Whadda WSMI7000

Whadda WSMI7000 Signal Transmitter and Tracker User Manual

Model: WSMI7000

Introduction

Welcome to the user manual for the Whadda WSMI7000 Signal Transmitter and Tracker kit. This DIY kit is designed to assist in the troubleshooting and repair of audio circuits by providing both signal injection and signal tracing capabilities. It is an essential tool for hobbyists and professionals working with amplifiers, radios, tone controls, and other audio equipment.

Safety Precautions

Please read and understand all safety instructions before beginning assembly or operation. Failure to do so may result in injury or damage to the device.

- Always work in a well-ventilated area when soldering.
- Use appropriate personal protective equipment, including safety glasses.
- Ensure your soldering iron is properly grounded and used on a heat-resistant surface.
- Avoid touching hot components or solder.
- Do not apply power to the circuit until all components are correctly soldered and inspected.
- This kit operates with electrical currents. Exercise caution to prevent electric shock.
- Keep out of reach of children. This product is intended for adult use.

Package Contents

Verify that all components listed below are present in your kit before starting assembly. Refer to the image below for a visual representation of the kit's contents.

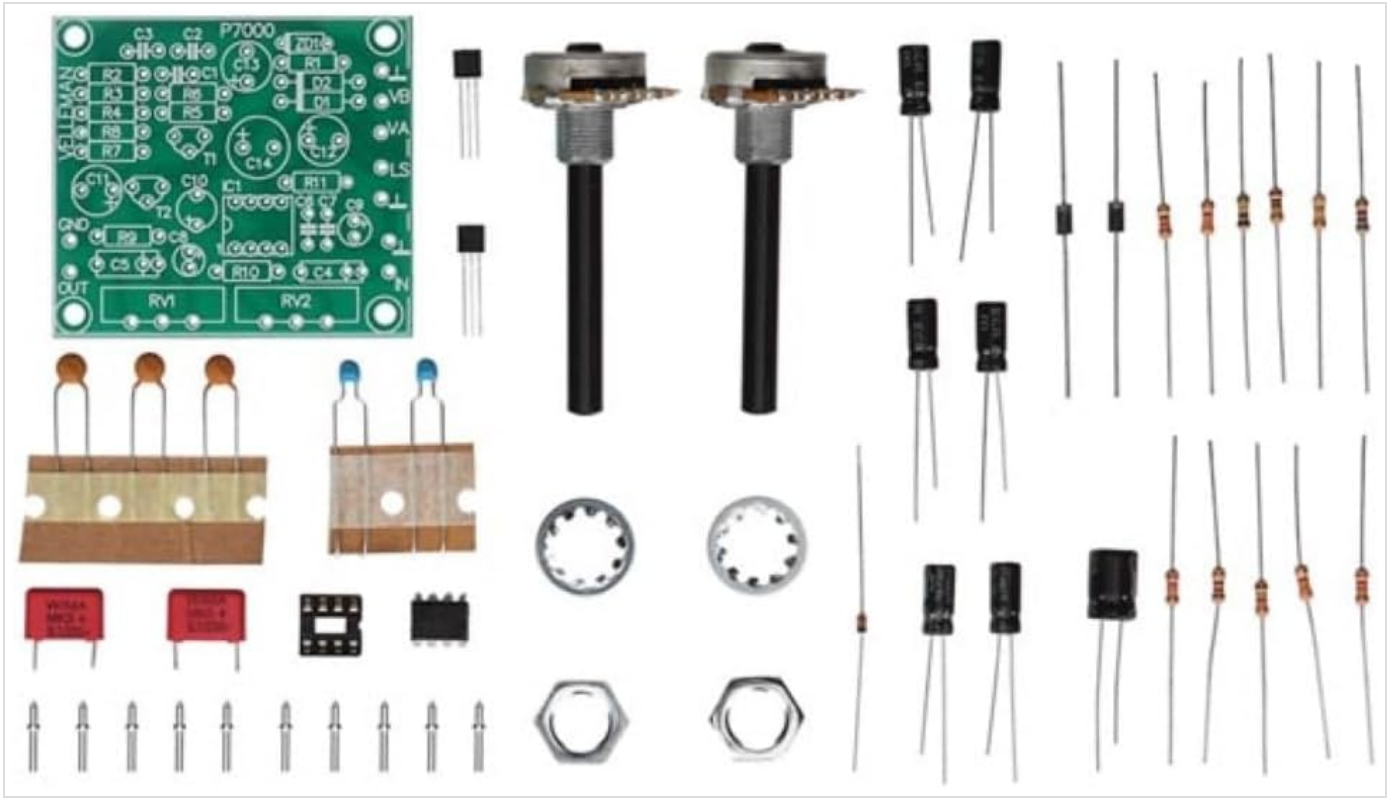


Image: All individual components of the Whadda WSMI7000 kit, including the printed circuit board, resistors, capacitors, integrated circuits, potentiometers, and various connectors, laid out on a flat surface.

- Printed Circuit Board (PCB)
- Resistors (various values)
- Capacitors (electrolytic and ceramic)
- Integrated Circuits (ICs)
- Potentiometers (for volume/gain control)
- Diodes and Transistors
- Input/Output Jacks and Connectors
- Mounting Hardware (nuts, washers for potentiometers)

Assembly Instructions

Assembly of the WSMI7000 kit requires basic soldering skills. Follow these steps carefully to ensure proper functionality.

1. **Component Identification:** Identify all components by their markings and values. Refer to the PCB silkscreen for component placement.
2. **Solder Low-Profile Components First:** Begin by soldering resistors, diodes, and small ceramic capacitors. Ensure components are flush with the PCB before soldering.
3. **Solder IC Sockets (if applicable) or ICs:** If your kit includes IC sockets, solder them first. Otherwise, carefully solder the integrated circuits, paying attention to pin 1 orientation (notch or dot).
4. **Solder Electrolytic Capacitors and Transistors:** Observe polarity for electrolytic capacitors (long lead is positive, stripe indicates negative) and transistors.
5. **Solder Potentiometers and Connectors:** Solder the potentiometers and any input/output jacks or power connectors.
6. **Visual Inspection:** After soldering all components, carefully inspect all solder joints for bridges, cold joints, or unsoldered pins. Ensure no component leads are shorting.

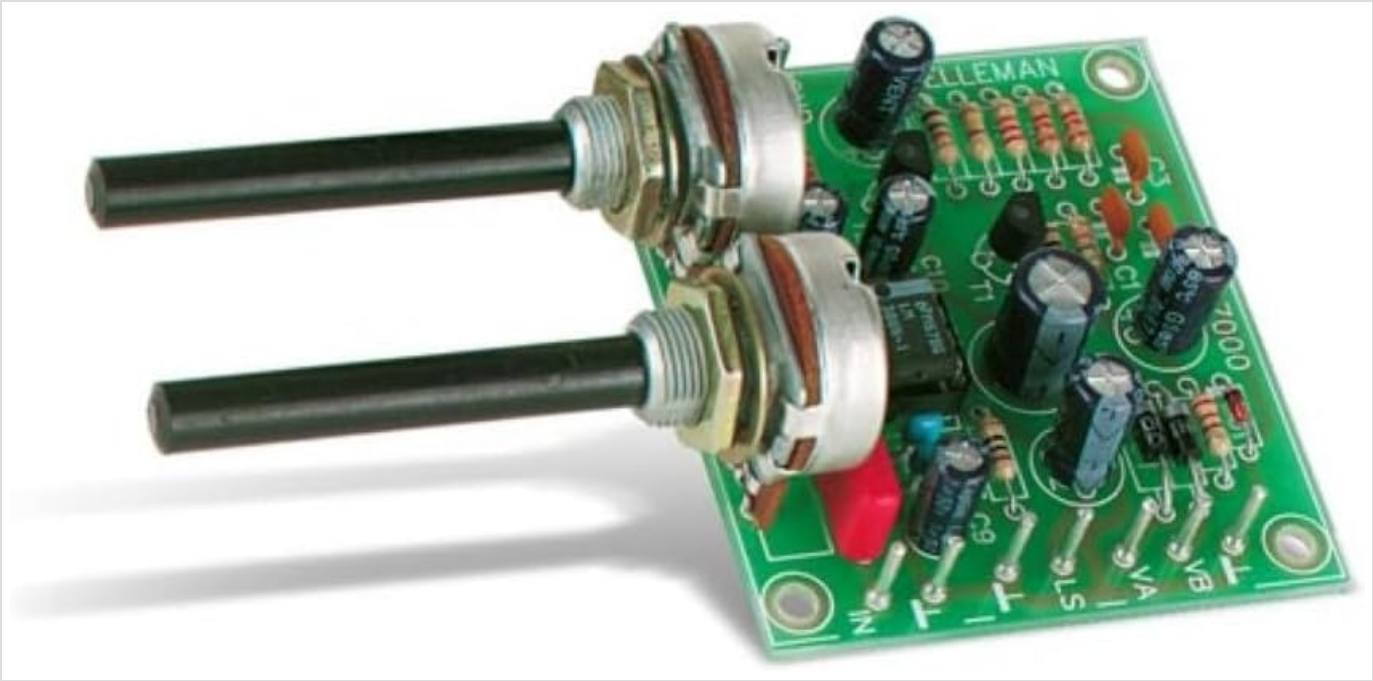


Image: The fully assembled Whadda WSMI7000 circuit board, showing all components soldered in place, including the two large potentiometers for control.

Operating the WSMI7000

The WSMI7000 can function as both a signal injector and a signal tracer, making it versatile for audio circuit diagnostics.

Power Supply Connection

The unit requires a power supply of **7-9 VAC or 9-12 VDC** with a minimum current of **150 mA**. Connect the power supply to the designated power input terminals on the PCB. Ensure correct polarity if using DC power.

Signal Injector Mode

In signal injector mode, the WSMI7000 generates an audio signal that can be injected into various points of an audio circuit to trace the signal path and identify faulty stages.

- Connect the output of the WSMI7000 to the input of the circuit under test.
- Adjust the potentiometers to control the signal level and frequency (if applicable).
- Move the injection point progressively through the circuit, listening for the signal at the circuit's output. The point where the signal disappears or becomes distorted indicates a fault in the preceding stage.

Signal Tracer Mode

In signal tracer mode, the WSMI7000 acts as a miniature amplifier, allowing you to listen to signals at different points within an audio circuit.

- Connect the input of the WSMI7000 to the point in the circuit you wish to monitor.
- Connect headphones or a small speaker (0.5 W / 8 Ohm) to the output of the WSMI7000.
- Trace the signal path by moving the input probe through the circuit. A missing or weak signal indicates a fault in the preceding stage.

The WSMI7000 is compatible with various audio devices, including amplifiers, radios, and tone control circuits.

Maintenance

The Whadda WSMI7000 is designed for durability and requires minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the circuit board. Avoid using liquids or abrasive cleaners.
- **Storage:** Store the unit in a cool, dry place away from direct sunlight and extreme temperatures.
- **Inspection:** Periodically inspect solder joints for any signs of cracking or corrosion, especially if the unit is frequently moved or subjected to vibrations.

Troubleshooting

If you encounter issues with your WSMI7000, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No output signal	◦ Incorrect power supply connection or no power. ◦ Cold solder joint or short circuit. ◦ Faulty component (e.g., IC, capacitor).	◦ Verify power supply voltage and polarity. ◦ Inspect all solder joints for quality. Use a multimeter to check for shorts. ◦ Test components if possible, or replace suspected faulty ones.
Distorted or weak signal	◦ Incorrect component value or placement. ◦ Poor connection or loose wire. ◦ Overloaded input/output.	◦ Double-check component values against the schematic. ◦ Ensure all connections are secure. ◦ Adjust potentiometer levels.
Unit gets hot	◦ Short circuit. ◦ Incorrect power supply voltage (too high). ◦ Faulty component drawing excessive current.	◦ Immediately disconnect power. Inspect for shorts. ◦ Verify power supply voltage. ◦ Identify and replace the faulty component.

Technical Specifications

Key specifications for the Whadda WSMI7000 Signal Transmitter and Tracker:

- **Item Number:** WSMI7000
- **Power Supply:** 7-9 VAC or 9-12 VDC
- **Current Consumption:** 150 mA (maximum)
- **Output Power:** 0.5 W / 8 Ohm (for signal tracer mode with speaker)
- **Product Dimensions:** Approximately 3.5 x 7.5 x 15.5 cm
- **Weight:** Approximately 220 g
- **Material:** Plastic (for housing/knobs, PCB is fiberglass)
- **Age Range (Description):** Adult

Warranty and Support

Whadda products are designed for quality and reliability. For specific warranty information, please refer to the documentation included with your purchase or visit the official Whadda website.
For technical support, frequently asked questions, or to download the latest version of this manual, please visit the official product page:
http://www.whadda.com/product/wsmi7000
You may also find additional resources and community support through online electronics forums and communities dedicated to DIY kits.

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.

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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