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› **CYOEST** /

› DIY Bluetooth Speaker Box Kit Electronic Sound Amplifier - Build Your Own Portable Wood Case Bluetooth Speaker Sound - Science Experiment and STEM Learning for Kids, Teens and Adults

CYOEST CYOEST100

DIY Bluetooth Speaker Box Kit Instruction Manual

Brand: CYOEST

Model: CYOEST100

1. PRODUCT OVERVIEW

The CYOEST DIY Bluetooth Speaker Box Kit is an electronic sound amplifier designed for hands-on assembly. This kit provides an engaging science experiment and STEM learning opportunity for kids, teens, and adults. Once assembled, it functions as a portable Bluetooth speaker, allowing connection to mobile phones or computers for audio playback. The kit emphasizes practical skills and understanding of basic electronics without requiring soldering.

2. WHAT'S IN THE BOX

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

- Laser-cut wooden components for the speaker enclosure.
- Two (2) Subwoofer 2-inch, 4-ohm, 3-watt Full Range Speakers.
- One (1) Dual Channel Bluetooth Amplifier Board.
- Clear and simple instructions (this manual).
- Necessary wires and connectors.
- Screws and small hardware for assembly.
- *Note: Four (4) AA batteries are required for operation and are not included in the kit.*



Figure 2.1: All components included in the DIY Bluetooth Speaker Kit.

3. SETUP AND ASSEMBLY INSTRUCTIONS

Follow these steps carefully to assemble your DIY Bluetooth Speaker. No soldering is required for this kit.

1. **Prepare the Wooden Enclosure:** Identify the various laser-cut wooden panels. These are designed to interlock. Begin by assembling the main speaker box structure. Ensure all pieces fit snugly.
2. **Install Speakers:** Secure the two 2-inch full-range speakers into the designated openings on the front panel of the wooden enclosure using the provided screws.
3. **Connect Speaker Wires:** Connect the wires from each speaker to the appropriate terminals on the Dual Channel Bluetooth Amplifier Board. Pay close attention to polarity (red wire to positive, black wire to negative).
4. **Install Battery Holder:** Attach the battery holder to the designated spot within the wooden enclosure. Insert four (4) AA batteries (not included) into the holder.
5. **Connect Power to Amplifier Board:** Connect the power wires from the battery holder to the power input terminals on the Bluetooth Amplifier Board. Ensure correct polarity to prevent damage.
6. **Install Power Switch:** Integrate the power switch into its designated slot on the top panel of the wooden enclosure. Connect the switch to the amplifier board as per the wiring diagram.

7. **Secure Amplifier Board:** Place the Bluetooth Amplifier Board securely within the enclosure, ensuring it does not short-circuit with other components or wires.
8. **Close the Enclosure:** Carefully close the wooden enclosure by fitting the remaining panels and securing them with screws.

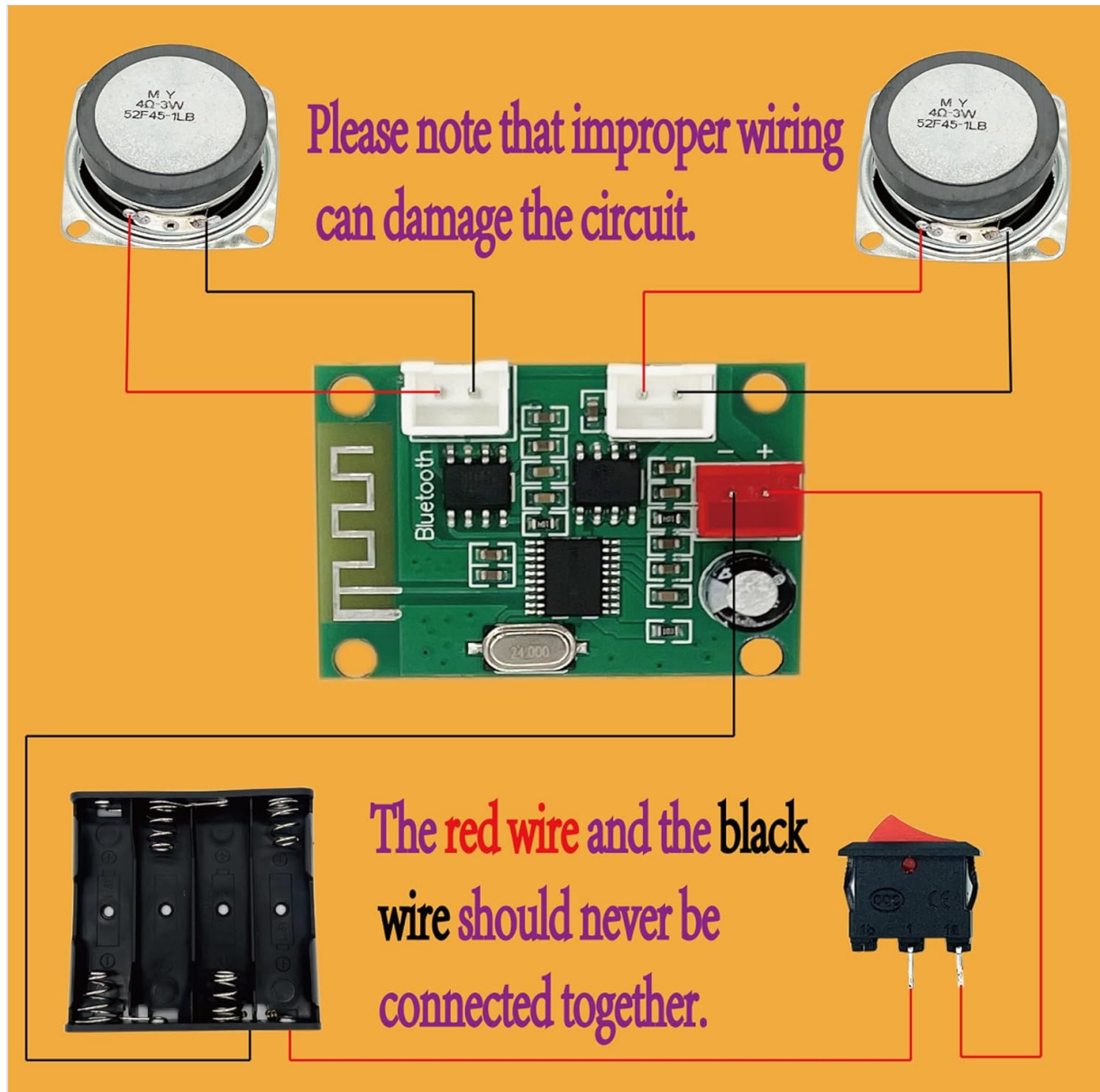


Figure 3.1: Important wiring considerations. Improper wiring can damage the circuit.



Figure 3.2: Visual guide for assembly, including tool usage and battery installation.

For a visual demonstration of the assembly process, please refer to the official product video below:

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Video 3.1: Official "DIY Bluetooth Speaker Kit - STEM Kit" assembly guide by Z-horse (Seller).

4. OPERATING INSTRUCTIONS

Once assembled and powered, your DIY Bluetooth Speaker is ready for use.

1. **Power On:** Flip the power switch on the top of the speaker to the "ON" position. A small indicator light on the amplifier board may illuminate, indicating it is powered on and ready for pairing.
2. **Bluetooth Pairing:**
 - On your mobile phone or computer, navigate to the Bluetooth settings.
 - Ensure Bluetooth is enabled on your device.
 - Search for available Bluetooth devices. The speaker should appear as "Z-horse bluetooth speaker" or a similar identifier.
 - Select the speaker from the list to pair. Once connected, you will hear an audible confirmation from the speaker.

3. **Audio Playback:** Once paired, you can play audio from your connected device, and the sound will be amplified through the DIY speaker. Adjust volume directly from your connected device.

Wireless connections

After turning on the speaker,
the device can be connected and the operation
is simple and easy to understand.



Figure 4.1: Connecting your device via Bluetooth for wireless audio playback.

GOOD SOUND QUALITY

Equipped with two 52mm high-definition speakers to accurately restore each note, the sound is thick and no noise



Figure 4.2: The speaker provides clear and rich sound quality.

5. MAINTENANCE

To ensure the longevity and optimal performance of your DIY Bluetooth Speaker, follow these simple maintenance guidelines:

- **Cleaning:** Wipe the wooden surfaces with a dry, soft cloth. Avoid using liquid cleaners or abrasive materials, as they may damage the wood or electronic components.
- **Battery Replacement:** When the sound quality degrades or the speaker fails to power on, replace the four (4) AA batteries. Ensure correct polarity when inserting new batteries.
- **Storage:** Store the speaker in a cool, dry place away from direct sunlight and extreme temperatures.
- **Water Resistance:** This product is **NOT** water resistant. Keep it away from water, moisture, and high humidity to prevent damage to electronic components.

6. TROUBLESHOOTING

If you encounter any issues with your DIY Bluetooth Speaker, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Speaker does not power on.	Batteries are dead or incorrectly inserted.	Replace batteries with new ones, ensuring correct polarity (+/-).
Cannot pair via Bluetooth.	Speaker is not in pairing mode or already connected to another device.	Ensure the speaker is powered on. Turn off Bluetooth on other nearby devices. Restart the speaker and try pairing again.
No sound or low sound output.	Volume on connected device is too low; speaker wires are loose or incorrectly connected.	Increase volume on your phone/computer. Check all speaker wire connections to the amplifier board for tightness and correct polarity. Refer to Figure 3.1.
Distorted sound.	Volume too high; loose connections; damaged speaker.	Reduce volume. Check all internal wiring. If distortion persists, a speaker may be damaged.

7. SPECIFICATIONS

Feature	Detail
Model Name	DIY Speaker Kit
Brand	CYOEST
Material	Wood
Product Dimensions	2.9"D x 4.9"W x 2.7"H
Item Weight	11.04 ounces
Speaker Type	Full Range Speaker
Speaker Size	2 Inches (Subwoofer Diameter)
Speaker Max Output Power	3 Watts
Impedance	4 Ohm
Audio Output Mode	Stereo (2.0 Surround Sound Channel Configuration)
Connectivity Technology	Wireless (Bluetooth)
Compatible Devices	Phones, Personal Computer
Power Source	Battery Powered (4x AA, not included)
Control Method	App (via connected device)
Water Resistance	Not Water Resistant
Recommended Uses	Music, Education, STEM Learning
Age Range	Kid (suitable for 8+ years old)
Manufacturer	Z-Horse
UPC	708214218647

8. WARRANTY AND SUPPORT

CYOEST is committed to ensuring your satisfaction with our products. If you encounter any problems or have questions regarding your DIY Bluetooth Speaker Kit, please do not hesitate to contact us. We aim to reply and resolve your issue within 24 hours.

For further assistance, please refer to the contact information provided on the product packaging or the official CYOEST website.