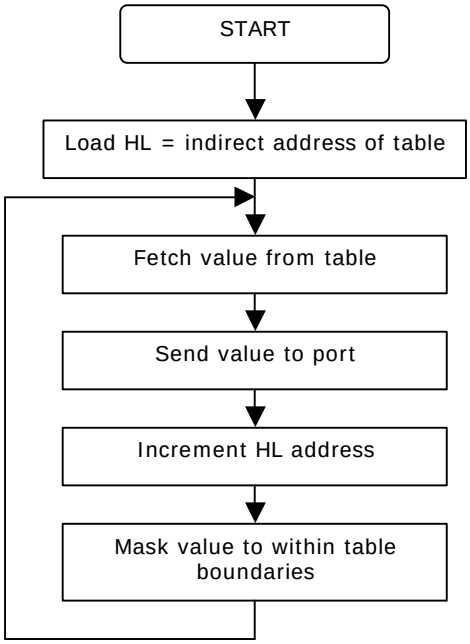
EZ-CPU CONTROL SYSTEM

MOTORS & SERVOS - 1

PROGRAM:	STEPPER MOTOR DRIVER	IP MODULE:	-
DESCRIPTION:	Sends 4 coded outputs to turn a stepper motor.	OP MODULE:	QSMD
		CPU SPEED:	1 KHz

Using indirect addressing, a table of values can be sent to the output port that represent samples of a waveform.



ADDR	INSTRUCTION	CODE
00	LD HL,0x80	21 80 00
03	LD A,(HL)	7E
04	OUT (0xFF),A	D3 FF
06	INC HL	23
07	LD A,L	7D
08	AND 83	E6 83
0A	LD L,A	6F
0B	JR -13	18 F6

The following table has 4 codes for rotation of a stepper motor

DATA TABLE								
Table length = 4 bytes								
ADDR	DATA							
80	0A	09	05	06				

This table will turn the motor in the opposite direction

Table length = 4 bytes								
ADDR	DATA							
80	06	05	09	0A				

For a 48-step motor this routine will produce a speed of:

Step time	= 13 machine cycles @ 1KHz = 13ms
Revolution time	= 48 steps x 13ms = 624ms
RPM	= 60,000ms / 624ms = 96.2RPM