

code

Dot Matrix Display Horizontal: (green light)

PPIC.C EQU 1EH
PPIC EQU 1CH
PPIB EQU 1AH (Red)
PPIA EQU 18H (green)



ORG 1000H
MOV AL, 10000000B
OUT PPIC.C, AL

MOV AL, 11111111B
OUT PPIC, AL

MOV AL, 11111111B (Red off)
OUT PPIB, AL

L1: MOV AL, 11111110B

L2: OUT PPIA, AL

CALL TIMER
ROL AL, 1

JC L2
JMP L1

TIMER: MOV CX, 0FFFFH

TIMER1: NOP
NOP
NOP
NOP
→ LOOP TIMER1
Ret → Code ENDS
END

Vertical: (Red)

```
PPIC_C EQU 1EH
PPIC EQU 1CH
PPIB EQU 1AH
PPIA EQU 18H
ORG 1000H
MOV AL, 10000000B
OUT PPIC_C, AL
MOV AL, 00000000B
OUT PPIB, AL
MOV AL, 01111111B
OUT PPIA, AL
```

```
L1: MOV AL, 00000001B
L2: OUT PPIC, AL
CALL TIMER
ROL AL, 1
JNC L2
JMP L1
```

Timer: MOV CX, 0FFFFH

```
TIMER: NOP
NOP
NOP
NOP
LOOP TIMER1
RET
```

CODE ENDS
END