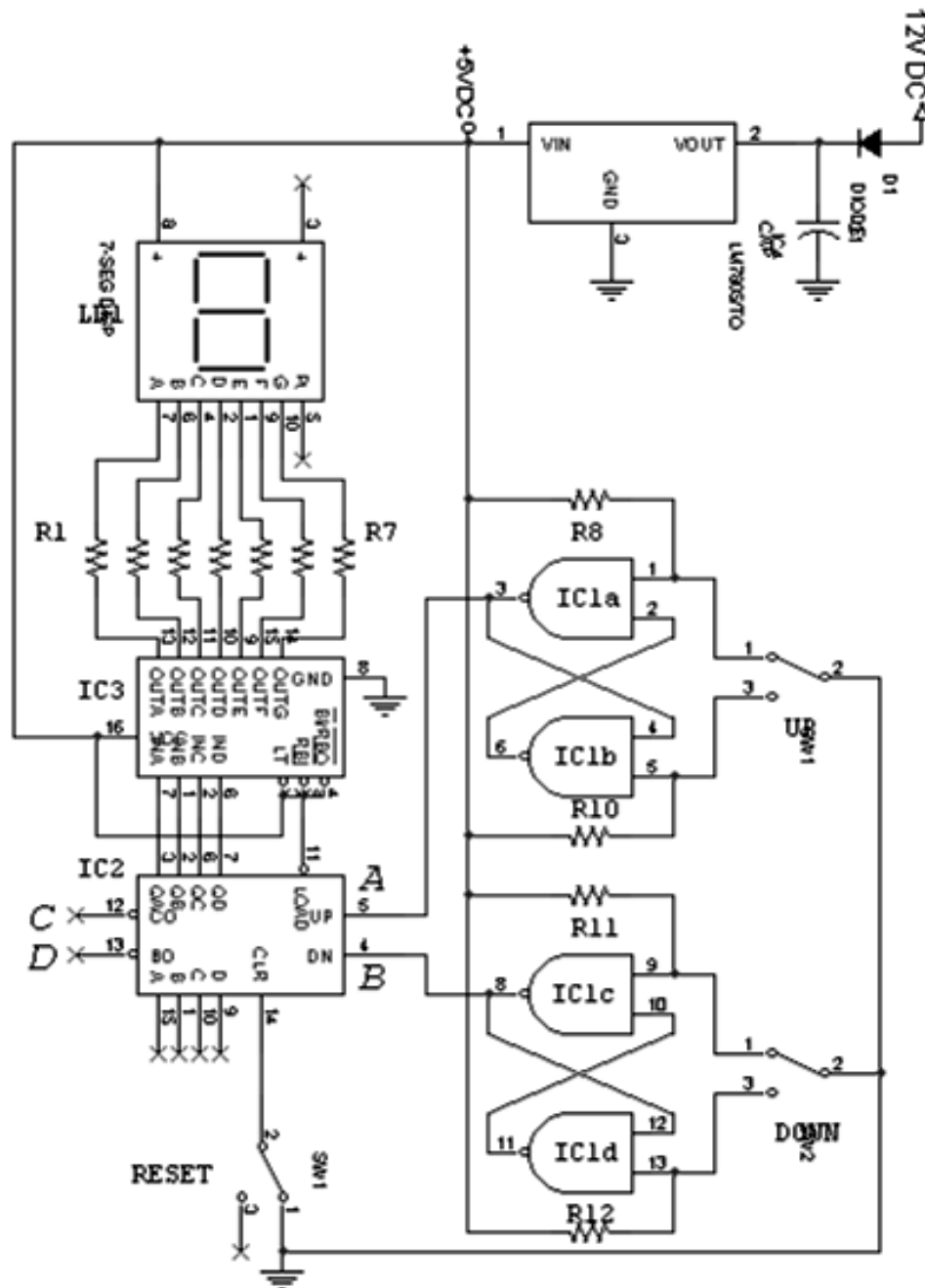
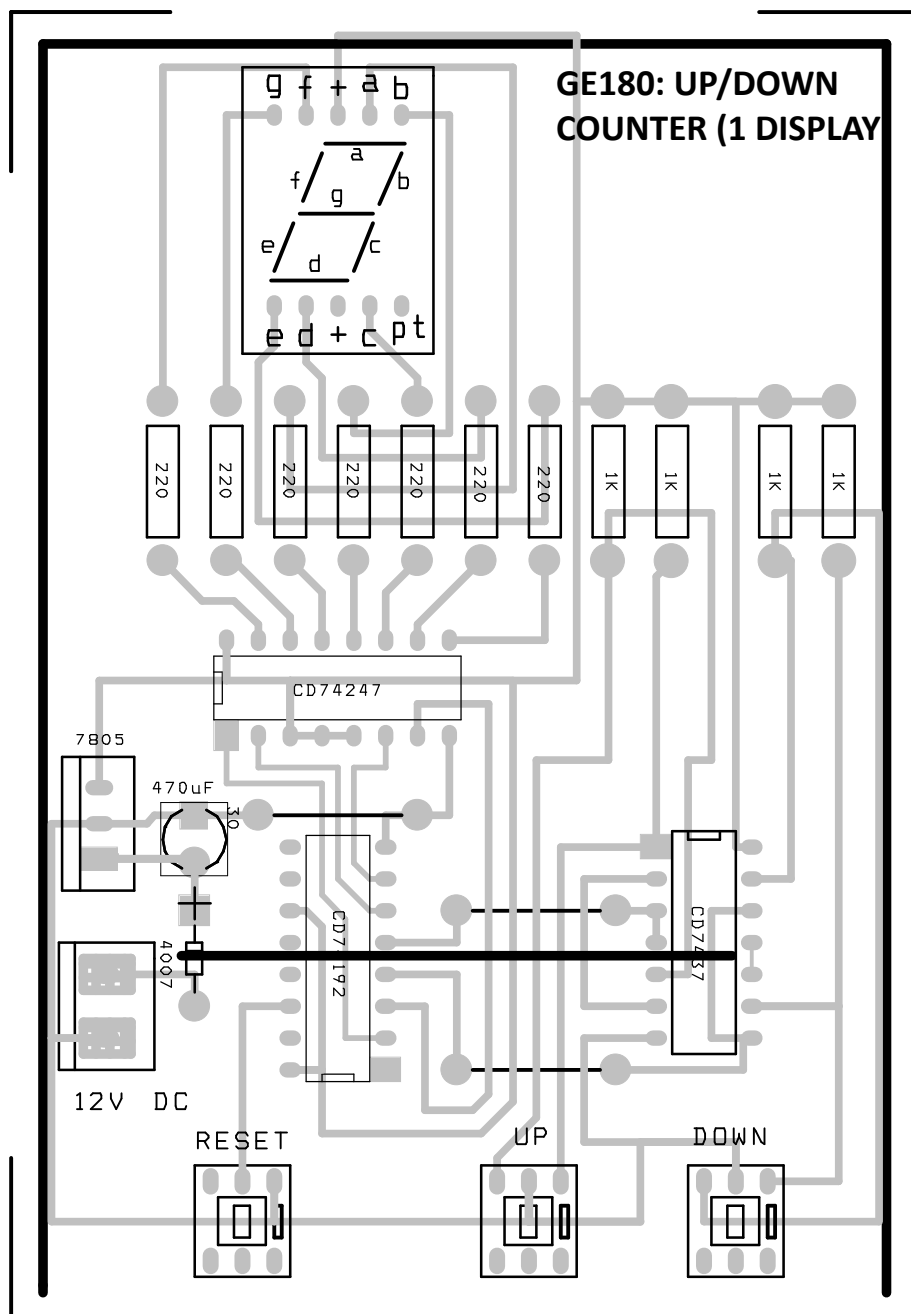


UP/DOWN COUNTER (1 DISPLAY)

GE 180



NOTE: YOU CAN CREATE A MULTI-DISPLAY UP/DOWN COUNTER BY CONNECTING TWO OR MORE UNITS OF (GE 180) , THIS CAN BE EASILY DONE BY CONNECTING THE (C) AND (D) POINTS OF THE FIRST UNIT TO THE (A) AND (B) POINTS OF THE SECOND UNIT.



BILL OF MATERIALS :

R1-R7 : 220 OHM (Red, violet, brown)	3 PUSH BUTTON SWITCHES
R8-R12 : 1 KOHM (Brown, black , red)	2 SCREW JUNCTIONS
C1 : 470UF 16V (Bipolar capacitor)	
D1 : 1N4007	
LD4 : 7-SEGMENT DISPLAY (C.A)	
IC1 : 7400 (QUAD 2-INPUT NAND GATE) OR SN7437	
IC2 : 74192 (UP \ DOWN COUNTER)	
IC3 : 74247 (BCD TO 7-SEGMENT DECODER)	
IC4 : LM7805 (REGULATOR)	
IC SOCKET: 14 PIN	
IC SOCKET: 16 PIN	