

FuseGuard Component Test Guide

1. LCD Display Test (I2C)

Connections:

- VCC -> 5V
- GND -> GND
- SDA -> A4
- SCL -> A5

```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>

LiquidCrystal_I2C lcd(0x27, 16, 2); // Change to 0x3F if needed

void setup() {
  lcd.begin();
  lcd.backlight();
  lcd.print("LCD Working!");
}

void loop() {}
```

2. ACS712 Current Sensor Test

Connections:

- VCC -> 5V
- GND -> GND
- OUT -> A0

```
void setup() {
  Serial.begin(9600);
}

void loop() {
  int value = analogRead(A0);
  float voltage = value * (5.0 / 1023.0);
  float current = (voltage - 2.5) / 0.185;
```

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```
Serial.print("Current: ");  
Serial.print(current);  
Serial.println(" A");  
  
delay(1000);  
}
```

3. Relay Module Test

Connections:

- VCC -> 5V
- GND -> GND
- IN -> D8

```
void setup() {  
    pinMode(8, OUTPUT);  
}  
  
void loop() {  
    digitalWrite(8, HIGH);  
    delay(1000);  
    digitalWrite(8, LOW);  
    delay(1000);  
}
```

4. LED & Buzzer Test

Connections:

- Green LED -> D9 (220 Ohm)
- Red LED -> D10 (220 Ohm)
- Buzzer -> D11

```
void setup() {  
    pinMode(9, OUTPUT);  
    pinMode(10, OUTPUT);  
}
```

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```
pinMode(11, OUTPUT);  
}  
  
void loop() {  
    digitalWrite(9, HIGH);  
    digitalWrite(10, LOW);  
    digitalWrite(11, LOW);  
    delay(1000);  
  
    digitalWrite(9, LOW);  
    digitalWrite(10, HIGH);  
    digitalWrite(11, HIGH);  
    delay(1000);  
}
```