ELEGOO EL-KIT-011

ELEGOO Upgraded 37 in 1 Sensor Modules Kit

Model: EL-KIT-011

Brand: ELEGOO

1. Introduction

The ELEGOO Upgraded 37 in 1 Sensor Modules Kit is a versatile and high-performance collection of electronic components designed for enthusiasts and beginners in electronics and programming. This kit is fully compatible with Arduino IDE UNO R3, MEGA, and Nano boards, providing a robust foundation for learning and creating various projects. This manual provides essential information regarding the kit's components, setup, operation, and care.

2. Component List

The kit includes 37 distinct sensor modules and additional components, carefully selected for their utility and performance in a wide range of applications. For detailed project tutorials and code examples, please refer to the included CD.

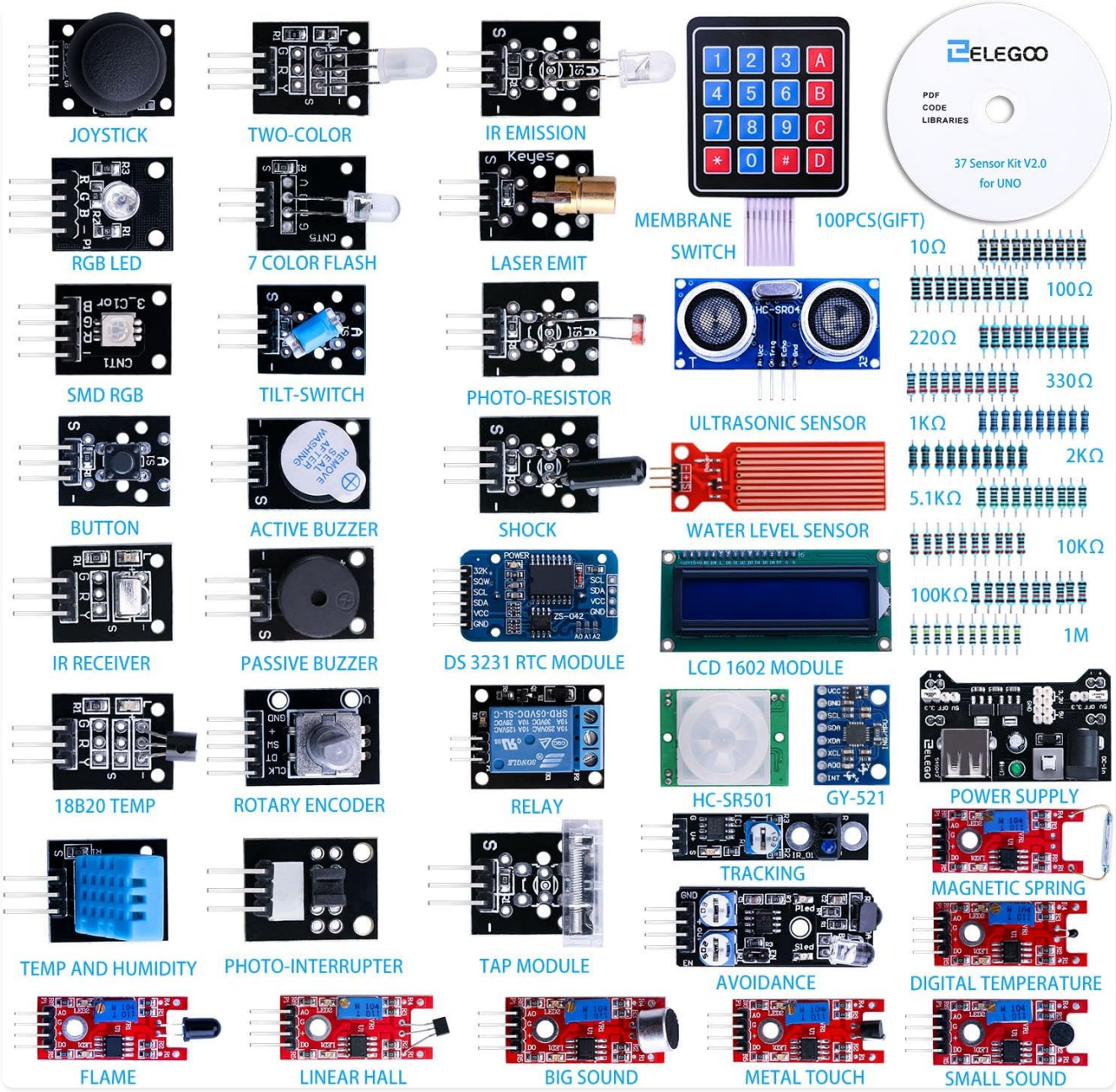


Figure 2.1: Comprehensive overview of all 37 sensor modules and additional components provided in the kit, neatly arranged for easy identification.

Included Modules and Components:

Component	Quantity
Joystick Module	1
Relay Module	1
Rotary Encoder Module	1
DS-1307 RTC Module	1
Ultrasonic Sensor Module	1
HC-SR501 PIR Sensor Module	1
Flame Sensor Module	1

Component	Quantity
Linear Hall Module	1
Metal Touch Module	1
Digital Temperature Module	1
Big Sound Module	1
Small Sound Module	1
RGB LED Module	1
SMD RGB Module	1
Two-tone Color Module	1
7 Color Flash Module	1
Laser Emit Module	1
Shake Module	1
IR Receiver Module	1
IR Emission Module	1
Tilt Switch Module	1
Button Module	1
Active Buzzer Module	1
Passive Buzzer Module	1
18B20 Temp Module	1
Photo-resistor Module	1
Temperature and Humidity Module	1
GY-521 Module	1
Photo-interrupter Module	1
Tap Module	1
Membrane Switch Module	1
Avoidance Module	1
Tracking Module	1
Magnetic Spring Module	1
Water Level Sensor	1
Power Supply Module	1
LCD1602 Module (with pin header)	1



Figure 2.2: The kit's components are neatly organized within a durable, compartmentalized plastic case, ensuring easy access and storage. A tutorial CD is also visible.

3. Setup

To begin using your ELEGOO sensor modules, you will need an Arduino-compatible controller board (such as UNO R3, MEGA, or Nano) and appropriate connecting wires. The kit provides a power supply module, but it is crucial to adhere to the specified input voltage range.

3.1 Power Supply Module Warning

WARNING: The input voltage of the Elegoo Power Supply Module is 6.5V - 9V (DC) via a 5.5mm x 2.1mm plug. Please DO NOT overcharge it, otherwise it will damage your board and chips.

3.2 Initial Connection

Connect the sensor modules to your Arduino board using jumper wires according to the circuit diagrams provided in the tutorial CD. Ensure all connections are secure before applying power.

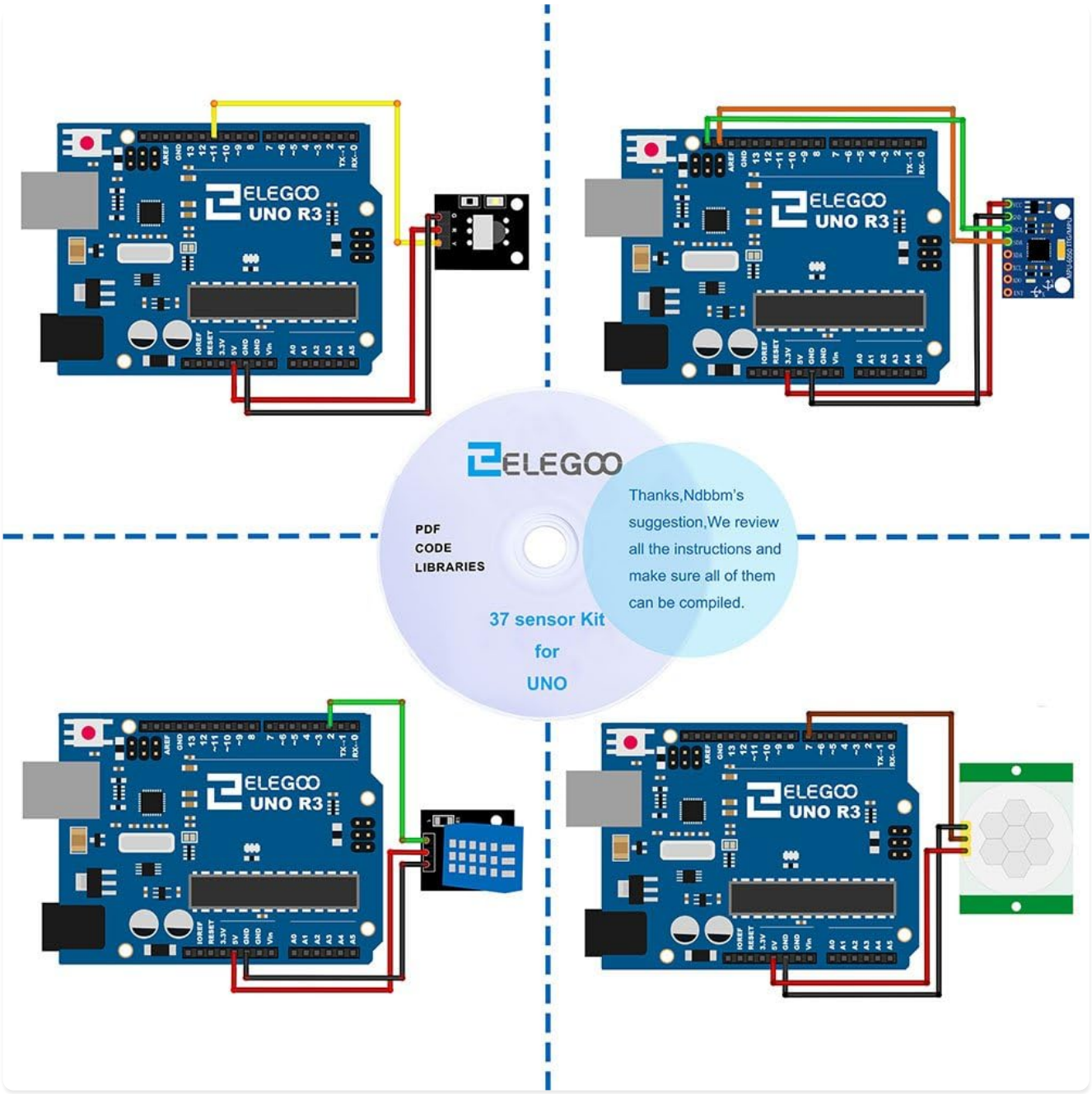


Figure 3.1: Example circuit diagrams demonstrating how different sensor modules can be connected to an Arduino UNO R3 board. These visual guides are essential for correct setup.

4. Operating Principles

Each module in the kit serves a specific function, from detecting motion and sound to measuring temperature and distance. To operate these modules, you will typically:

1. **Connect the module:** Follow the provided circuit diagrams to correctly wire the sensor to your Arduino board.
2. **Upload code:** Use the Arduino IDE to upload the corresponding example code (found on the tutorial CD) to your Arduino board.
3. **Monitor output:** Observe the sensor's output via the Arduino Serial Monitor or through physical indicators (e.g., LED lights, buzzer sounds).

The tutorial CD contains detailed explanations and code for each module, guiding you through various projects and experiments. Basic electronic knowledge is recommended for optimal learning and project success.

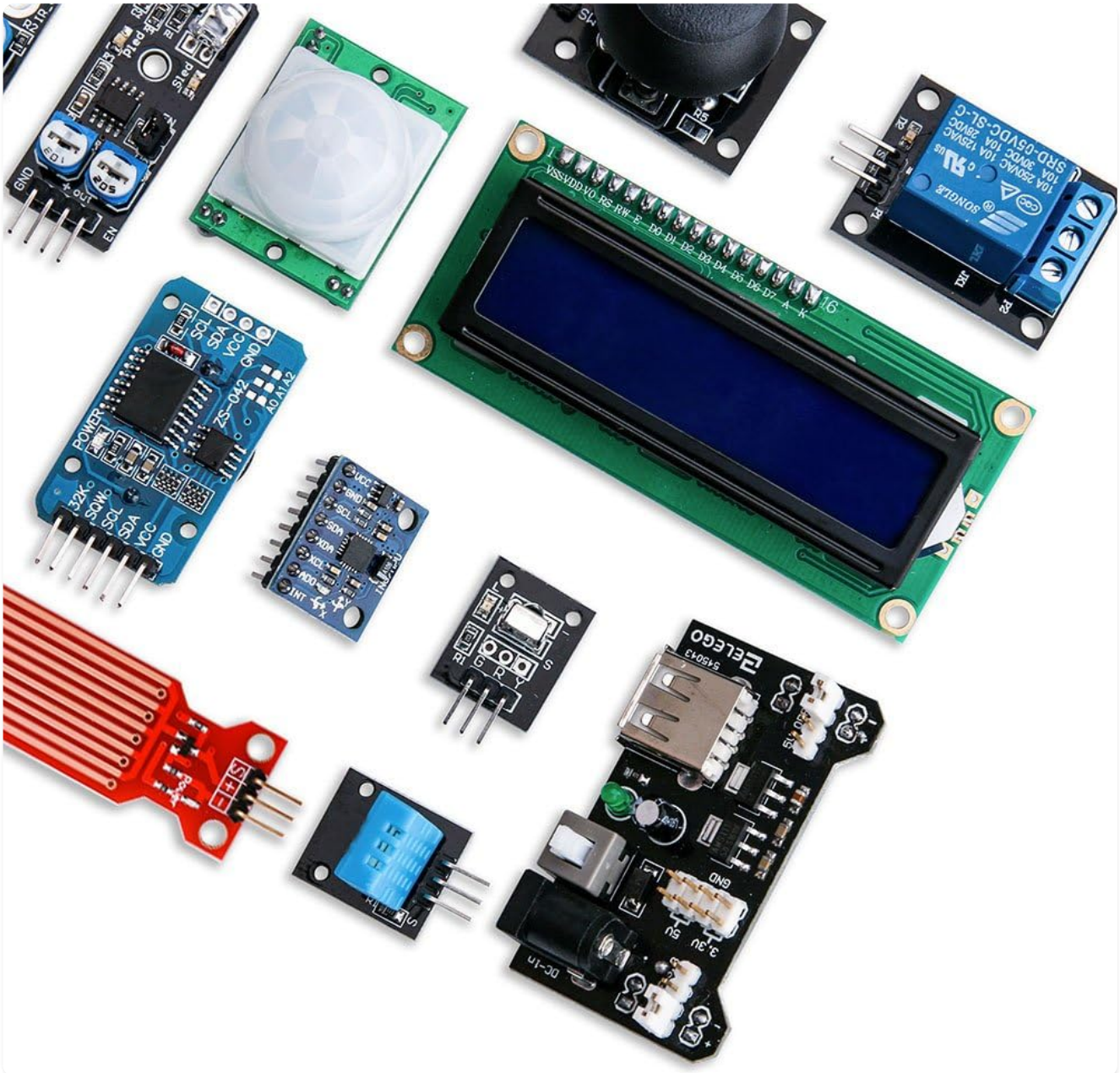


Figure 4.1: A close-up of various sensor modules, such as the water level sensor and power supply module, highlighting their compact design and pin configurations.

5. Maintenance

Proper maintenance ensures the longevity and functionality of your sensor modules:

- **Storage:** Store all components in the provided compartmentalized case to prevent damage and loss. Keep them in a dry, cool environment away from direct sunlight.
- **Handling:** Handle modules by their edges to avoid touching sensitive electronic parts. Static electricity can damage components, so consider using anti-static precautions.
- **Cleaning:** If necessary, gently clean modules with a soft, dry cloth. Avoid using liquids or abrasive materials.
- **Power:** Always disconnect power before making or changing connections to prevent short circuits or damage to components.



Figure 5.1: The kit's organized case, designed for secure storage and easy access to all components, is crucial for proper maintenance and longevity.

6. Troubleshooting

If you encounter issues with your sensor modules, consider the following common troubleshooting steps:

- **Check Connections:** Verify that all wires are correctly connected according to the circuit diagrams. Loose or incorrect connections are a common cause of problems.
- **Power Supply:** Ensure your power supply is within the specified voltage range (6.5V - 9V DC) and is providing stable power.
- **Code Verification:** Double-check your uploaded code against the examples on the tutorial CD. Ensure all necessary libraries are installed in your Arduino IDE.
- **Module Integrity:** Inspect the module for any visible damage or bent pins. If a module appears faulty, contact customer support.
- **Arduino IDE:** Ensure your Arduino IDE is properly configured and that you have selected the correct board and port.

For more specific issues, consult the detailed troubleshooting guides available on the tutorial CD or the ELEGOO website.

7. Specifications

Key technical specifications for the ELEGOO Upgraded 37 in 1 Sensor Modules Kit:

Specification	Value
Brand	ELEGOO
Model Name	EL-KIT-011

Specification	Value
Item Weight	14.1 ounces
Product Dimensions	10.63 x 7.09 x 1.73 inches
Power Supply Module Input Voltage	6.5V - 9V (DC)
Compatibility	Arduino IDE UNO R3, MEGA, Nano, STM32

8. Warranty and Support

ELEGOO is committed to providing high-quality products and excellent customer service. While the kit undergoes multiple quality checks, issues may occasionally arise.
For any questions or concerns regarding your product, please contact ELEGOO's dedicated support team. They are available to provide quick assistance and ensure your satisfaction.

- **US&CA Customer Service:** service@elegoo.com
- **European and Asian Customers:** euservice@elegoo.com

For the most up-to-date information and additional resources, please visit the official ELEGOO website.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question