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DONGKER GY21488-1-KTH

DONGKER Owl LED Soldering Kit Instruction Manual

MODEL: GY21488-1-KTH

1. Introduction

This manual provides detailed instructions for assembling and operating your DONGKER Owl LED Soldering Kit. This kit is designed for beginners and enthusiasts to learn and practice soldering skills while creating a functional and decorative LED owl light with touch control.

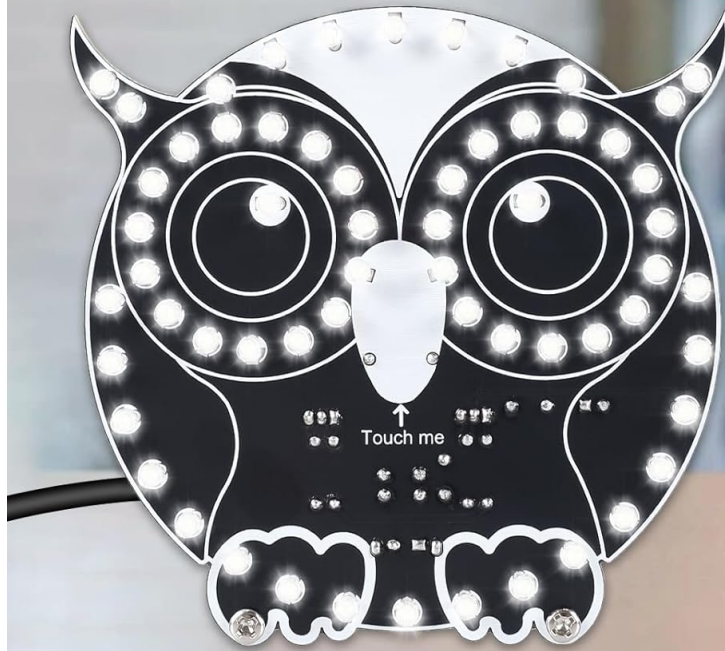
2. Package Contents

Before beginning assembly, please verify that all components listed below are present in your kit.

- Owl-shaped PCB (Printed Circuit Board)
- LEDs (Light Emitting Diodes)
- Resistors
- Capacitors
- Integrated Circuits (ICs)
- USB Power Cable
- Mounting Screws and Standoffs

3 Beleuchtungsmodi

Die Eulenlampe bietet 3 verschiedene Modi zur Auswahl: Augenbeleuchtung, Umrissbeleuchtung und volle Helligkeit. Sie haben die Freiheit, Ihr bevorzugtes Ambiente auszuwählen.



An image showing all the components included in the DONGKER Owl LED Soldering Kit, laid out neatly. This includes the owl-shaped PCB, numerous LEDs, various resistors, capacitors, integrated circuits, a USB cable, and small hardware.



A close-up of the included USB power cable, used to power the assembled owl light.

3. Setup and Assembly

This section guides you through the soldering process. Basic soldering tools (soldering iron, solder, desoldering wick/pump, safety glasses) are required and not included.

3.1 Component Identification

Familiarize yourself with the different electronic components. The PCB is clearly marked to indicate where

each component should be placed. Pay close attention to the markings for correct orientation.



A close-up view of the DONGKER Owl LED Soldering Kit's PCB, showing various electronic components such as resistors, capacitors, and integrated circuits ready for soldering. The USB-C power input is also visible.

3.2 Soldering Process

1. **Prepare Your Workspace:** Ensure a well-ventilated area, clear of flammable materials. Wear safety glasses to protect your eyes.
2. **Identify Components:** Match each component to its designated spot on the PCB using the silkscreen markings. Pay attention to polarity for LEDs, diodes, and electrolytic capacitors. The longer leg of an LED is typically positive (+).
3. **Solder Smallest Components First:** Begin with resistors, then diodes, smaller capacitors, and finally the integrated circuits. This approach makes soldering easier by preventing larger components from obstructing access.
4. **Solder LEDs:** Carefully solder each LED into its position. Ensure correct polarity.
5. **Solder USB Port:** Attach the USB power port to the PCB.
6. **Inspect Solder Joints:** After soldering each component, visually inspect the joints for proper connection. Look for shiny, cone-shaped joints. Avoid cold joints (dull, lumpy) or solder bridges (solder connecting two adjacent pads).

Größeninformationen



A hand holding a soldering iron, applying solder to a component on the DONGKER Owl LED Soldering Kit's PCB. This illustrates the active soldering process.



An image showing an adult and child engaged in soldering the DONGKER Owl LED kit, demonstrating the kit's suitability for learning and shared projects.

3.3 Final Assembly

Once all components are soldered and inspected, attach the included standoffs and screws to secure the PCB and provide stability for the finished owl light.

4. Operating Instructions

The DONGKER Owl LED light features touch control for mode selection and brightness adjustment.

4.1 Powering On

Connect the provided USB power cable to the USB port on the owl light and to a 5V DC power source (e.g., USB wall adapter, computer USB port).



A close-up view of the USB-C power input port on the DONGKER Owl LED Soldering Kit's PCB, ready for connection.

4.2 Changing LED Modes

The owl light offers three distinct LED modes. To cycle through these modes, lightly tap the **"Touch me"** area located on the owl's beak.

1. **First Tap:** Activates the eye lights only.
2. **Second Tap:** Activates the outline lights.

3. **Third Tap:** Activates all lights for full brightness.
4. **Fourth Tap:** Turns off all lights.



A series of four images demonstrating the different LED lighting modes of the DONGKER Owl LED light. The first shows only the eyes lit, the second shows the outline lit, the third shows all LEDs lit, and the fourth shows all LEDs off, with a hand icon indicating the touch area.

"Touch Me" um den Modus zu wechseln

Klicke auf den Schnabel, um den Beleuchtungsmodus zu wechseln

Erster Tipp

Schalte die Lichter an den Augen der Eule ein



Zweiter Tipp

Schalte die Lichter am Umriss der Eule ein



Dritter Tipp

Schalte alle Lichter ein

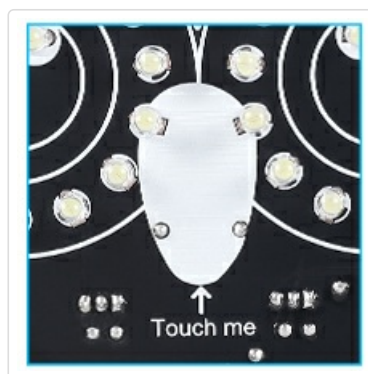


Vierter Tipp

Schalte alle Lichter aus



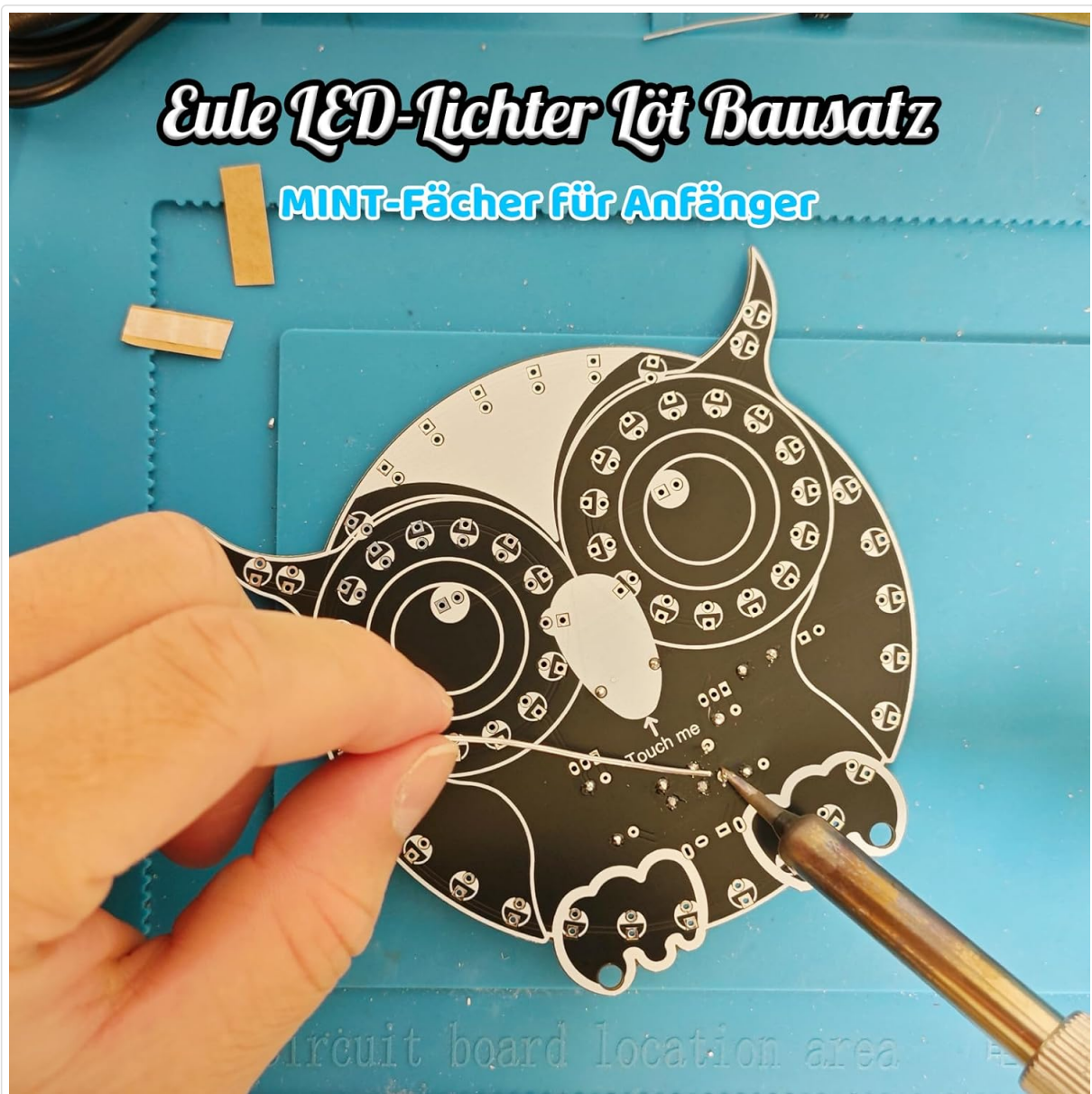
Three images showcasing the DONGKER Owl LED light in different illumination modes: eye lighting, outline lighting, and full brightness, highlighting the versatility of the LED display.



A close-up view of the designated "Touch me" area on the owl's beak, which functions as the control interface.

4.3 Adjusting Brightness

To adjust the brightness, press and hold your finger on the "Touch me" area. The brightness will gradually increase or decrease. Release your finger when the desired brightness level is reached.



An image showing a finger pressing the "Touch me" area on the DONGKER Owl LED light, with an animated graphic indicating the brightness level changing. Below are three smaller images showing the owl at different brightness levels.

5. Maintenance

To ensure the longevity and proper functioning of your DONGKER Owl LED light, follow these simple maintenance guidelines:

- **Cleaning:** Gently wipe the PCB and LEDs with a soft, dry cloth. Avoid using liquids or abrasive cleaners, which can damage electronic components.
- **Storage:** Store the assembled kit in a dry, dust-free environment when not in use to prevent component degradation.
- **Handling:** Handle the circuit board with care to avoid bending or damaging components and solder joints.

6. Troubleshooting

If you encounter issues with your DONGKER Owl LED light, refer to the following common problems and solutions:

- **LEDs Not Lighting Up:**

- Check power connection: Ensure the USB cable is securely connected to a working 5V power source.
 - Inspect solder joints: Look for any cold joints (dull, lumpy) or solder bridges that might prevent electrical contact. Re-solder as necessary.
 - Verify LED polarity: Ensure all LEDs are soldered with the correct polarity. Incorrect polarity will prevent LEDs from lighting.
 - Check for short circuits: Examine the PCB for any accidental solder bridges between traces or component leads.
- **Inconsistent Touch Response:**
 - Ensure the "Touch me" area is clean and dry. Moisture or dirt can interfere with touch detection.
 - Verify the touch sensor components are correctly soldered and not damaged.
 - **Only Some LEDs Light Up:**
 - This often indicates a faulty solder joint or incorrect polarity for the unlit LEDs. Re-inspect and correct the affected LEDs.

If problems persist after attempting these solutions, please contact DONGKER customer support for further assistance.

7. Specifications

Feature	Detail
Model Number	GY21488-1-KTH
Manufacturer	DONGKER
Power Type	DC 5V (via USB)
Package Dimensions	14.1 x 11.4 x 1.6 cm
Weight	60 grams
Included Components	PCB, LEDs, Resistors, Capacitors, ICs, USB Cable
Batteries Required	No
Spare Parts Availability	1 Year



An image displaying the DONGKER Owl LED light with measurements, indicating a width of 9.2 cm and a height of 9.5 cm.

8. Warranty and Support

DONGKER is committed to providing quality products. While this is a DIY kit, we offer support for any questions you may have during assembly or operation.

- **Support:** If you have questions or require assistance, please contact DONGKER customer service through the retailer where you purchased the product.

- **Spare Parts:** Spare parts are available for 1 year from the date of purchase.