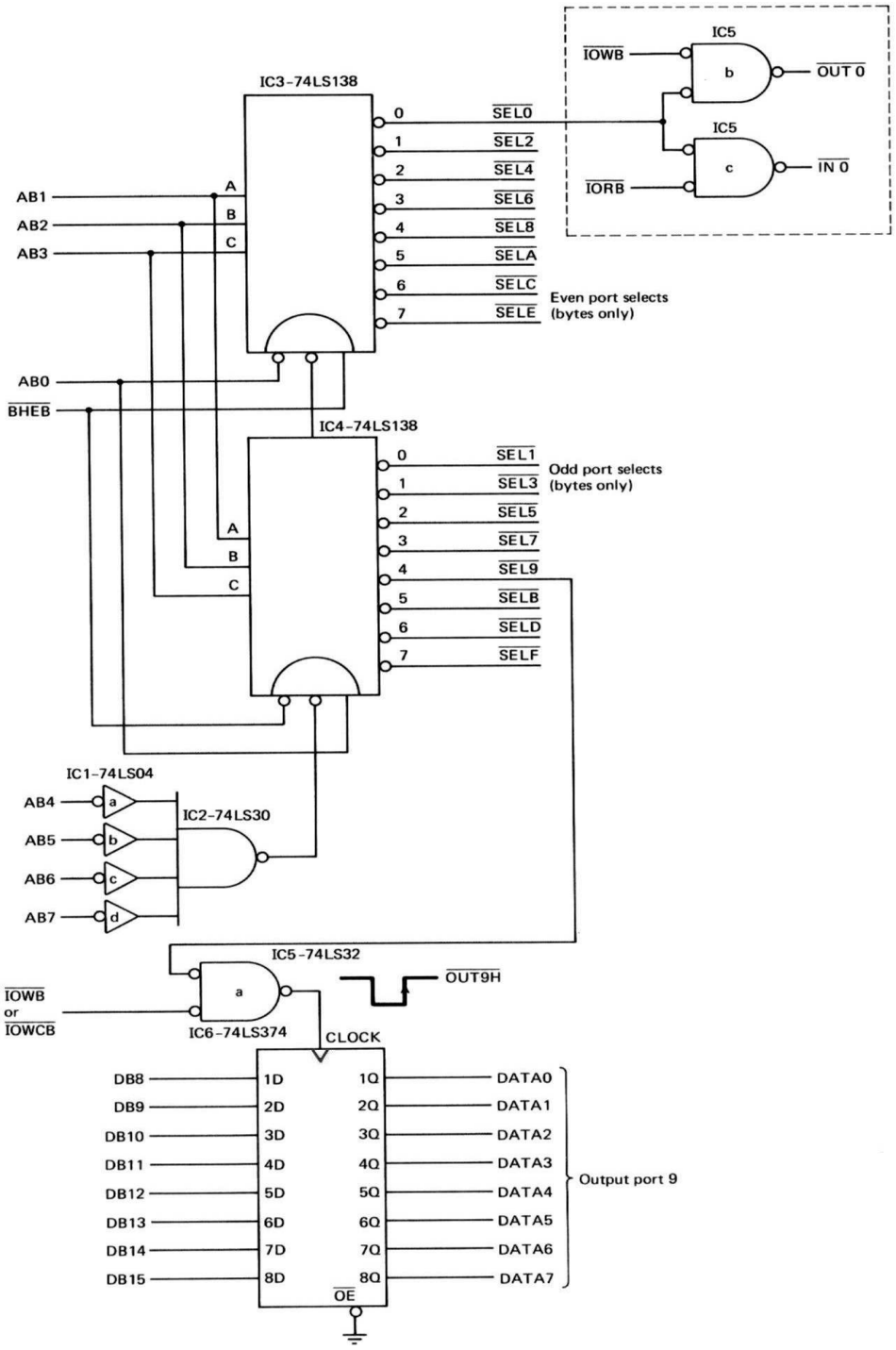
Type	Instruction	Address bus	Data bus	Control bus[a]	
				Min. mode	Max. mode
Direct	IN AL (or AX),port	A0–A7 = port address[b] A8–A19 = 0	D0–D7 = even byte D8–D15 = odd byte D0–D15 = even word	M/$\overline{IO}$ = 0 $\overline{RD}$ = 0	$\overline{IORC}$ = 0
	OUT port,AL (or AX)	A0–A7 = port address[b] A8–A19 = 0	D0–D7 = even byte D8–D15 = odd byte D0–D15 = even word	M/$\overline{IO}$ = 0 $\overline{WR}$ = 0	$\overline{IOWC}$ = 0 $\overline{AIOWC}$ = 0
Indirect	IN AL (or AX),DX	A0–A15 = port address[c] A16–A19 = 0	As above	As above	As above
	OUT DX,AL (or AX)	A0–A15 = port address[c] A16–A19 = 0	As above	As above	As above

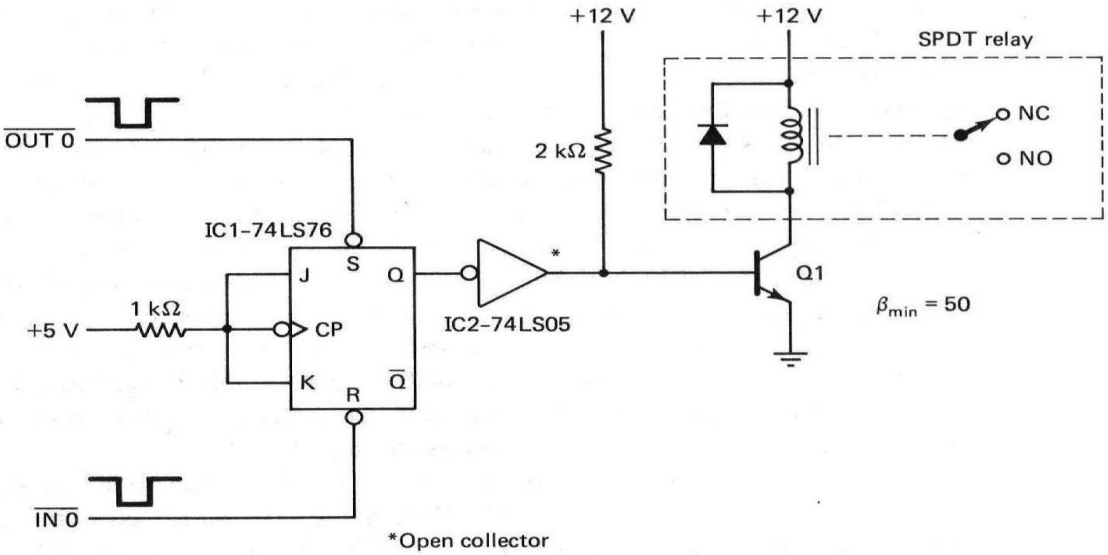
[a]BHE and A0 are encoded as follows:

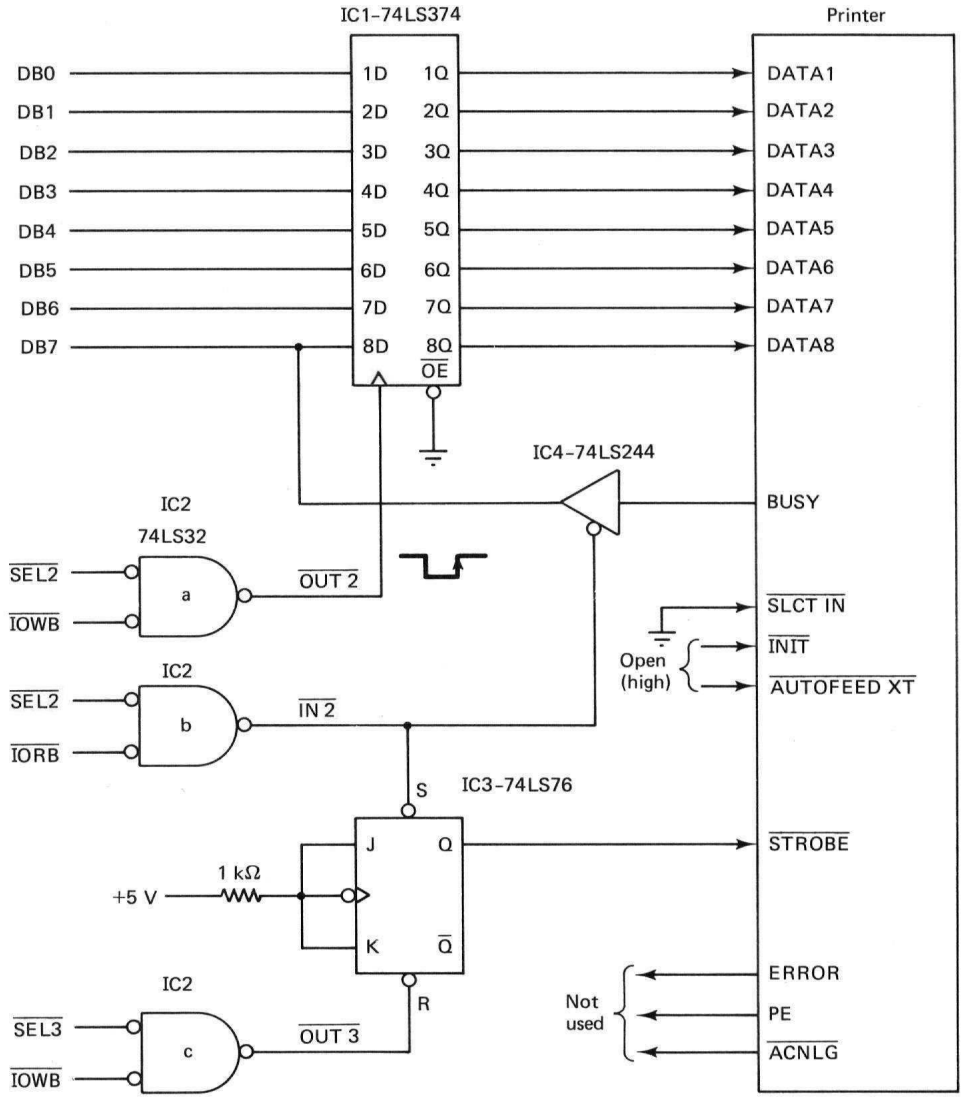
$\overline{BHE}$	A0	
0	0	Word access
0	1	Odd-byte access
1	0	Even-byte access
1	1	No action

[b]The port address is supplied within the instruction.

[c]The port address is supplied in register DX.


IC5
IOWB
b
OUT 0
IC5
c
IORB
IN 0
IC3-74LS138
AB1
AB2
AB3
A
B
C
0 SEL0
1 SEL2
2 SEL4
3 SEL6
4 SEL8
5 SELA
6 SELC
7 SELE
Even port selects (bytes only)
AB0
BHEB
IC4-74LS138
0 SEL1
1 SEL3
2 SEL5
3 SEL7
4 SEL9
5 SELB
6 SELD
7 SELF
Odd port selects (bytes only)
IC1-74LS04
AB4
AB5
AB6
AB7
a
b
c
d
IC2-74LS30
IC5-74LS32
OUT9H
IOWB or IOWCB
IC6-74LS374
CLOCK
DB8 1D 1Q DATA0
DB9 2D 2Q DATA1
DB10 3D 3Q DATA2
DB11 4D 4Q DATA3
DB12 5D 5Q DATA4
DB13 6D 6Q DATA5
DB14 7D 7Q DATA6
DB15 8D 8Q DATA7
OE
Output port 9


+12 V
+12 V
SPDT relay
NC
NO
OUT 0
2 kΩ
IC1-74LS76
S
J
Q
*
Q1
1 kΩ
+5 V
CP
IC2-74LS05
β_{min} = 50
K
R
$\overline{Q}$
IN 0
*Open collector


IC1-74LS374
Printer
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
1D
2D
3D
4D
5D
6D
7D
8D
1Q
2Q
3Q
4Q
5Q
6Q
7Q
8Q
OE
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
DATA8
IC4-74LS244
BUSY
IC2
74LS32
SEL2
IOWB
a
OUT 2
SLCT IN
INIT
Open
(high)
AUTOFEED XT
IC2
SEL2
IORB
b
IN 2
S
IC3-74LS76
J
Q
STROBE
1 kΩ
+5 V
K
R
IC2
SEL3
IOWB
c
OUT 3
ERROR
Not
used
PE
ACNLG