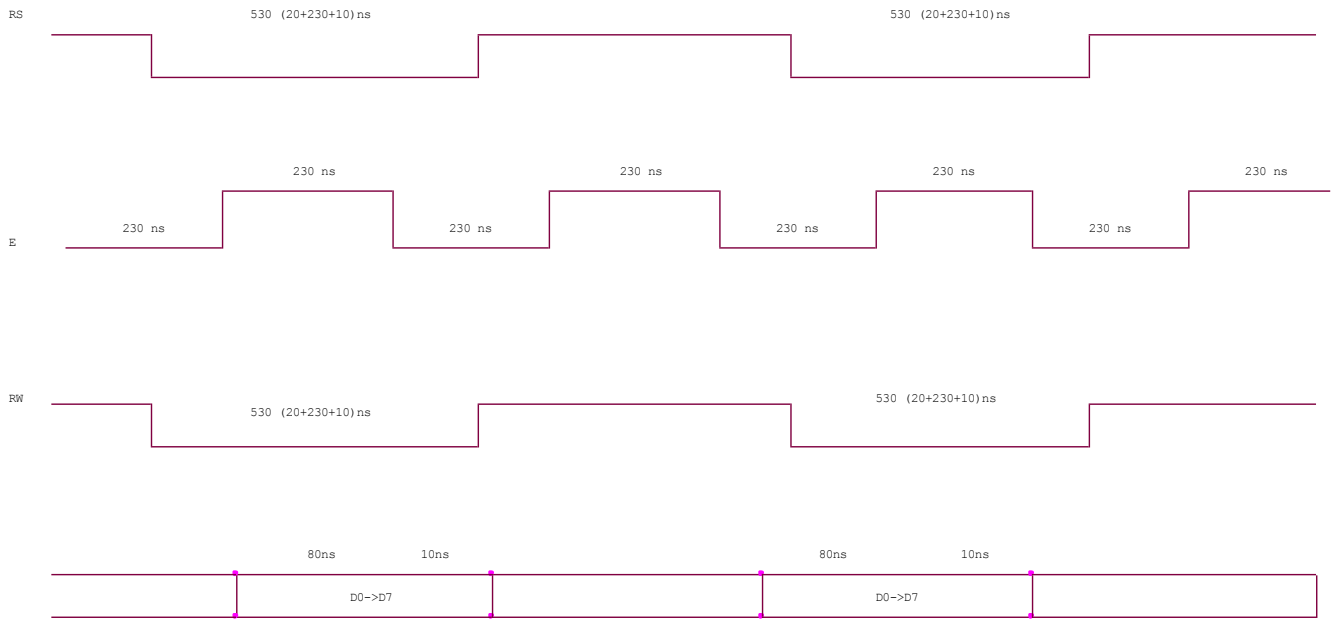


Program VFD 05-29-12:
 1) Timing diagrams.



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A	<Doc>	<Rev Code>	
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2) Physical Connections:

Arduino	Vfd module
PD7 7	-----> 14 DB7
PD6 6	-----> 13 DB6
PD5 5	-----> 12 DB5
PD4 4	-----> 11 DB4
PD3 3	-----> 10 DB3
PD2 2	-----> 9 DB2
PD1 1	-----> 8 DB1
PD0 0	-----> 7 DB0
PB4 12	-----> 6 E
	Gnd ----> 5 RW
PB2 10	-----> 4 RS

Parameter	Symbol	Conditions	Min.	Max.	Units
Enable Cycle Time	t_{CYC}	Fig.1, 2	500	—	ns
Enable Pulse Width	P_{WEH}	Fig.1, 2	230	—	ns
Enable Rise/Fall Time	t_{ER}, t_{EF}	Fig.1, 2	—	20	ns
Address Setup Time	t_{AS}	Fig.1, 2	40	—	ns
Address Hold Time	t_{AH}	Fig.1, 2	10	—	ns
Write Data Setup Time	t_{DSW}	Fig.1	80	—	ns
Write Data Hold Time	t_{DHW}	Fig.1	10	—	ns
Read Data Delay Time	t_{DDR}	Fig.2	—	160	ns
Read Data Hold Time	t_{DHR}	Fig.2	5	—	ns

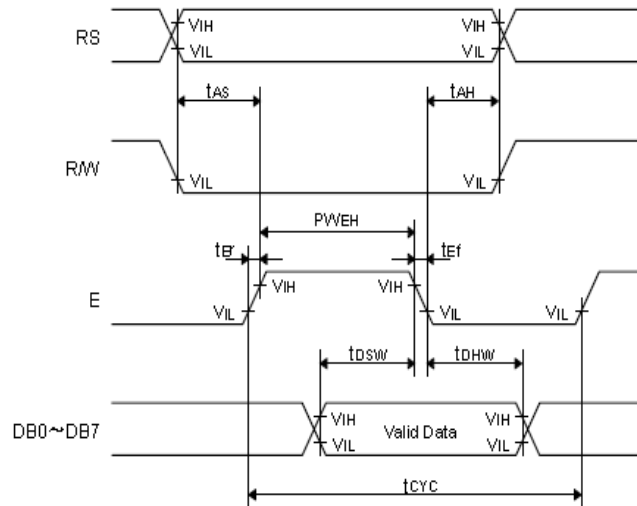


Fig.1 Write Operation Timing

CU20045-UW5A

10.3 CPU bus write timing (Parallel interface M68 type)

