

Interfacing 4-pole stepper motor with 8088 CPU through 8255 PPI.

Consider a 4-pole stepper motor interfaced with 8255 PPI Port A (Bit 0 to Bit 3). PPI has addresses from A0H to A3H. Write assembly language code that runs the stepper motor in full-step mode.

START:

```
MOV    AL, 80H    ;PORTA AS OUTPUT
OUT    0A3H, AL   ;WRITE BYTE TO PPI'S CW REGISTER
```

RUN_MOTOR:

```
MOV    AL, 01H    ;ENERGISE POLE 1 ONLY
OUT    0A0H, AL   ;WRITE VALUE TO PORTA'S LOWER HALF
CALL   DELAY
MOV    AL, 02H    ;ENERGISE POLE 2 ONLY
OUT    0A0H, AL   ;WRITE VALUE TO PORTA'S LOWER HALF
CALL   DELAY
MOV    AL, 04H    ;ENERGISE POLE 3 ONLY
OUT    0A0H, AL   ;WRITE VALUE TO PORTA'S LOWER HALF
CALL   DELAY
MOV    AL, 08H    ;ENERGISE POLE 4 ONLY
OUT    0A0H, AL   ;WRITE VALUE TO PORTA'S LOWER HALF
CALL   DELAY
JMP    RUN_MOTOR
```

;SUBROUTINE FOR CREATING DELAY BETWEEN EACH STEP

DELAY:

```
MOV    CX, 0FFFFH
```

HERE: LOOP HERE

```
RET
```

Schematic diagram:

