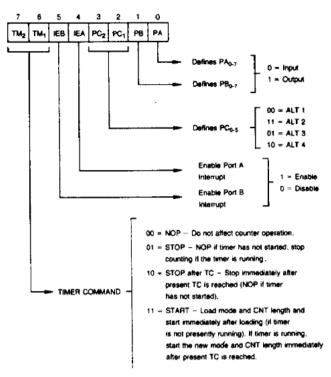
Electronic Ludo

31 May 2012 15:07



Control Word therefore is (01001111) = 4Fh

Chip Enable Logic relies on A15=1, hence the address becomes 10000AAA

80H- Control/Status Register

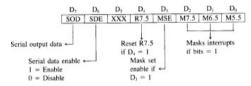
81H- Port A

82H- Port B

83H- Port C

Memory Management

0000-7FFFH	ROM
8000H-80FFH	RAM
8155 I/O base address	80H



□ SOD — Serial Output Data: Bit D₂ of the accumulator is latched into the SOD output line and made available to a serial peripheral if bit D₅ = 1.
 □ SDE — Serial Data Enable: If this bit = 1, it enables the serial output. To implement

SDE—Serial Data Enable: If this bit = 1, it enables the serial output. To implement serial output, this bit needs to be enabled.
XXX—Doa't Care
R7.5—Resct RST 7.5: If this bit = 1, RST 7.5 flip-flop is reset. This is an additional control to resct RST 7.5.
MSE—Mask Sct Enable: If this bit is high, it enables the functions of bits D₂, D₁, D₀. This is a master control over all the interrupt masking bits. If this bit is low, bits D₂, D₁, and D₃ do not have any effect on the masks.
M7.5—D₂ = 0, RST 7.5 is enabled.
= 1, RST 7.5 is masked or disabled.
= 1, RST 6.5 is masked or disabled.
M5.5—D₀ = 0, RST 5.5 is enabled.
= 1, RST 5.5 is masked or disabled.
= 1, RST 5.5 is masked or disabled.

Interrupt Mask Register 00001011 = 0BH

Column deciding Algorithm

Player 1

If			
CounterPlayer1	Column	Port A	Port B
1-5	1	01	00
6-11	2	00	02
12	3	00	04
13-18	4	00	08
19-24	5	00	01
25	6	80	00
26-31	7	40	00
32-37	8	20	00
38	9	10	00
39-44	10	08	00
45-50	11	04	00
51-56	12	02	00

Player 2 = (Player 1 + 3)%12

Player3=(Player1+6)%12

Player4=(Player1+9)%12 Control 12 - 4 Control 11 - 3 Control 10 - 2 1 Row Dice LEDs 1 Row

Players and Win/Lose + 1 dice led

Control 9 Control 8 Control 7

6

7

5

8 - Control 6 9 - Control 5 10 - Control 4 Oops! It was active low. Have to change all to their complements. Here is the corrected list.

Port A	Port B	
FE	FF	
FF	FD	
FF	FB	
FF	F7	
FF	FE	
7F	FF	
BF	FF	
DF	FF	
EF	FF	
F7	FF	
FB	FF	
FD	FF	

LEDdata algorithm

Count	LED-data
1	02H
2	04H
3	08H
4	10H
5	20H
6	20H
7	10H
8	08H
9	04H
10	02H
11	01H
12	01H
13	01H
14	02H (starts repeating)
15	04H
16	08H
17	10H

Dice Data

Dice Number	Data 1	Data 2
1	00H	(20H)
2	12H	No effect
3	0СН	(20H)
4	2DH	No effect
5	2DH	(20H)
6	3FH	No effect