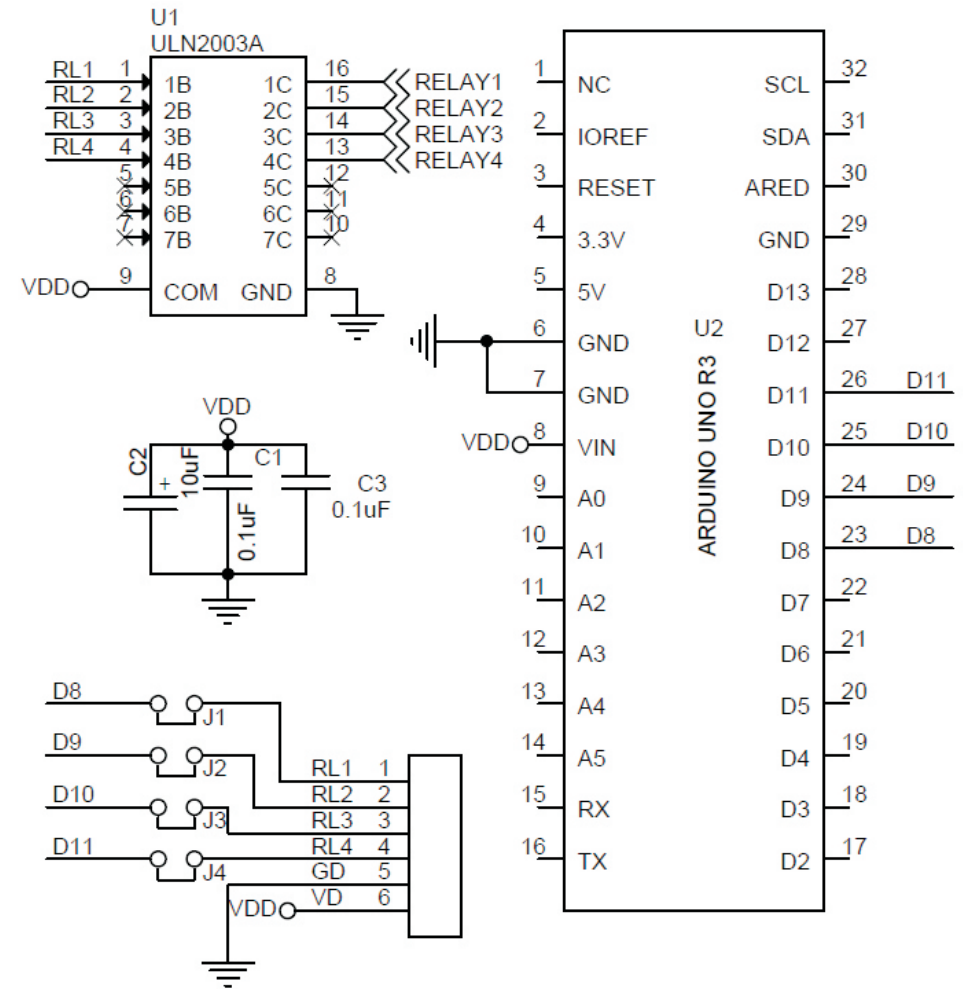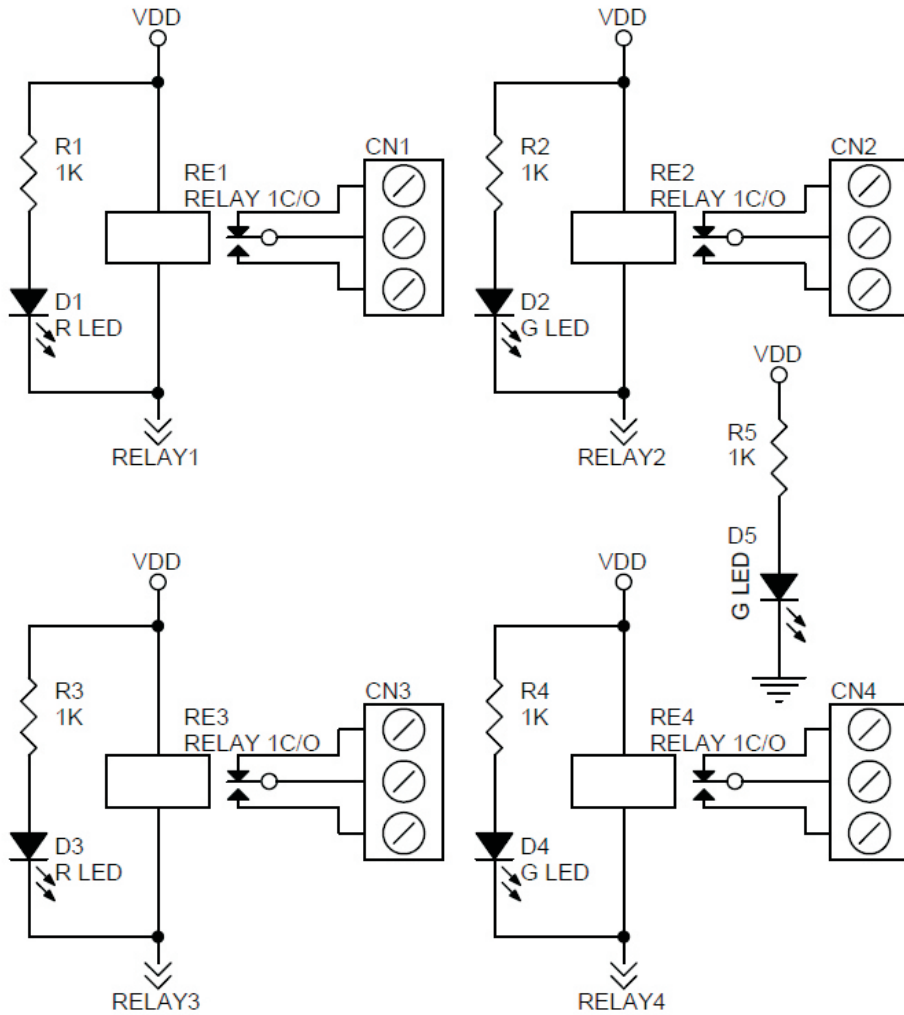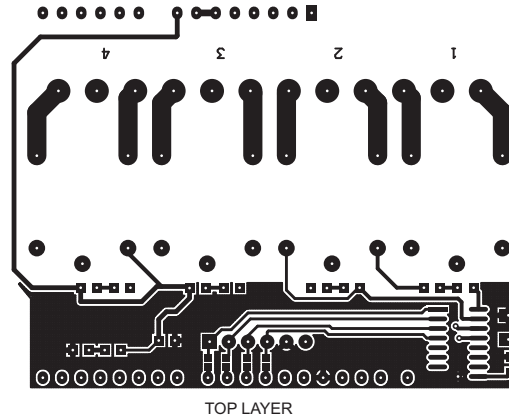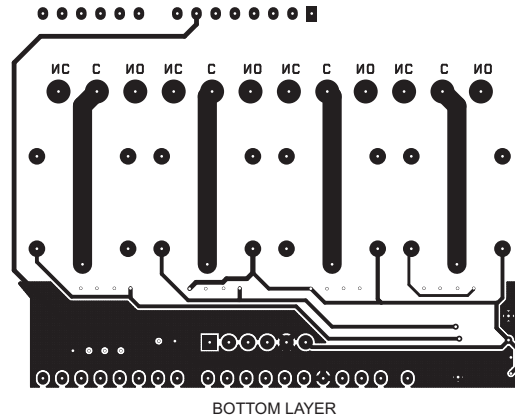# 4 Channel Relay Shield for Arduino Uno

4 Channel Relay Shield for Arduino UNO   is a simple and convenient way to interface 4 relays for switching application in your project. Very compact design can fit on top of Arduino UNO, Board required 12V DC supply, all 4 trigger inputs required TTL signal, Relay-1 to Relay-4 inputs connected to D8 To D11 of Arduino digital pins through solder jumpers J1 To J4. All trigger inputs can be connected to other I/O pins of Arduino using female header connectors, open solder jumpers J1-J4 in this case. D1, D2, D3, D4 LEDs provided to indicate the Relay ON/OFF status. D5 Power LED. Each relay has 3 pin screw terminals with normally open/normally closed switch to connect the load. Project is ideally to use for low voltage applications required extra care In case of using high voltage AC switching applications.

Features
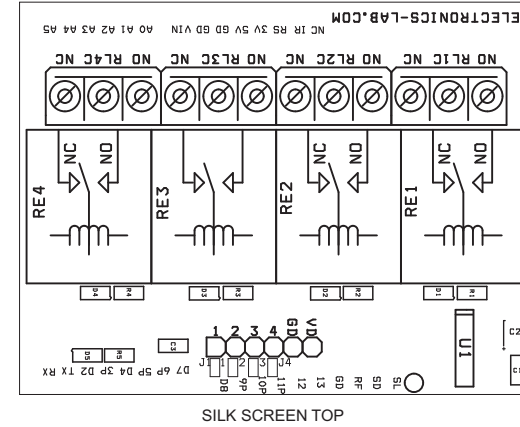
Input supply 12 VDC @ 170 mA (Arduino DC Jack)
Output four SPDT relay
Relay specification 7A/24V DC-230V AC
Trigger level 2 ~ 5 VDC
Header Connector for connecting power and trigger voltage
Solder Jumpers J1, J2, J3, J4 Interface Arduino Pins D8, D9, D10, D11
LED on each channel indicates relay status
Power Battery Terminal (PBT) for easy relay output
PCB Dimensions 68.37MM x 51.91 MM

VDD

R1
1K
RE1
RELAY 1C/O
CN1

D1
R LED
RELAY1

VDD

R2
1K
RE2
RELAY 1C/O
CN2

D2
G LED
RELAY2

VDD

R3
1K
RE3
RELAY 1C/O
CN3

D3
R LED
RELAY3

VDD

R4
1K
RE4
RELAY 1C/O
CN4

D4
G LED
RELAY4

VDD

R5
1K

D5
G LED

U1
ULN2003A

RL1 1 1B   1C 16 RELAY1
RL2 2 2B   2C 15 RELAY2
RL3 3 3B   3C 14 RELAY3
RL4 4 4B   4C 13 RELAY4
    5 5B   5C 12
    6 6B   6C 11
    7 7B   7C 10

VDD 9 COM   GND 8

VDD

C2   C1
10uF 0.1uF   C3
            0.1uF

D8 ─o o─ J1
D9 ─o o─ J2
D10 ─o o─ J3
D11 ─o o─ J4

RL1 1
RL2 2
RL3 3
RL4 4
GD 5
VD 6
VDD

ARDUINO UNO R3   U2

1 NC   SCL 32
2 IOREF   SDA 31
3 RESET   ARED 30
4 3.3V   GND 29
5 5V   D13 28
6 GND   D12 27
7 GND   D11 26 D11
8 VIN   D10 25 D10
9 A0   D9 24 D9
10 A1   D8 23 D8
11 A2   D7 22
12 A3   D6 21
13 A4   D5 20 D5
14 A5   D4 19 D4
15 RX   D3 18 D3
16 TX   D2 17 D2

VDD

BOTTOM LAYER

TOP LAYER

SILK SCREEN TOP

PCB DIMENSIONS 68.37MM X 51.91

BOM			
SR.	QNTY.	REF.	DESC.
1	4	CN1,CN2,CN3,CN4	3 PIN HEADER CONNECTOR
2	1	CN7	6 PIN HEADER CONNECTOR
3	2	C1,C3	0.1uF SMD 0805
4	1	C2	10uF 25V SMD 1210
5	2	D1,D3	R LED SMD 0805
6	3	D2,D4,D5	G LED SMD 0805
7	4	J1,J2,J3,J4	SOLDER JUMPER
8	4	RE1,RE2,RE3,RE4	12V SUGER CUBE RELAY
9	5	R1,R2,R3,R4,R5	1K SMD 0805
10	1	U1	ULN2003A SMD
11	1	U2	ARDUINO UNO SHIELD

07005