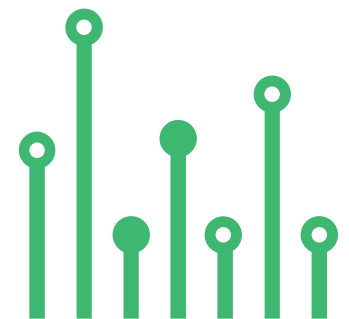


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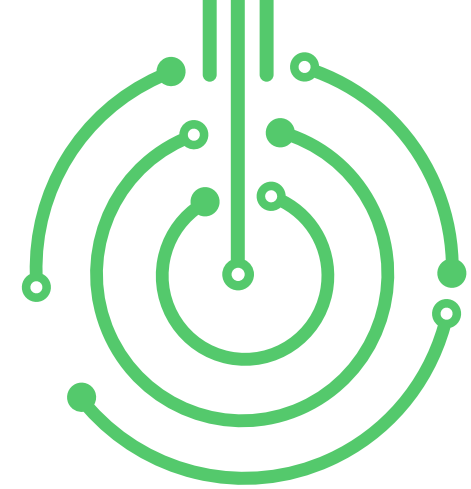
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REMOTE CONTROL



Arduino Bluetooth Relay Switch



SKU: EL153725

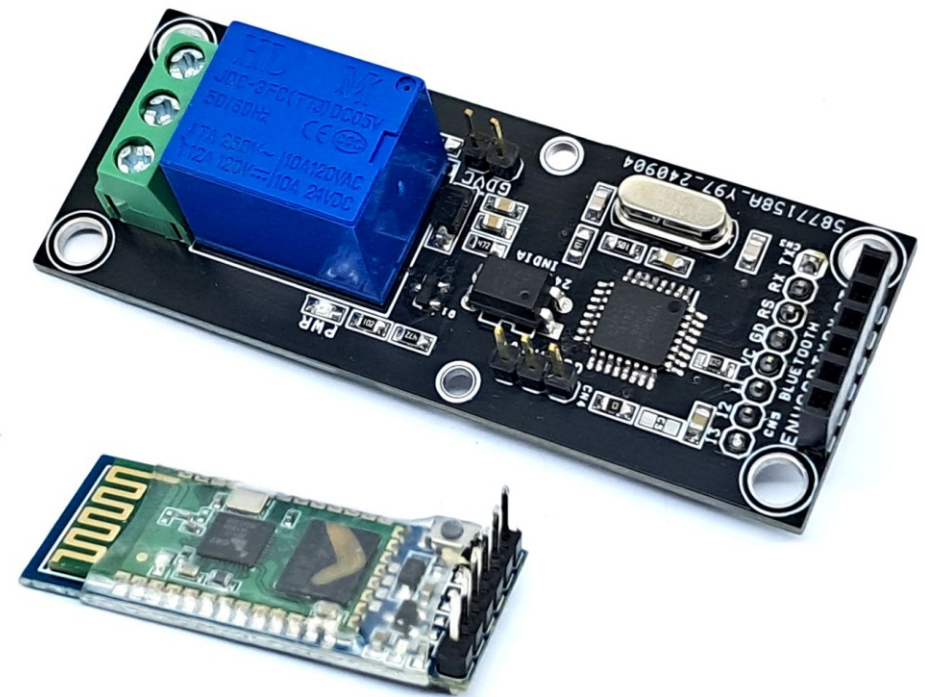
Arduino Bluetooth Relay Switch



This Bluetooth Relay Switch enables users to control lights, fans, or other devices using a Bluetooth app on an Android device. The device can be controlled using a simple app. The project consists of an Arduino-compatible microcontroller (ATMEGA328), a 5V relay, a relay driver BJT, and an optocoupler, which provides isolation between the relay and microcontroller, ensuring noise immunity and preventing high voltage entering the DC circuit. The HC-05 Bluetooth module provides wireless connectivity between the Android app and the Bluetooth board. Screw terminals are provided to connect the load to the relay contacts, and a header connector is available to power the board with 5V. A power LED indicates the presence of power, and a relay LED indicates relay operations. The relay contacts can handle loads up to 7A/250V AC and 10A/24V DC. An 8-pin header connector is provided for Arduino programming and Bootloader load.

FEATURES

- Power Supply 5V DC @ 100Ma
- Wireless Bluetooth Connectivity
- On Board Power LED
- On Board Relay LED
- 4X4MM Mounting Holes
- PCB Dimensions 74.61X28.89MM



Bootloader and Arduino Programming

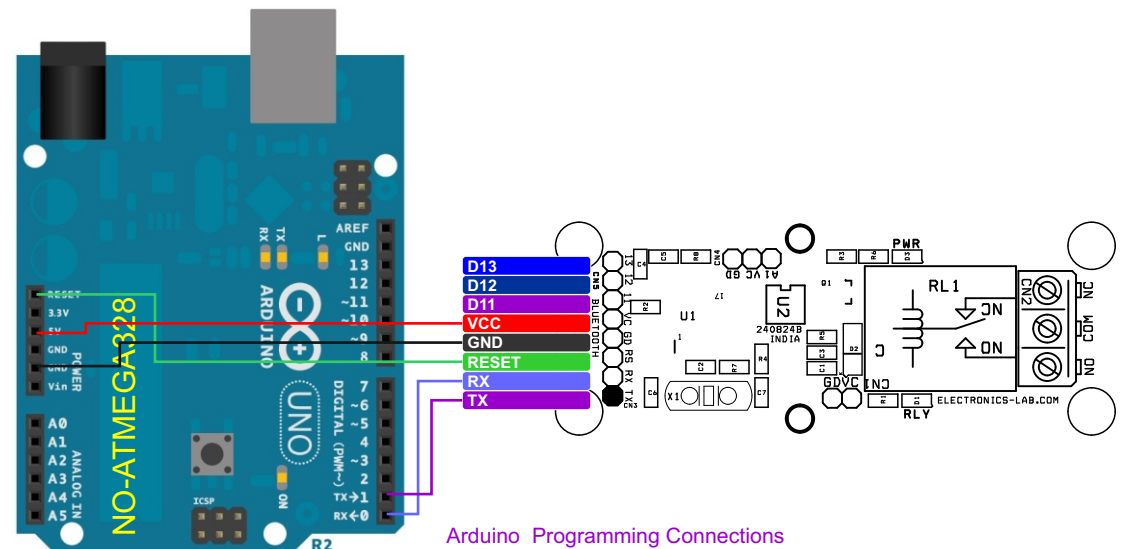
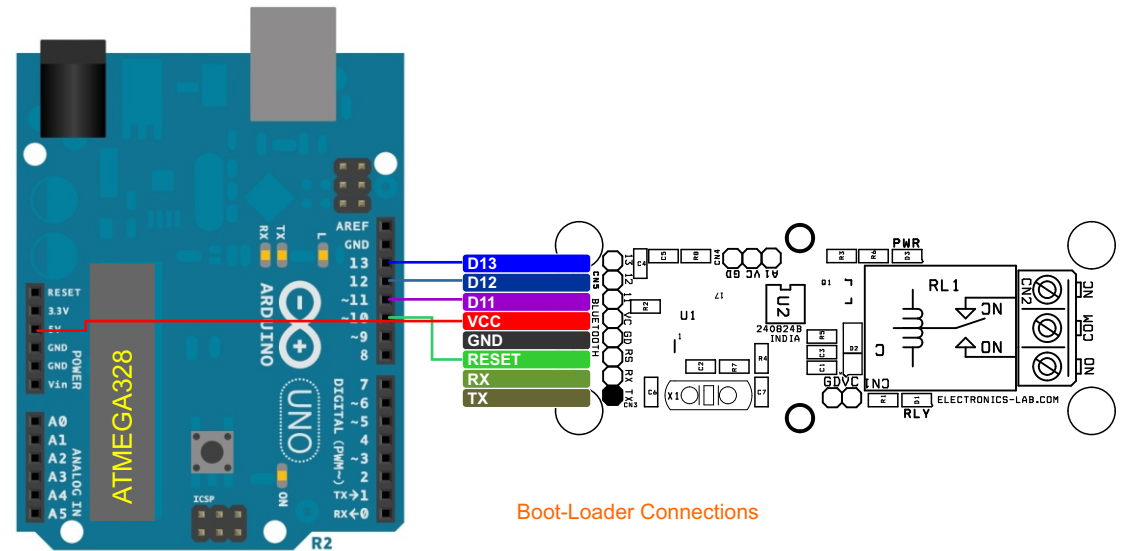
To test the board, download the Arduino code and upload it to the **ATMEGA328** microcontroller. Before uploading the code, ensure that the **Bootloader** is loaded on the new **ATMEGA328**.

Refer to the connections diagram for Arduino programming and bootloader instructions.

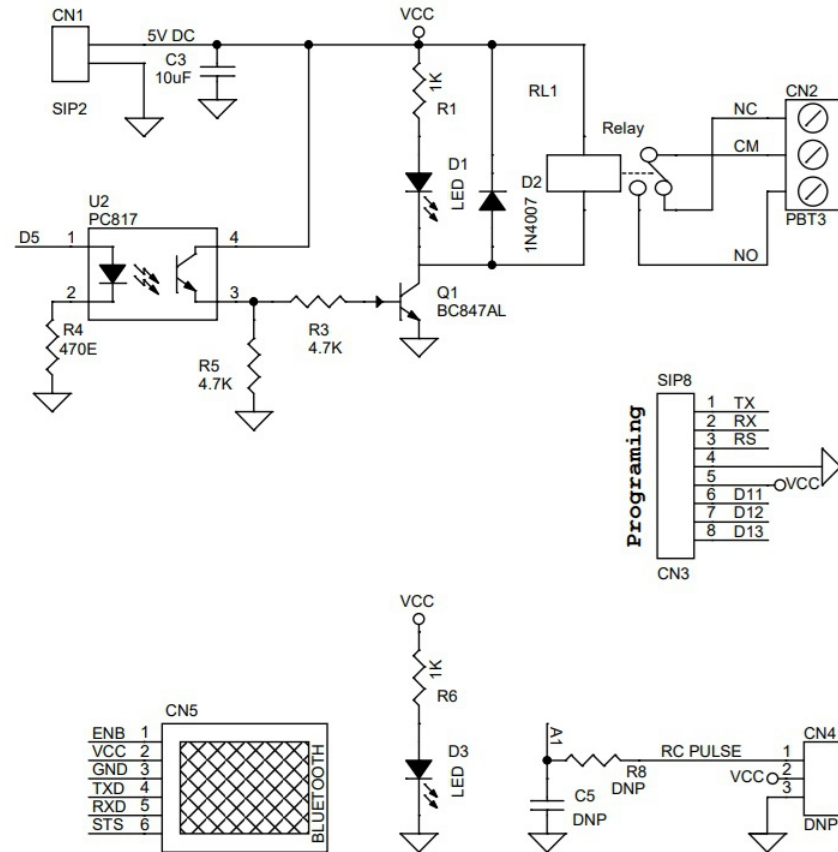
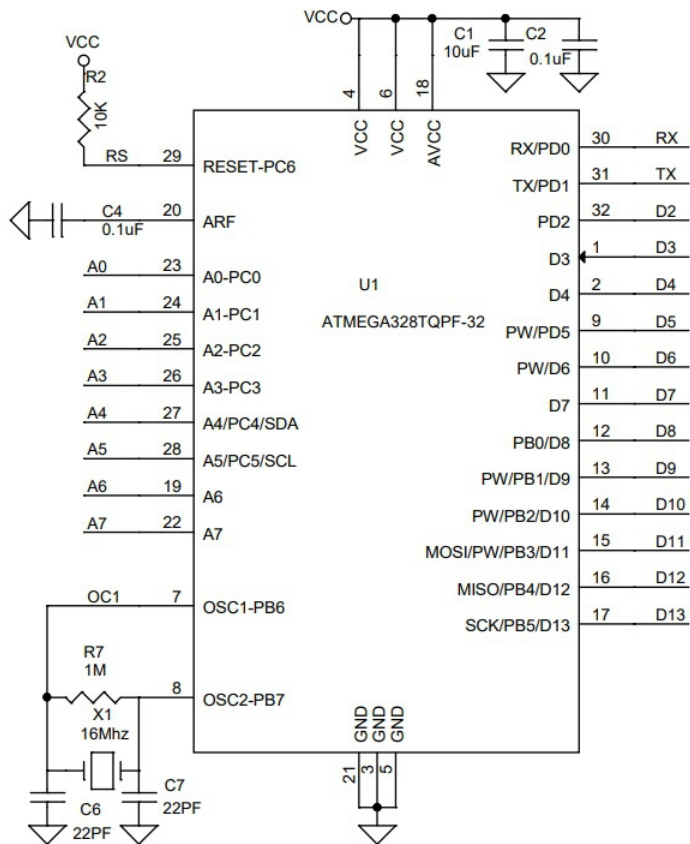
<https://docs.arduino.cc/built-in-examples/arduino-isp/ArduinoToBreadboard/>

Bluetooth Android App Download

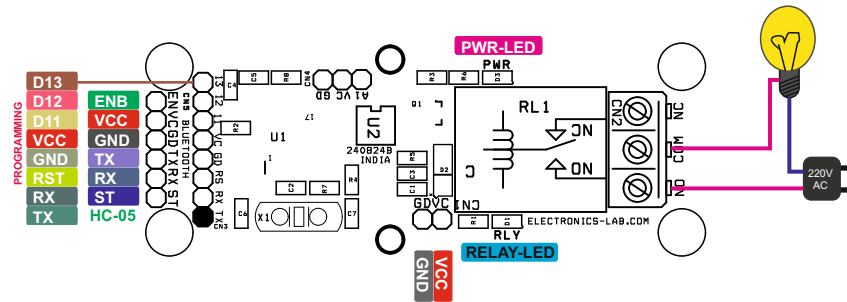
<https://play.google.com/store/apps/details?id=com.giristudio.o.hc05.bluetooth.arduino.control&hl=en>



Schematic



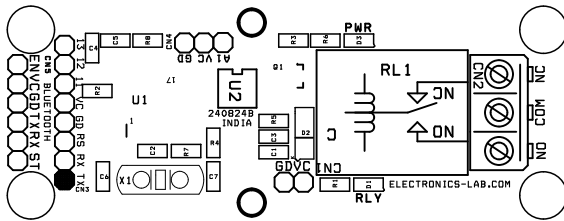
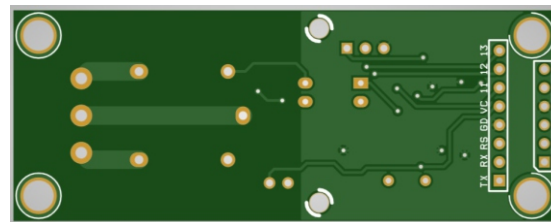
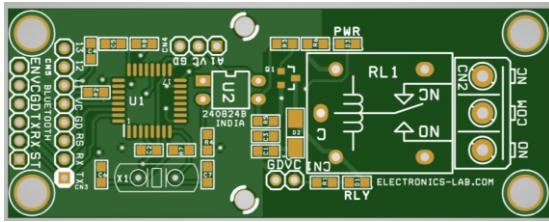
Connections



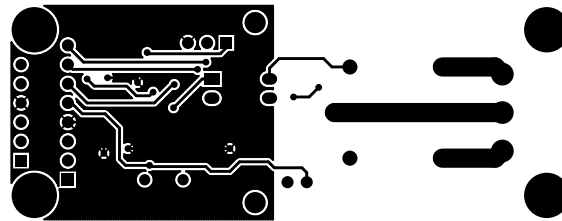
Connections

- CN1: Pin 1 VCC 5V DC, Pin 2 = GND
- CN2: Relay Contacts, Pin 1 = Relay Normally Closed (NC) , Pin 2 = GND, Pin 3 = Normally Open (NO)
- D1: Relay LED
- D3: Power LED
- CN5: Bluetooth HC-05 Module

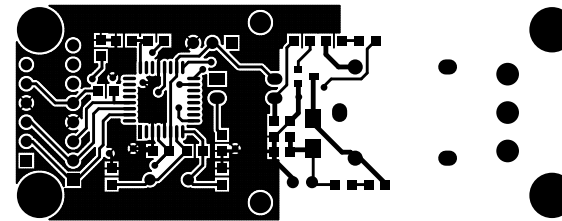
PCB



SILK SCREEN TOP



BOTTOM LAYER



TOP LAYER

PCB DIMENSIONS 74.61X28.89MM

Parts List

BOM						
NO	QNTY.	REF	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
2	1	CN2	3 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1248-ND
3	1	CN3	8 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5321-ND
4	1	CN4	DO NOT INSTALL			
5	1	CN5	BLUETOOTH MODULE HC-05		ALIEXPRESS/AMAZON	
6	2	C1,C3	10uF/16V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
7	2	C2,C4	0.1uF/25V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
8	2	C5,R8	DNP			
9	2	C6,C7	22PF/50V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
10	2	D1,D3	LED RED/GREEN SMD SIZE 0805	OSRAM	DIGIKEY	475-1278-1-ND
11	1	D2	1N4007 SMD	DIODE INC	DIGIKEY	S1MBDITR-ND
12	1	Q1	BC847AL SOT23-3	NEXPERIA	DIGIKEY	1727-2921-1-ND
13	1	RL1	5V RELAY	TE CONNECTIVITY	DIGIKEY	PB2032-ND
14	2	R1,R6	1K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
15	1	R2	10K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
16	2	R3,R5	4.7K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
17	1	R4	470E 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
18	1	R7	1M 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
19	1	U1	ATMEGA328TQPF-32	MICROCHIP	DIGIKEY	ATMEGA328P-AU-ND
20	1	U2	PC817	SHARP	DIGIKEY	PC817X2NSZ9F-ND
21	1	X1	16Mhz	ECS IONC	DIGIKEY	X1103-ND

Notes



APP

Android App

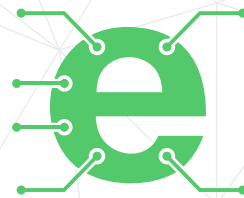
DOWNLOAD



Android App launched in 2017 and has 100k+ downloads - rated with 4.5 stars.

SCAN QR CODE





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