USER'S MANUAL

FOR

Arduino UNO with

Expansion Board

Manufactured By

Logsun *Systems*

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Experiment No. - 01

Aim: To interface LED and Switches with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 2
- USB type B Cable (Printer Cable)
- Interfacing board

Procedure:

1. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
2. Connect SV1 on Arduino expansion board to SV3 on Interfacing Board.
3. Connect SV2 on Arduino expansion board to SV1 on Interfacing Board.
4. Connect the Arduino to PC using USB cable.
5. From given sample codes, open the LED SW program in Arduino IDE and upload the code.
6. Turn the switch ON to turn on the respective LED.

Experiment No. - 02

Aim: To interface Push-button with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 1
- USB type B Cable (Printer Cable)
- Interfacing board

Procedure:

7. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
8. Connect SV1 on Arduino expansion board to SV2 on Interfacing Board.
9. Connect the Arduino to PC using USB cable.
10. From given sample codes, open the Push-button program in Arduino IDE and upload the code.
11. Push the individual button and observe the output in Serial monitor.

Experiment No. - 03

Aim: To interface RGB LED with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 1
- USB type B Cable (Printer Cable)
- Interfacing board

Procedure:

12. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
13. Connect SV1 on Arduino expansion board to SV4 on Interfacing Board.
14. Connect the Arduino to PC using USB cable.
15. From given sample codes, open the RGB LED program in Arduino IDE and upload the code.
16. Observe the RGB LED on interfacing board.

Experiment No. - 04

Aim: To interface DHT-11 sensor with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 1
- USB type B Cable (Printer Cable)
- Interfacing board

Procedure:

17. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
18. Connect SV1 on Arduino expansion board to SV4 on Interfacing Board.
19. Connect the Arduino to PC using USB cable.
20. From given sample codes, open the DHT-11 program in Arduino IDE and upload the code.
21. Observe the output on Serial Monitor.

Experiment No. - 05

Aim: To interface IR sensor with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 1
- USB type B Cable (Printer Cable)
- Interfacing board

Procedure:

22. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
23. Connect SV1 on Arduino expansion board to SV4on Interfacing Board.
24. Connect the Arduino to PC using USB cable.
25. From given sample codes, open the IR sensor program in Arduino IDE and upload the code.
26. Put the hand in front of IR sensor and check the output on Serial monitor.

Experiment No. - 06

Aim: To interface ADC MCP3208 with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 1
- USB type B Cable (Printer Cable)
- Interfacing board

Procedure:

27. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
28. Connect UEXT on Arduino expansion board to SV5 on Interfacing Board.
29. Connect the Arduino to PC using USB cable.
30. From given sample codes, open the ADC program in Arduino IDE and upload the code.
31. Rotate the POT VR3 on interfacing board and observe the output on Serial Monitor.

Experiment No. - 07

Aim: To interface Traffic Light Controller with Arduino Uno.

Requirement:

- Arduino Uno with Expansion Board
- 10 Pin FRC x 2
- USB type B Cable (Printer Cable)
- Traffic Light interfacing board

Procedure:

32. Short the pin 2&3 of jumper JP1 on Arduino expansion board.
33. Connect SV1 on Arduino expansion board to J1 on Traffic Light Board.
34. Connect SV2 on Arduino expansion board to J2 on Traffic Light Board.
35. Connect the Arduino to PC using USB cable.
36. From given sample codes, open the Traffic Light program in Arduino IDE and upload the code.
37. Observe the output on traffic light board.