

MiOYOOW GY21487-1

MiOYOOW Christmas Tree Soldering Kit (Model GY21487-1) Instruction Manual

DIY LED Flashing Christmas Tree Soldering Practice Kit with Music

[Introduction](#)[Instructions](#)[Safety Information](#)[Maintenance](#)[Package Contents](#)[Troubleshooting](#)[Assembly Instructions](#)[Specifications](#)[Operating](#)[Support](#)

1. INTRODUCTION

The MiOYOOW Christmas Tree Soldering Kit (Model GY21487-1) provides an engaging DIY project to create a festive electronic decoration. This kit includes components to assemble a mini Christmas forest scene featuring two Christmas trees, a Santa Claus figure, and a reindeer figure. Once assembled, the kit illuminates with flashing LEDs and plays classic Christmas music, making it an ideal decorative item for desks, shelves, or holiday displays.

This kit is designed to be an educational STEM project, suitable for students, DIY enthusiasts, and makers interested in learning basic circuit principles and improving soldering skills. A full-color printed manual with step-by-step guidance and diagrams is included to facilitate the assembly process. Please note that a basic understanding of electronics and soldering techniques is recommended for optimal results.

2. SAFETY INFORMATION

Please read and understand all safety instructions before beginning assembly. Improper use of soldering equipment can result in injury or damage to components.

- **Ventilation:** Always work in a well-ventilated area to avoid inhaling solder fumes.
- **Eye Protection:** Wear safety glasses to protect your eyes from solder splashes or flying debris.
- **Hot Surfaces:** Soldering irons reach high temperatures. Avoid touching the tip directly. Use a soldering iron stand when not in use.
- **Electrical Safety:** Ensure your soldering iron and power supply are in good condition and properly grounded. Do not work with wet hands.

- **Component Handling:** Some electronic components can be sensitive to static electricity. Handle them carefully.
- **Children:** This kit contains small parts and requires soldering. It is not suitable for young children without adult supervision.

3. PACKAGE CONTENTS

Before starting assembly, verify that all components listed below are present in your kit. Refer to the image for visual identification.



Figure 3.1: All components included in the MiOYOOO Christmas Tree Soldering Kit, neatly arranged for identification. This includes the main PCB, two Christmas tree-shaped PCBs, Santa Claus and reindeer figures, various LEDs, resistors, integrated circuits (ICs), switches, a speaker, and a USB power cable.

- Main Printed Circuit Board (PCB)
- Christmas Tree Shaped PCBs (2 pieces)

- Santa Claus Figure
- Reindeer Figure
- White LEDs (36 pieces)
- Colorful Flashing LEDs (15 pieces)
- Resistors (various values)
- Integrated Circuits (ICs)
- Toggle Switch (for music)
- Power Switch
- Speaker
- USB Power Cable
- Mounting Hardware (screws, standoffs)
- Full-color Printed Installation Manual

4. ASSEMBLY INSTRUCTIONS

Follow these steps carefully to assemble your MiOYOOW Christmas Tree Soldering Kit. Refer to the included printed manual for detailed diagrams and component placement.

4.1. Preparation

1. Gather your tools: soldering iron, solder wire, desoldering braid (optional), wire cutters, needle-nose pliers, and safety glasses.
2. Ensure your workspace is clean, well-lit, and well-ventilated.
3. Identify all components using the package contents list and the provided manual.



Miniature Christmas Tree House Soldering Kit



Figure 4.1: A person wearing gloves is shown carefully soldering components onto a circuit board, demonstrating the soldering process required for this kit.

4.2. Soldering Components to the Main PCB

Begin by soldering the smaller components to the main PCB first, then proceed to larger ones. Pay close attention to component polarity where indicated (e.g., LEDs, ICs).

1. **Resistors:** Solder all resistors into their designated positions on the main PCB. Resistors typically do not have polarity.
2. **Integrated Circuits (ICs):** Carefully align the notch or dot on the IC with the corresponding marking on the PCB. Solder each pin securely. Note: Some kits may include surface-mount ICs which require precise soldering.
3. **White LEDs:** Solder the 36 white LEDs onto the main PCB. Ensure correct polarity; the longer lead (anode) usually goes into the hole marked with a '+' or a square pad, and the shorter lead (cathode) into the round pad.
4. **Switches:** Solder the music toggle switch and the main power switch into their respective positions.
5. **Speaker:** Connect and solder the speaker wires to the designated pads on the PCB.
6. **USB Power Interface:** Solder the USB power connector to the PCB.

4.3. Assembling the Christmas Trees and Figures

1. **Colorful LEDs:** Solder the 15 colorful LEDs onto the two Christmas tree-shaped PCBs. Observe polarity for each LED.
2. **Tree Assembly:** Attach the two Christmas tree PCBs to the main PCB using the provided slots or connectors.
3. **Figures:** Place the Santa Claus and reindeer figures into their designated slots on the main PCB. These are typically non-electronic decorative elements.



Figure 4.2: An illustrative diagram showing the progression from individual components to the fully assembled miniature Christmas tree house soldering kit, highlighting the main PCB, tree cutouts, and figures.

4.4. Final Checks

1. Visually inspect all solder joints for cold joints, bridges, or poor connections.
2. Ensure all polarized components are installed in the correct orientation.
3. Remove any excess solder or wire clippings from the PCB.

Video 4.1: This video demonstrates the assembly process and showcases the LED flashing and music features of the MiOYOOW Christmas Tree Soldering Kit. It provides a visual guide to help with construction and understanding the final product's functionality.

5. OPERATING INSTRUCTIONS

Once assembled, your MiOYOOW Christmas Tree Soldering Kit is ready for operation.

5.1. Powering On

1. Connect the provided USB power cable to the USB power interface on the main PCB.
2. Plug the other end of the USB cable into a standard USB power adapter (not included) or a USB port on a computer.
3. Flip the main power switch to the "ON" position. The white LEDs on the base and the colorful LEDs on the trees should begin to flash.



Figure 5.1: A detailed view of the music switch and the USB power interface on the assembled Christmas tree kit, showing where to connect power and control music playback.

5.2. Music Control

1. Locate the music toggle switch on the main PCB.
2. Flip the switch to turn the built-in Christmas music ON or OFF according to your preference.



Figure 5.2: The assembled MiOYOOW Christmas Tree Soldering Kit displaying its flashing LED lights and indicating the presence of built-in Christmas music, creating a festive atmosphere.

5.3. Lighting Effects

The kit features two types of lighting effects:

- **Base LEDs:** 36 white LEDs on the base create a flowing, "jumping fence" pattern.
- **Tree LEDs:** 15 colorful LEDs on the Christmas trees flicker in seven random colors.



Figure 5.3: A collage showing various colorful lighting effects produced by the MiOYOOOW Christmas Tree Soldering Kit, demonstrating the dynamic and festive illumination.

6. MAINTENANCE

The MiOYOOOW Christmas Tree Soldering Kit requires minimal maintenance to ensure its longevity.

- **Cleaning:** Use a soft, dry cloth to gently wipe dust from the assembled kit. Avoid using liquid cleaners or abrasive materials.
- **Storage:** When not in use, store the kit in a dry, cool place away from direct sunlight and extreme temperatures.
- **Handling:** Handle the assembled kit with care to avoid damaging the soldered connections or delicate components.

7. TROUBLESHOOTING

If you encounter issues with your MiOYOOOW Christmas Tree Soldering Kit, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No lights or music when powered on.	- Power cable not connected properly. - Main power switch is OFF. - Faulty USB power adapter. - Poor solder joint on power input or main IC. - Incorrectly installed polarized components (e.g., ICs, LEDs).	- Ensure USB cable is fully inserted and power adapter is working. - Flip the main power switch to ON. - Try a different USB power adapter or port. - Inspect solder joints, especially around the power input and main control IC. Reflow any suspicious joints. - Verify polarity of all LEDs and ICs.
Lights work, but no sound.	- Music toggle switch is OFF. - Speaker wires not properly soldered. - Faulty speaker. - Issue with the sound-generating IC or associated components.	- Flip the music toggle switch to ON. - Check solder connections for the speaker. - Inspect the sound IC and surrounding components for proper soldering.
Some LEDs do not light up.	- Incorrect LED polarity. - Poor solder joint for the specific LED. - Faulty LED.	- Verify the polarity of the non-working LED. Desolder and re-solder if incorrect. - Reflow the solder joints for the affected LED. - If polarity and soldering are correct, the LED might be faulty. Replace it if a spare is available.
Sound interference with chase lights.	Insufficient power filtering.	Consider adding a 100 uF/10V electrolytic capacitor across the power connector if you have advanced soldering skills and components. (<i>Note: This is an advanced solution based on user feedback and may not be necessary for all kits.</i>)

8. SPECIFICATIONS

Feature	Detail
Brand	MiOYOOW

Feature	Detail
Model Number	GY21487-1
Display Type	LED
Included Components	Resistors, PCB, LEDs, ICs, switches, speaker, USB cable, figures
Power Source	USB (5V DC, adapter not included)
Lighting Effects	36 white base LEDs (flowing pattern), 15 colorful tree LEDs (7 random colors)
Audio	Built-in classic Christmas music with ON/OFF switch
Skill Level	Beginner to Intermediate (requires basic electronic theoretical knowledge and soldering ability)

9. WARRANTY AND SUPPORT

MiOYOOW is committed to providing quality products. While specific warranty details are not provided with this manual, please retain your proof of purchase for any potential warranty claims.

For technical assistance, missing parts, or further inquiries, please contact MiOYOOW customer support through the retailer where the product was purchased. You may also visit the official MiOYOOW store page for additional resources and contact information.

Online Resources:

- MiOYOOW Store: <https://www.amazon.com/stores/Mioyoow/page/DFCC3468-9ADF-42B1-817B-DE2E7F4DC522>

© 2026 MiOYOOW. All rights reserved. This manual is for informational purposes only.

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

Anonymous

Email

you@example.com

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