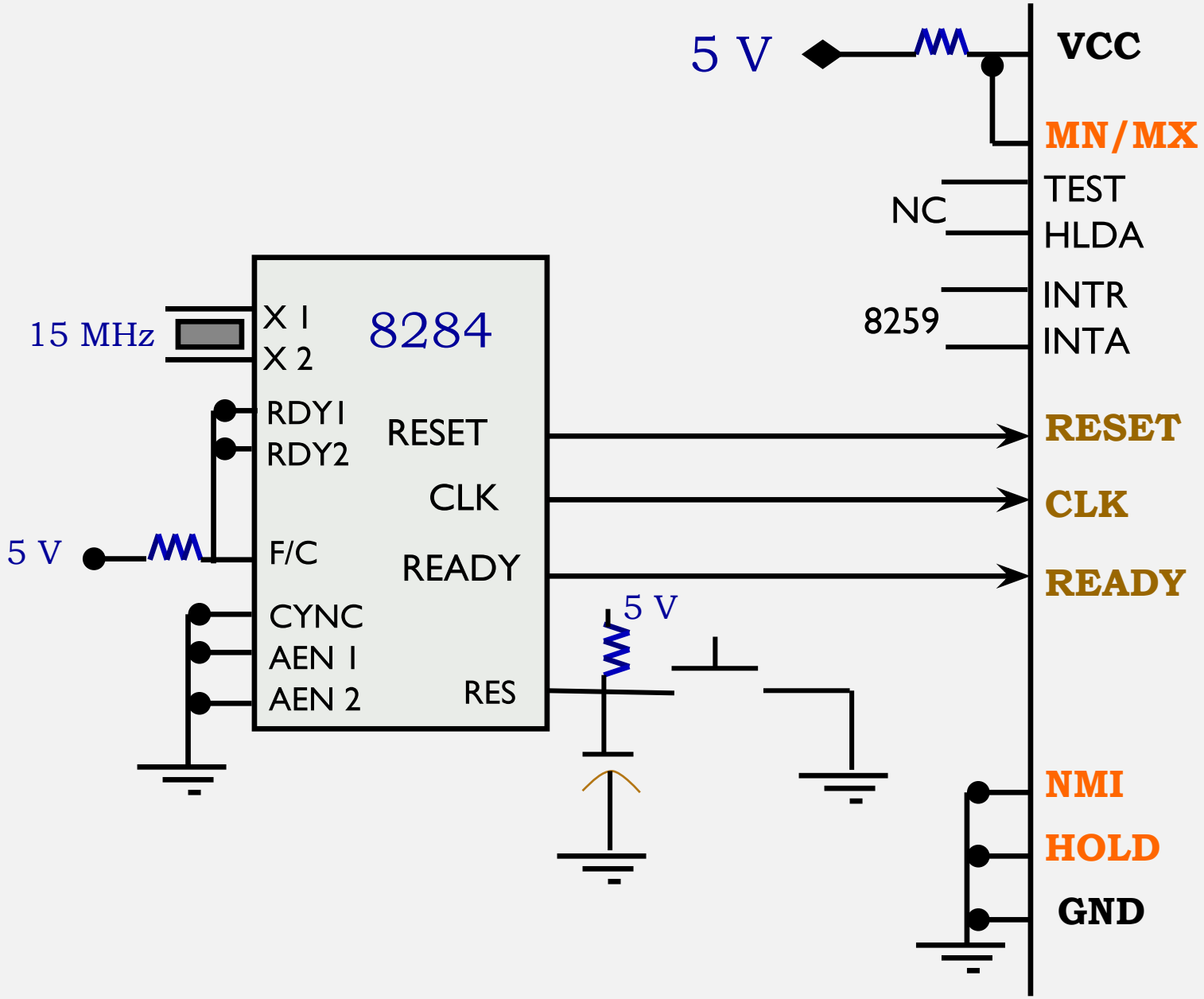
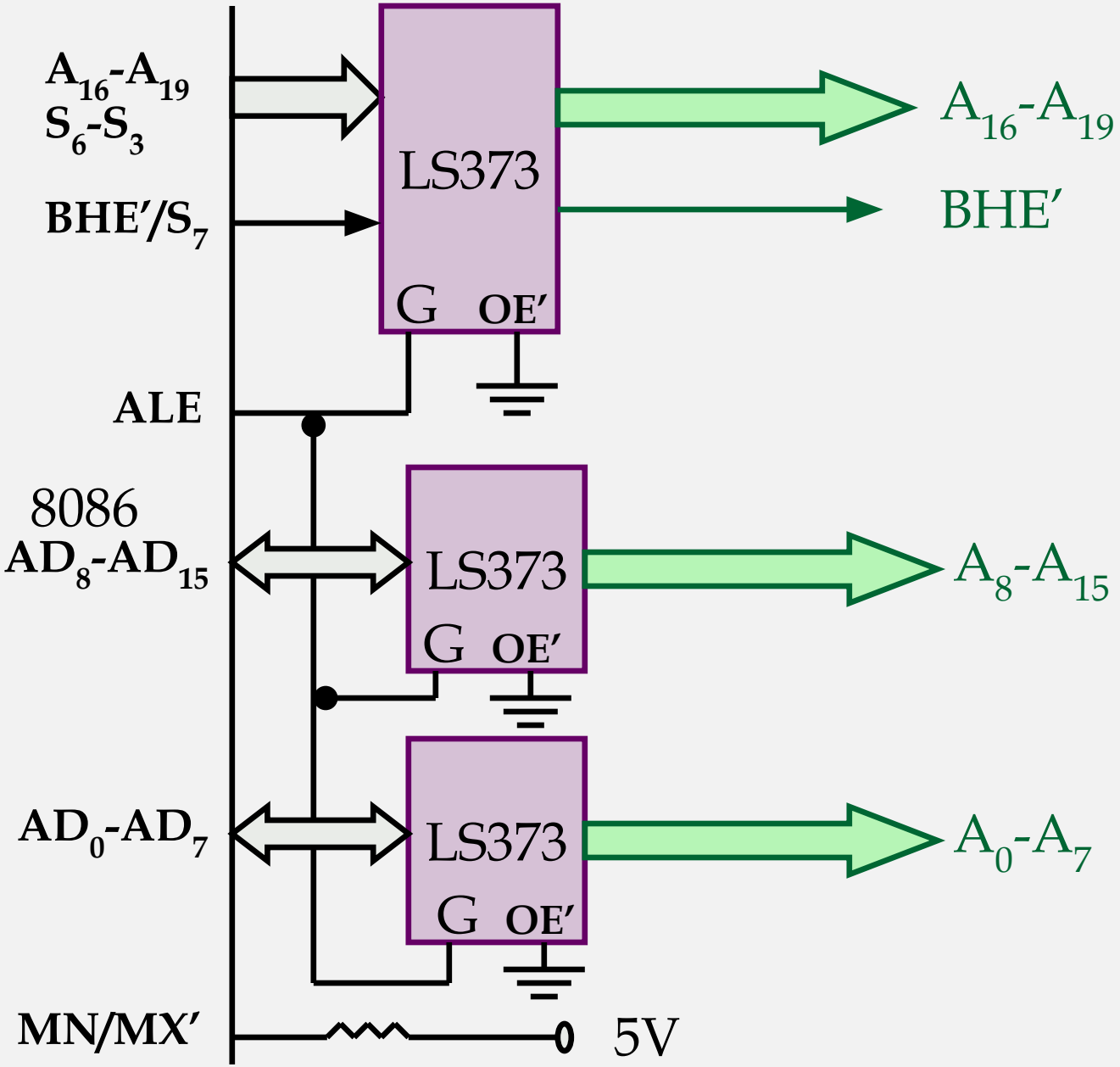
# Elevator Control System

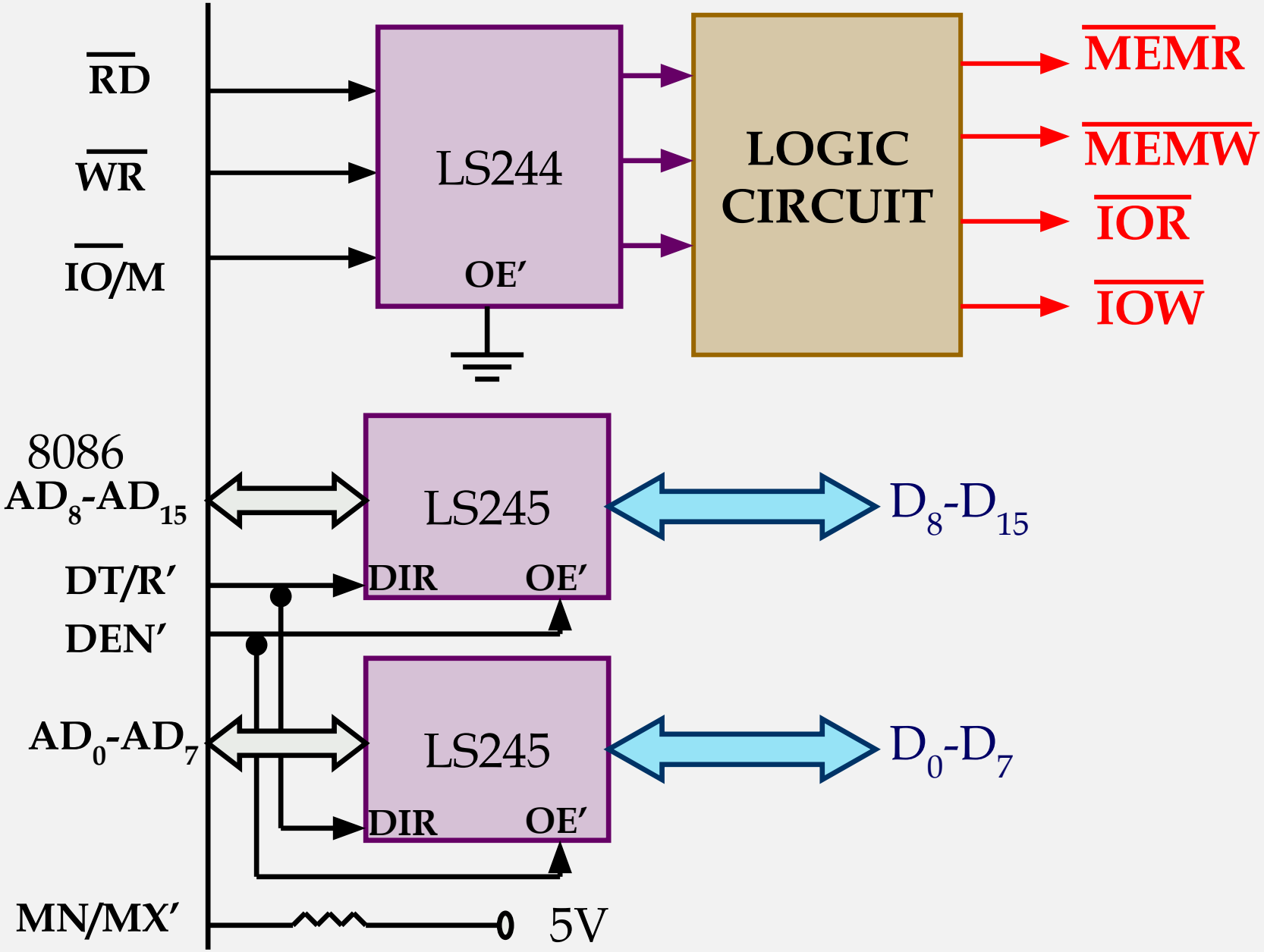
# 8086 Inputs

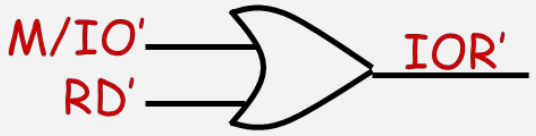

5 V
VCC
MN/MX
TEST
NC
HLDA
INTR
8259
INTA
15 MHz
X 1
X 2
8284
RDY1
RDY2
RESET
CLK
5 V
F/C
READY
CYNC
AEN 1
AEN 2
RES
5 V
RESET
CLK
READY
NMI
HOLD
GND

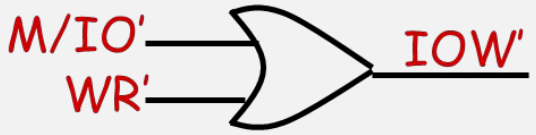
# System Bus of 8086 (Address)



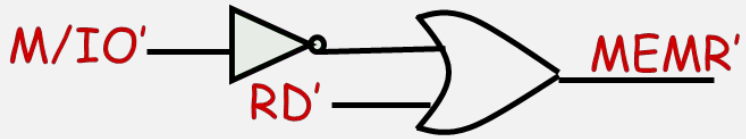
# System Bus of 8086(Data + Control)

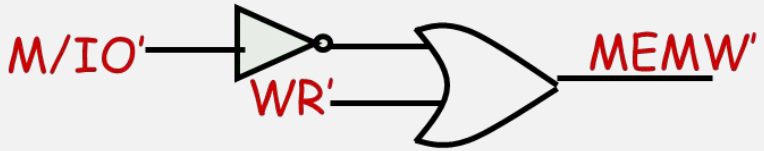




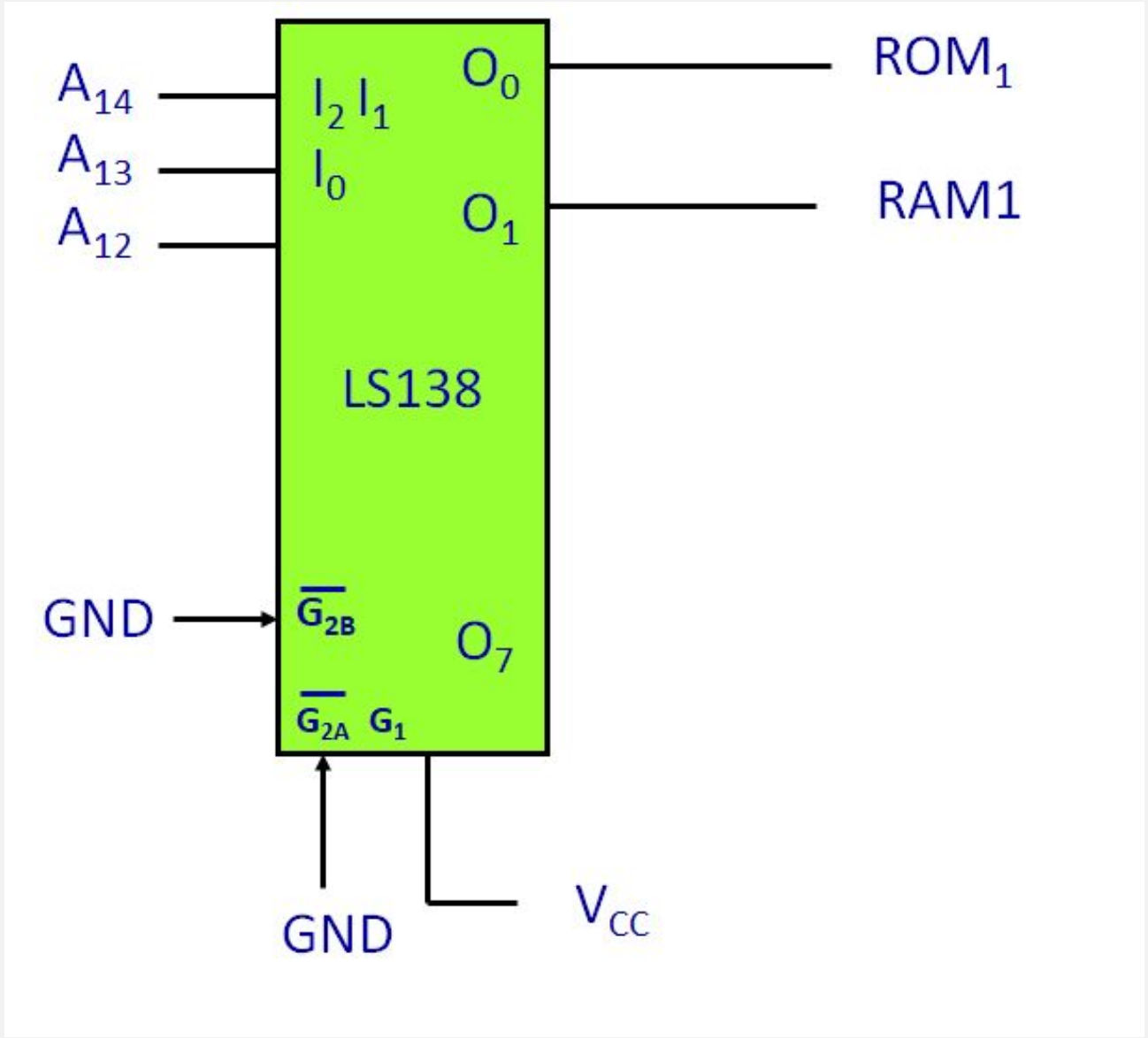

| M/IO' | RD' | WR' | Bus cycle |
|---|---|---|---|
| 1 | 0 | 1 | MEMR' |
| 1 | 1 | 0 | MEMW' |
| 0 | 0 | 1 | IOR' |
| 0 | 1 | 0 | IOW' |

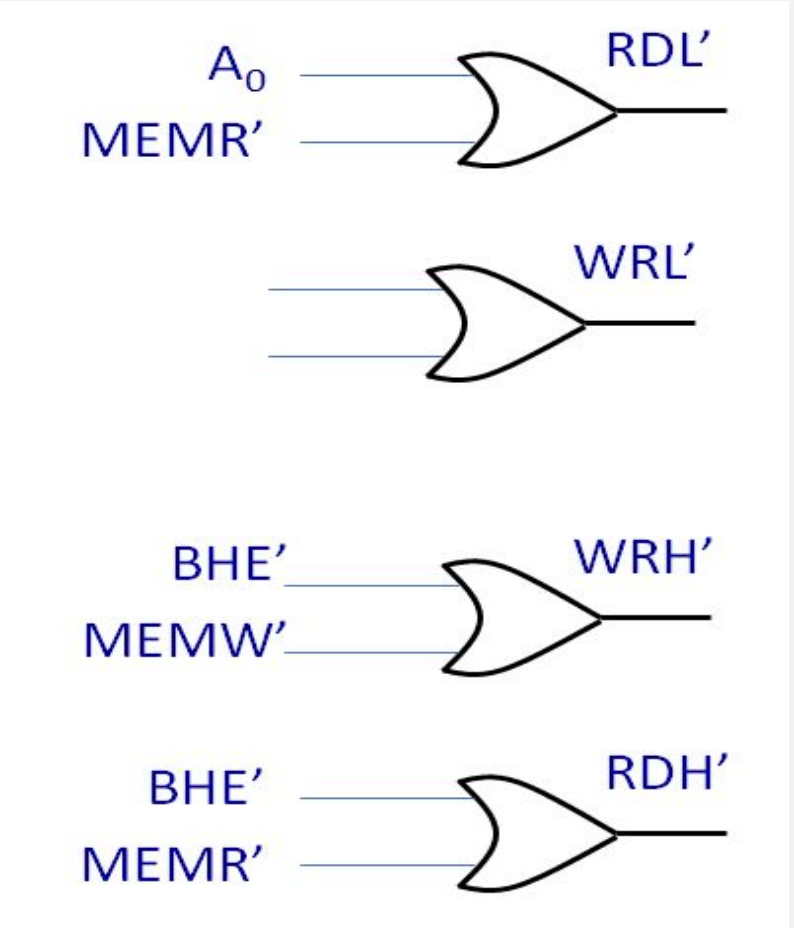


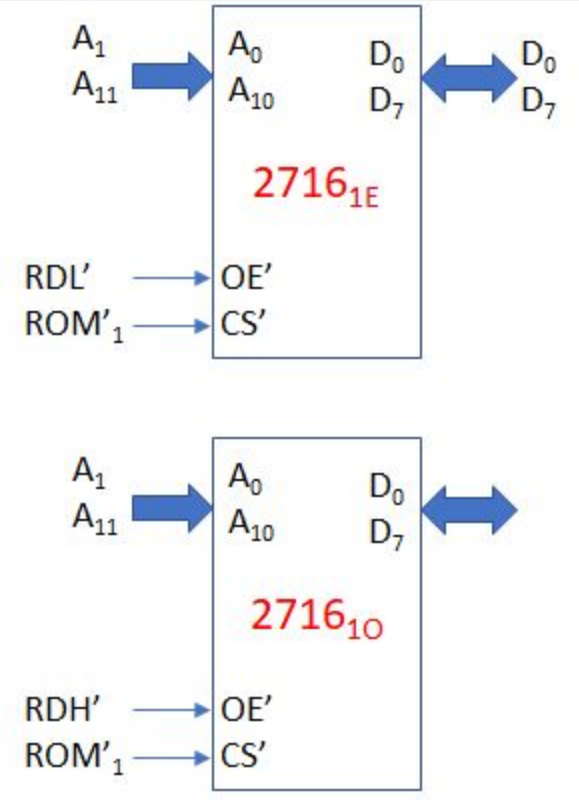

back

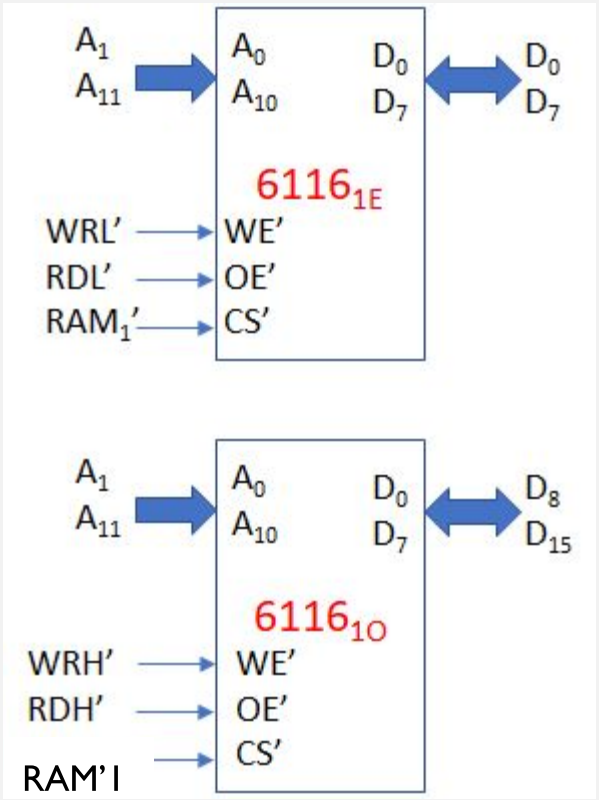
# MEMORY INTERFACING

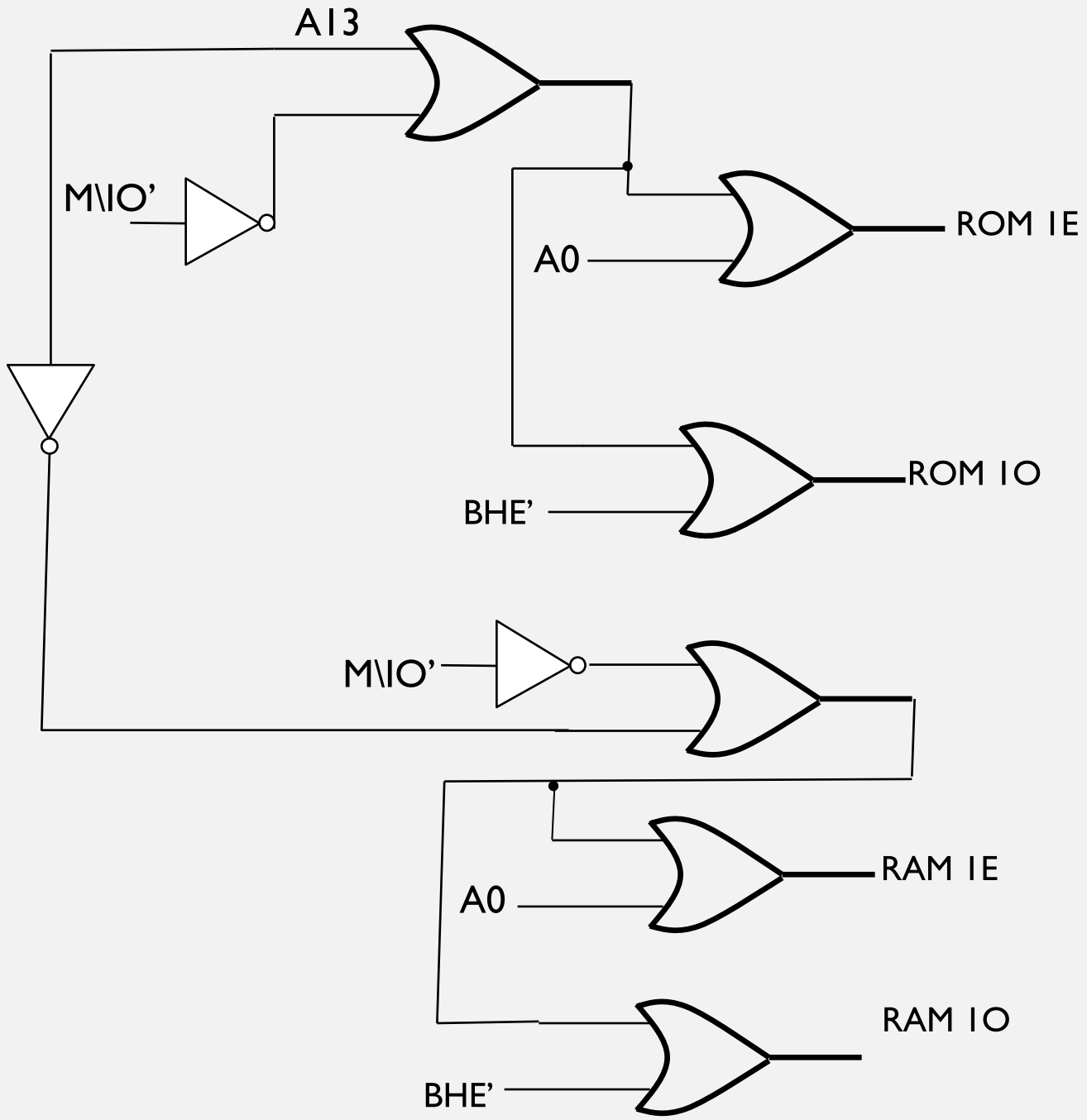


# MEMORY INTERFACING

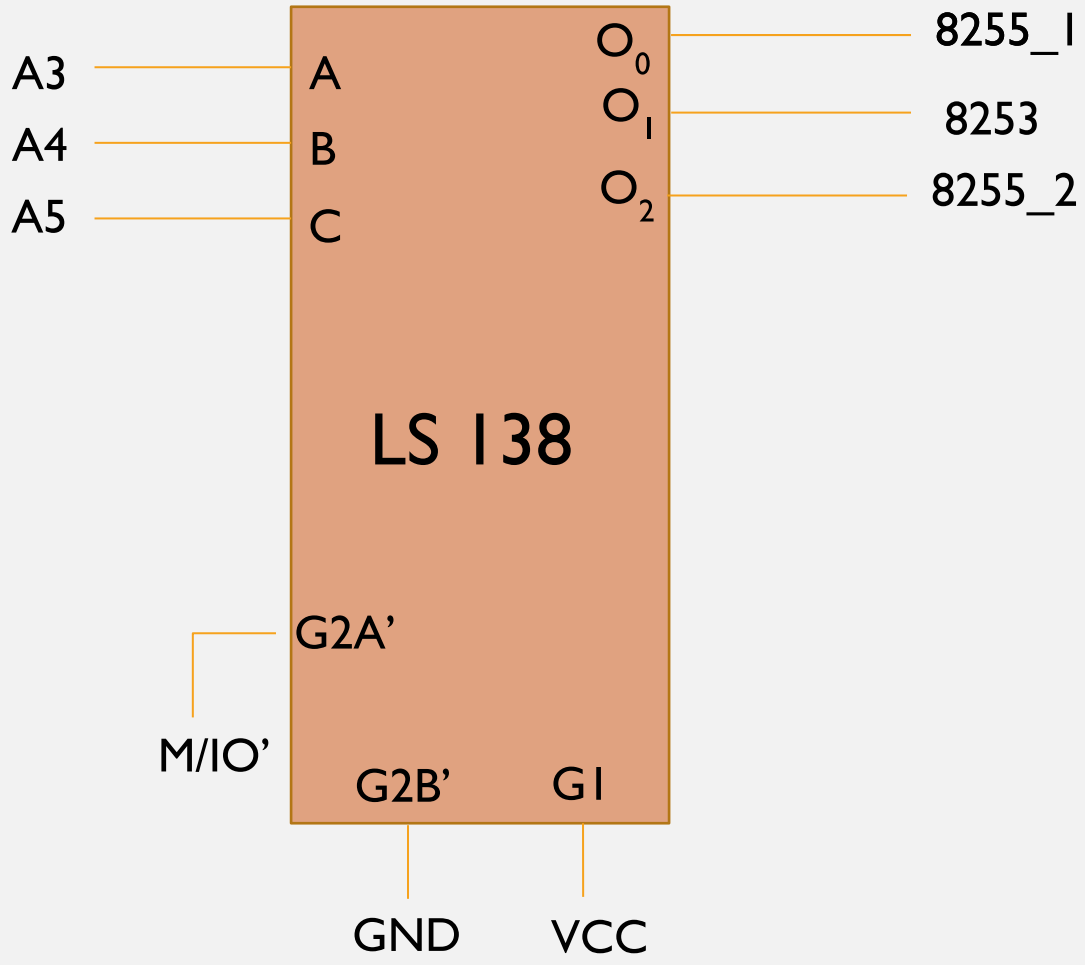


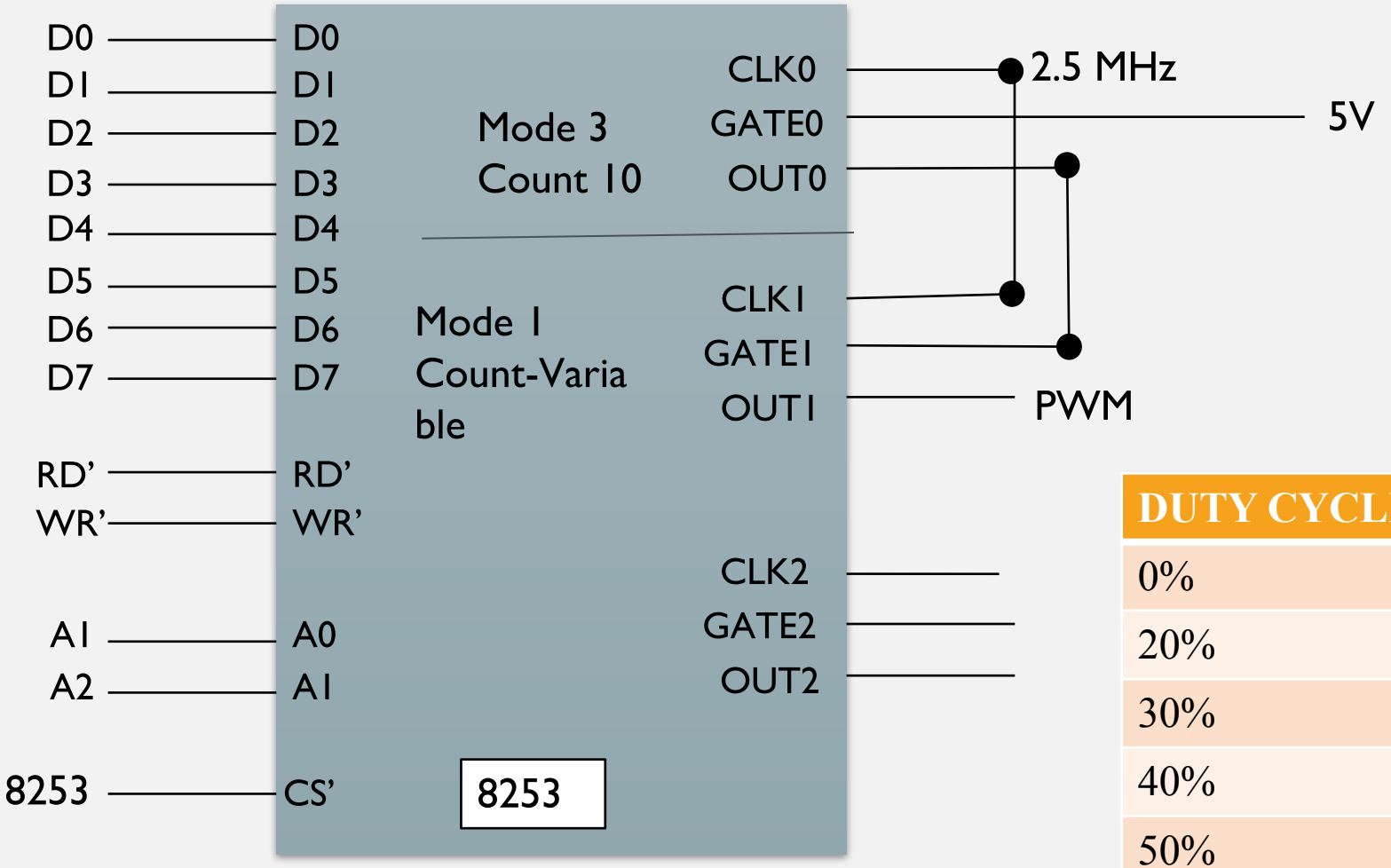



# MEMORY INTERFACING

# I/O Decoder

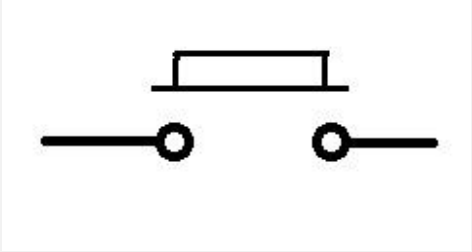

A3
A4
A5
A
B
C
$O_0$
$O_1$
$O_2$
8255_1
8253
8255_2
LS 138
G2A'
M/IO'
G2B'
G1
GND
VCC

# 8253 Interfacing




| DUTY CYCLE | COUNT in CLK1 |
|---|---|
| 0% | 0Ah |
| 20% | 08h |
| 30% | 07h |
| 40% | 06h |
| 50% | 05h |

# Push Button



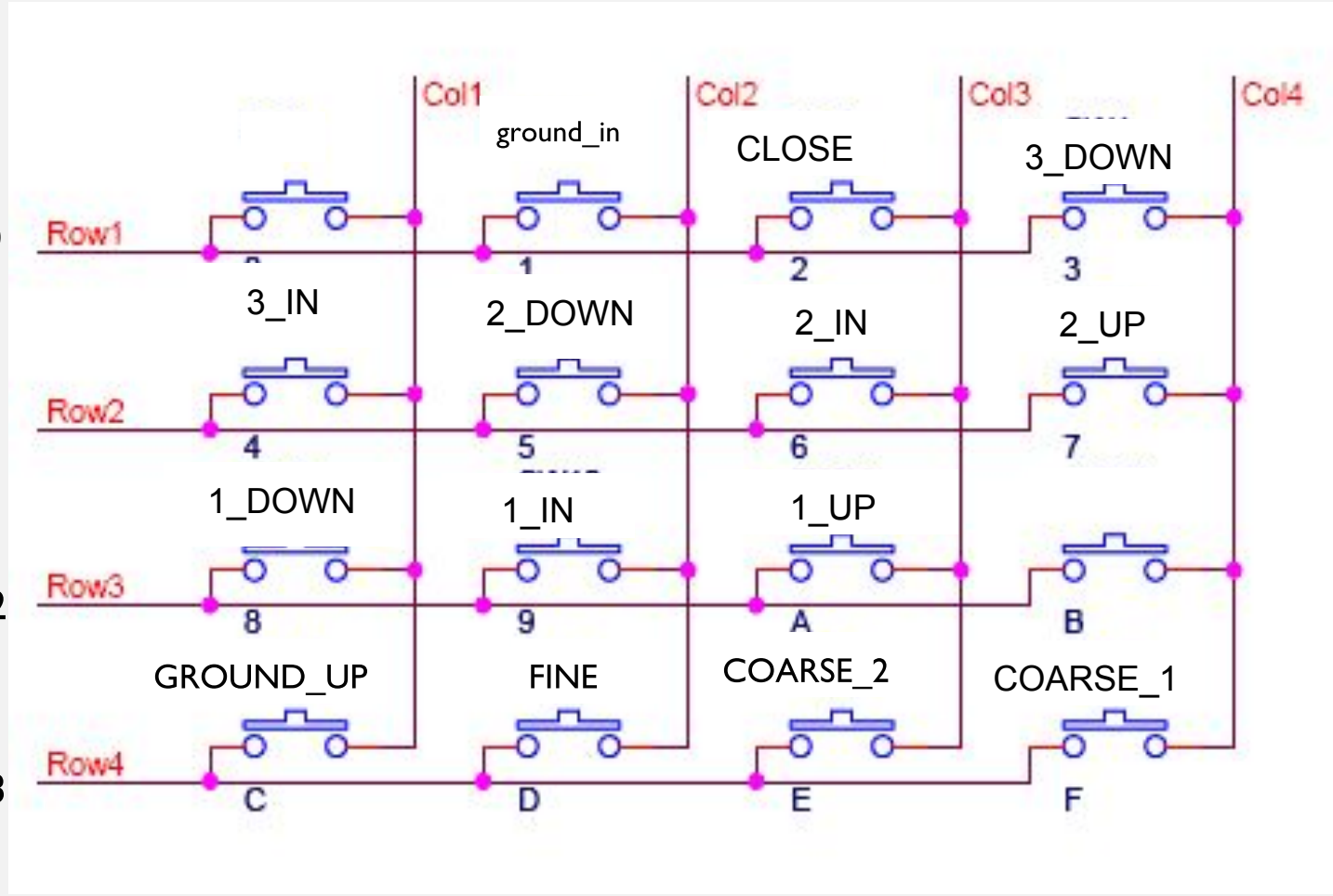
# KEYBOARD INTERFACING

COLUMN OUTPUTS

PB0 PB1 PB2 PB3

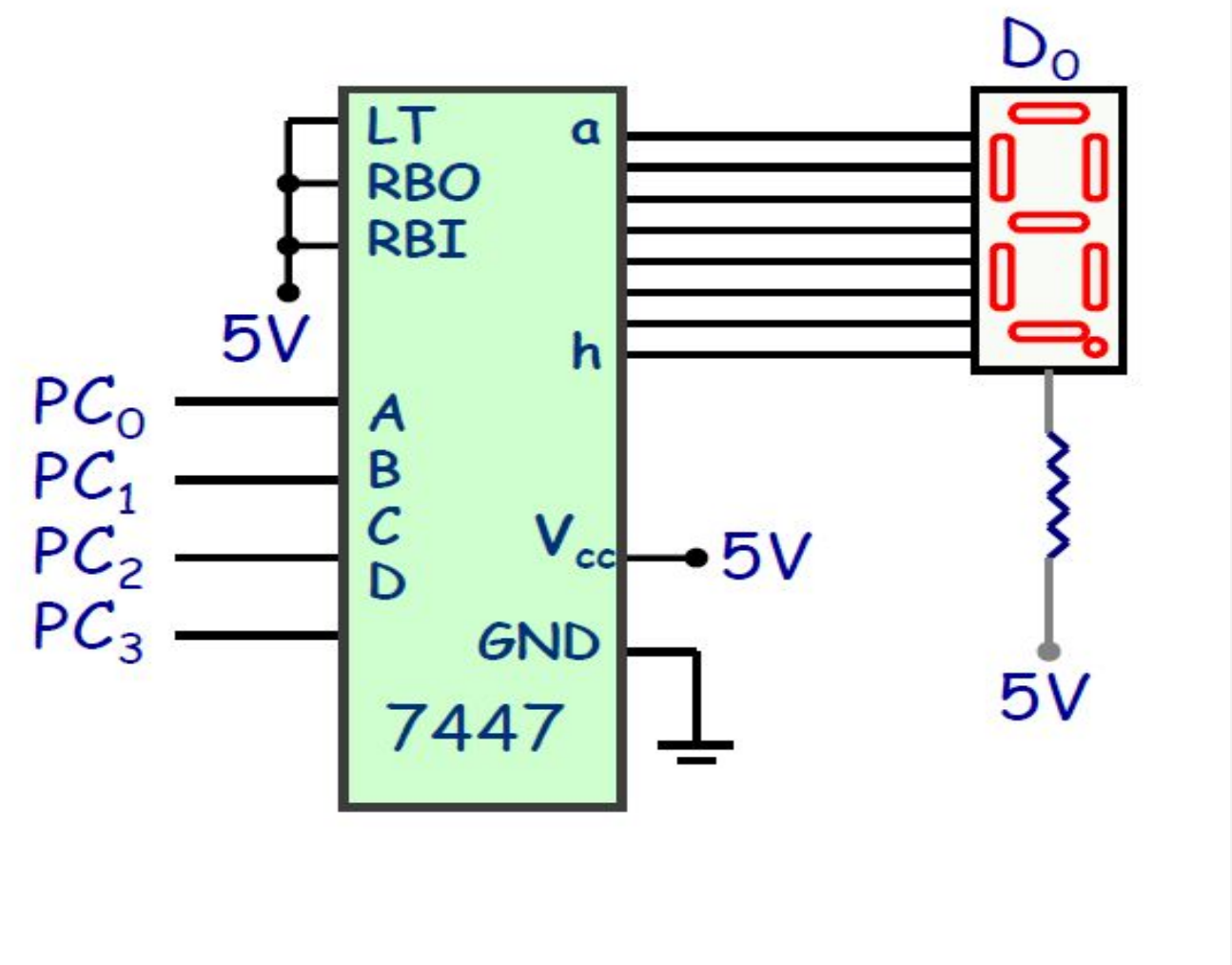
ROW INPUTS

PA0 PA1 PA2 PA3

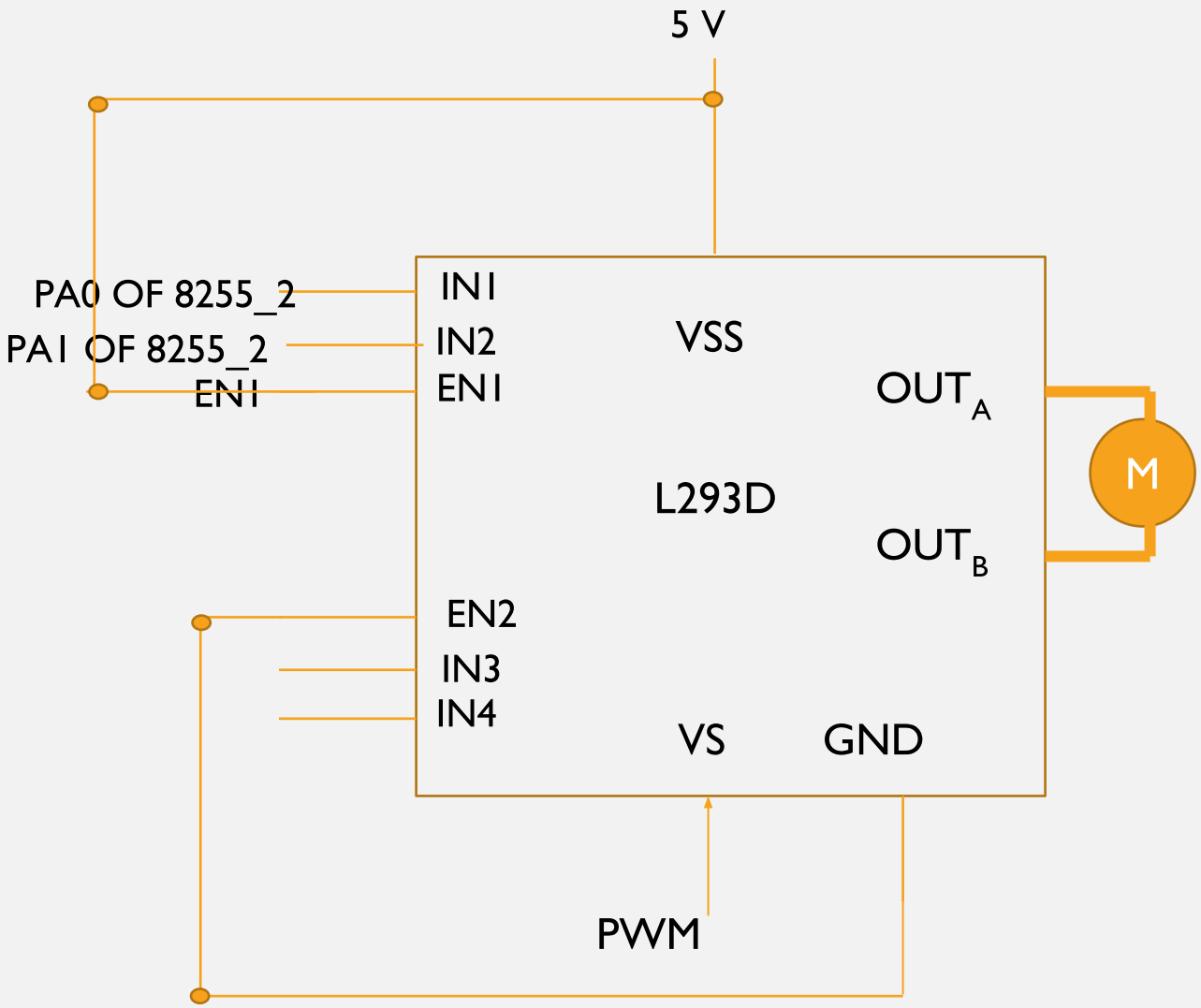


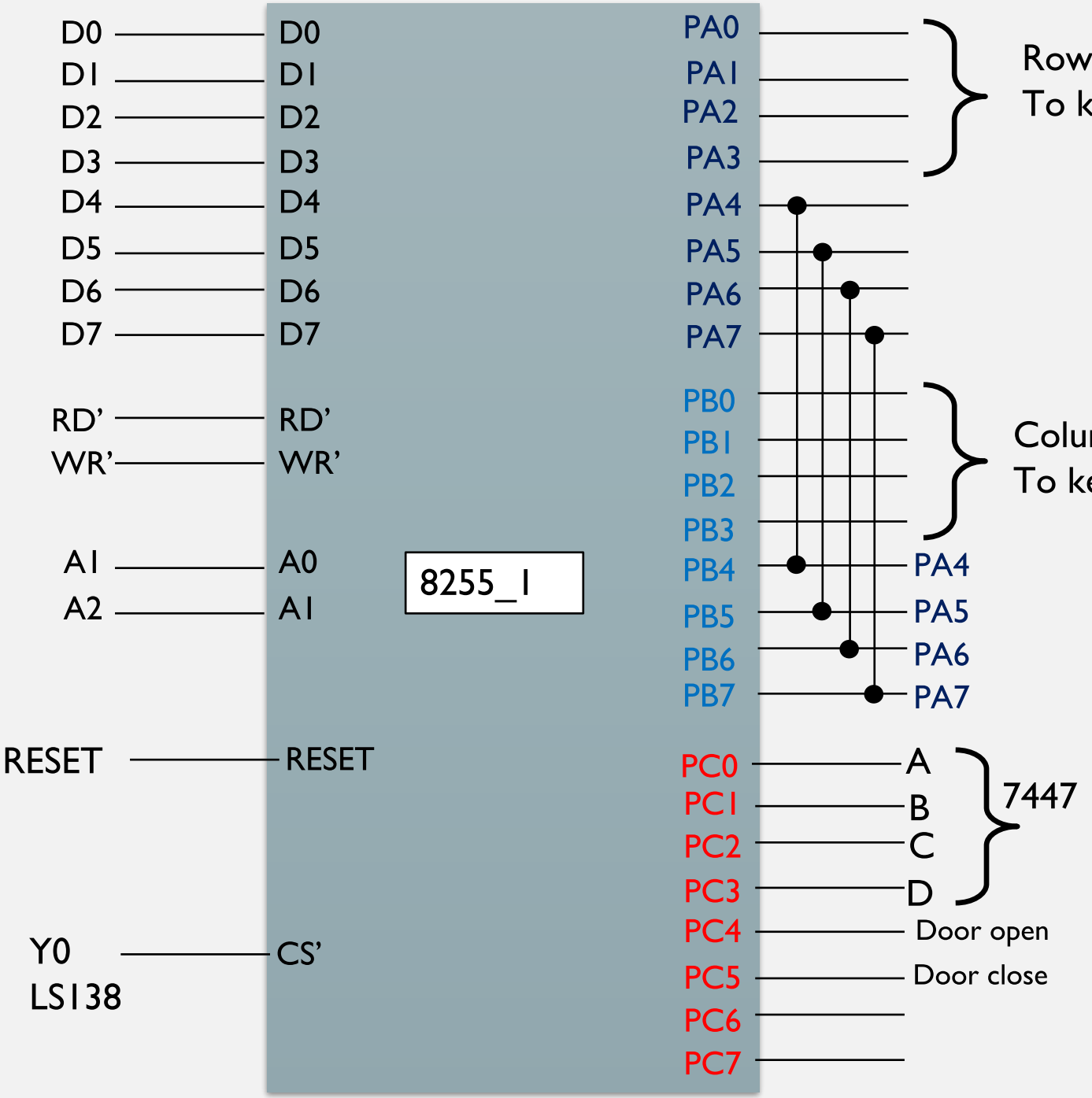
| R3 | R2 | R1 | R0 | C3 | C2 | C1 | C0 | Hex | Button |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 77 | Cs_1 |
| 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 7B | Fine |
| 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 7D | Cs_2 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7E | Ground_up |
| 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | BB | First_up |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | BD | First_in |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | BE | First_down |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | D7 | 2_UP |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | DB | 2_IN |
| 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | DD | 2_DOWN |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | DE | 3_IN |
| 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | E7 | 3_DOWN |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | EB | CLOSE |
| 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | ED | Ground_in |

# 7 Segment Display

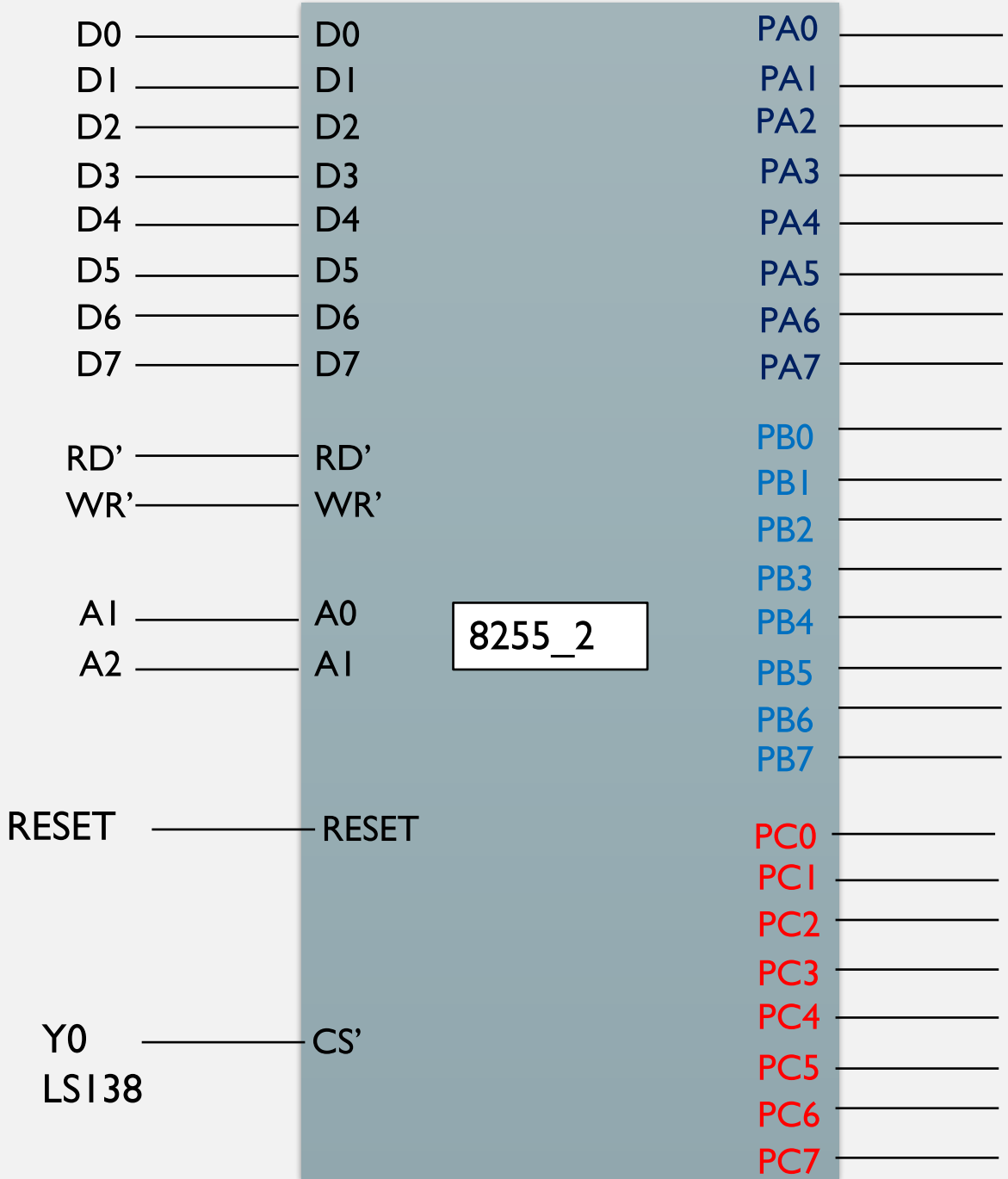


# MOTOR INTERFACING






# 8255_1 INTERFACING




# 8255_2 INTERFACING