ld e, [hl]
| 0x000002e1    1600    ld d, 0x00
| 0x000002e3    210042  ld hl, 0x4200
| 0x000002e6    19      add hl, de
| 0x000002e7    71      ld [hl], c
| 0x000002e8    c9      ret
| 0x000002e9    ff      rst 0x38
| 0x000002ea    ff      rst 0x38
| 0x000002eb    ff      rst 0x38
| 0x000002ec    ff      rst 0x38
| 0x000002ed    ff      rst 0x38
| 0x000002ee    ff      rst 0x38
| 0x000002ef    ff      rst 0x38
| 0x000002f0    ff      rst 0x38
| 0x000002f1    ff      rst 0x38
```

```
-- Thank you for using radare2. Have a nice night!
```

```
[0x00000200]>
```