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TJGOPKUJ TIG-200 250 Upper plate 12 tubes

TJGOPKUJ TIG-200 250 Inverter Plate Instruction Manual

Model: TIG-200 250 Upper plate 12 tubes

1. Product Overview

This document provides essential instructions for the installation, operation, and maintenance of the TJGOPKUJ TIG-200 250 Inverter Plate. This component is designed as a replacement or upgrade part for compatible dual voltage welding machines, supporting AC220V and AC380V inputs. It is an integral part of the welding machine's power conversion system.

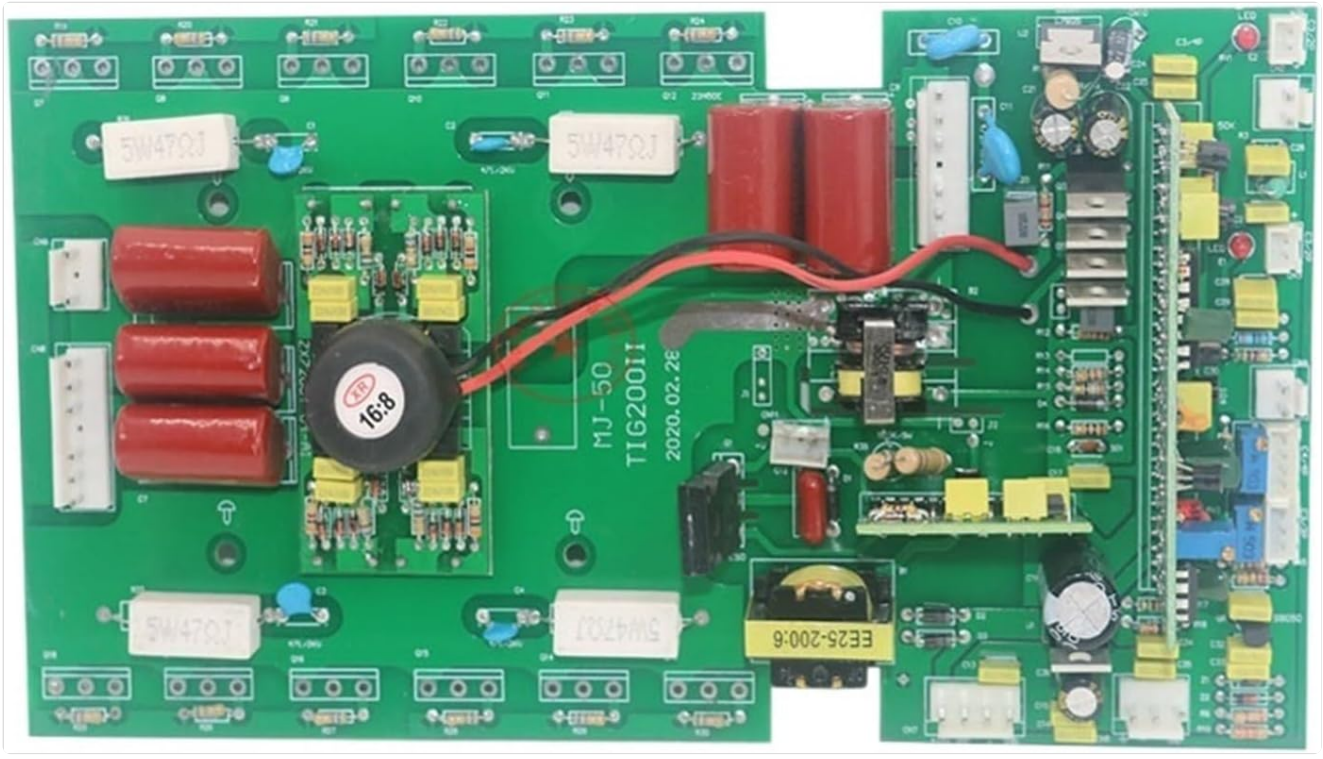


Figure 1: Top view of the TJGOPKUJ TIG-200 250 Inverter Plate, showing various components including capacitors, resistors, and integrated circuits. This is the primary circuit board for power inversion.

2. Safety Information

Always prioritize safety when handling electronic components and working with welding equipment. Failure to follow safety guidelines can result in serious injury or damage to equipment.

- **Disconnect Power:** Ensure the welding machine is completely disconnected from all power sources before attempting any installation, maintenance, or inspection of the inverter plate.
- **Qualified Personnel:** Installation and service should only be performed by qualified technicians with experience in electronics and welding equipment.
- **Electrostatic Discharge (ESD):** Handle the inverter plate with care to prevent electrostatic discharge. Use anti-static mats and wrist straps.
- **Inspect for Damage:** Before installation, visually inspect the inverter plate for any signs of physical damage. Do not install damaged components.
- **Ventilation:** Ensure adequate ventilation around the welding machine to prevent overheating of internal components, including the inverter plate.

3. Specifications

Feature	Detail
Model	TIG-200 250 Upper plate 12 tubes
Type	Inverter Plate / Hand Tool Part
Voltage Compatibility	AC220V / AC380V (Dual Voltage)
Dimensions (Package)	1.18 x 0.79 x 0.39 inches (approximate)
Item Weight	3.49 ounces (99 Grams)
Manufacturer	TJGOPKUJ
Color	Green (With tube 3878)
Power Plug Type	No Plug (Component for integration)

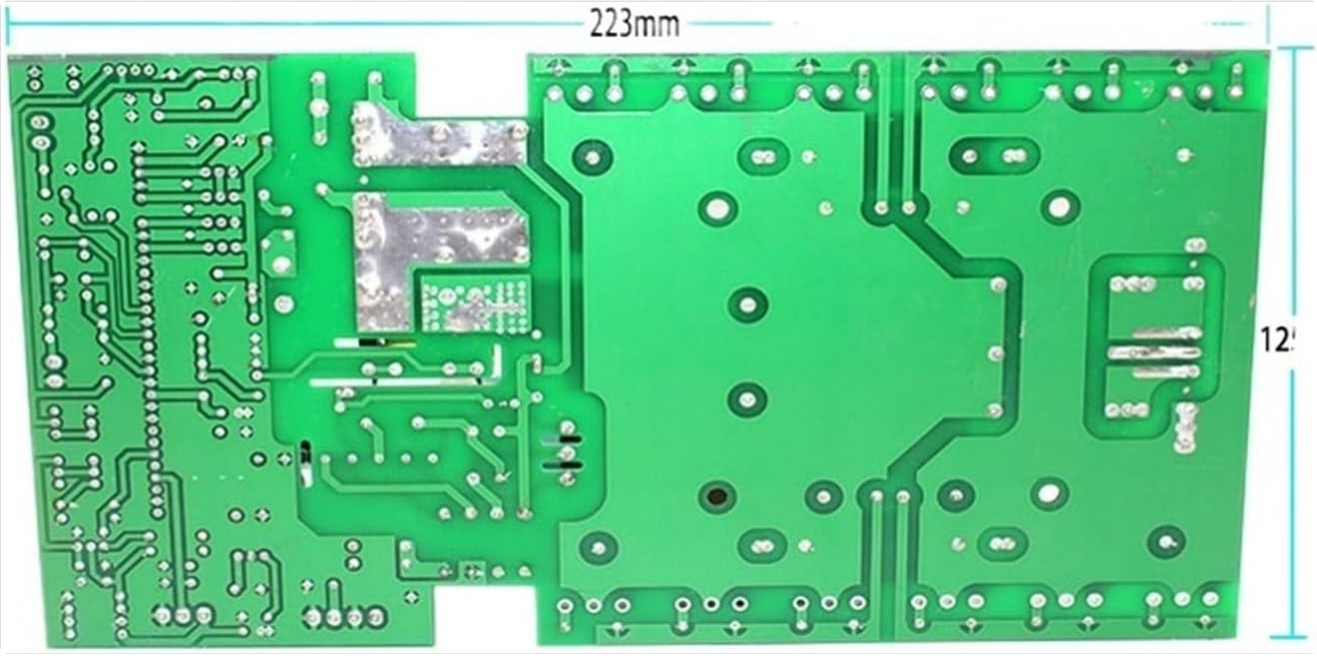


Figure 2: Bottom view of the inverter plate, revealing the intricate circuit traces and solder points. This side connects to the main chassis or other components of the welding machine.

4. Installation and Setup

This inverter plate is a specialized component. Proper installation is critical for its functionality and the safety of the welding machine. Refer to the specific service manual of your welding machine for detailed instructions.

1. **Preparation:** Ensure the welding machine is powered off and unplugged. Allow any residual charge in capacitors to dissipate.
2. **Access:** Carefully open the welding machine casing to access the existing inverter plate or the designated installation area.
3. **Removal (if replacing):** Document all connections (wiring, connectors, mounting screws) before carefully detaching the old inverter plate. Take photos for reference.
4. **Installation:**
    - Align the new TJGOPKUJ TIG-200 250 Inverter Plate with the mounting points.
    - Secure the plate using appropriate screws, ensuring it is firmly seated and does not flex.
    - Reconnect all wiring and connectors according to your documentation. Double-check each connection for proper polarity and secure fit.
5. **Inspection:** Before closing the casing, perform a thorough visual inspection to ensure no wires are pinched, no components are loose, and all connections are correct.
6. **Initial Power-Up:** Close the casing. Connect the welding machine to the appropriate power supply (AC220V or AC380V). Perform a test power-up according to your welding machine's manual, observing for any unusual behavior.

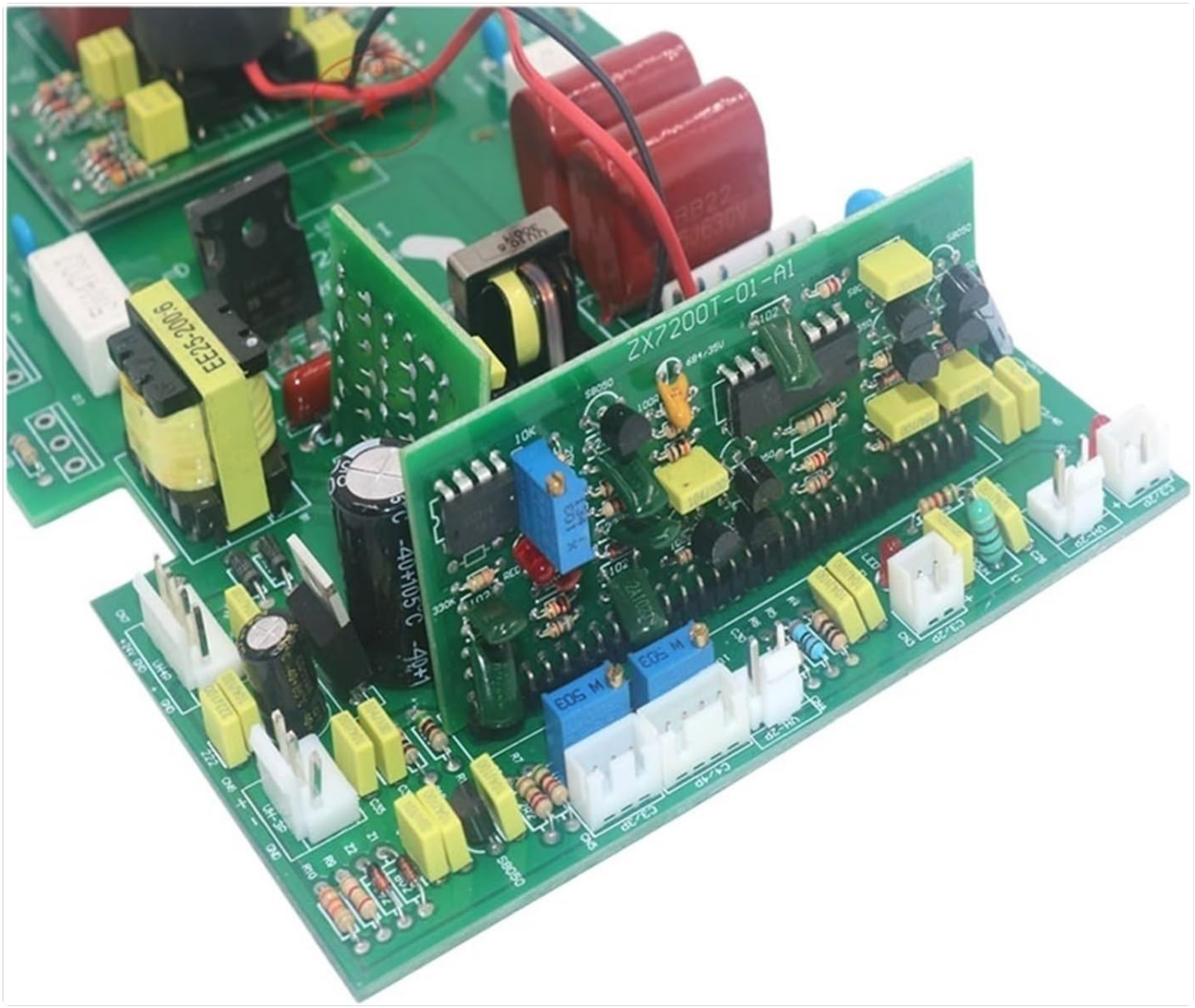


Figure 3: A detailed view of a section of the inverter plate, highlighting the smaller daughterboards and various connectors. These connectors are crucial for integrating the plate into the welding machine's control and power systems.

5. Operation

The TJGOPKUJ TIG-200 250 Inverter Plate functions as a core power conversion unit within a compatible welding machine. Its operation is integrated into the overall functionality of the welder. Once correctly installed, the inverter plate will operate automatically as part of the welding machine's power supply system.

- **Power Conversion:** The inverter plate converts the incoming AC power (220V or 380V) into a high-frequency AC current, which is then rectified into a stable DC current suitable for welding.
- **Control Integration:** It works in conjunction with the welding machine's control board to regulate output current and voltage, ensuring precise welding performance.
- **Thermal Management:** The plate is designed to operate within specific temperature ranges. Ensure the welding machine's cooling system is functioning correctly to prevent overheating.

Refer to your welding machine's primary user manual for specific operational procedures, welding parameters, and safety guidelines related to the complete welding system.

6. Maintenance

Regular maintenance helps ensure the longevity and reliable performance of the inverter plate and the welding machine.

- **Cleaning:** Periodically, with the power disconnected, open the welding machine casing and gently clean the inverter plate and surrounding areas. Use compressed air to remove dust and debris. Avoid using liquids or abrasive cleaners.
- **Visual Inspection:** During cleaning, inspect the board for any signs of overheating (discoloration), loose components, cracked solder joints, or damaged traces.
- **Connection Checks:** Ensure all connectors and wiring remain secure and free from corrosion.
- **Environmental Conditions:** Operate and store the welding machine in a clean, dry environment, free from excessive dust, moisture, and corrosive fumes.

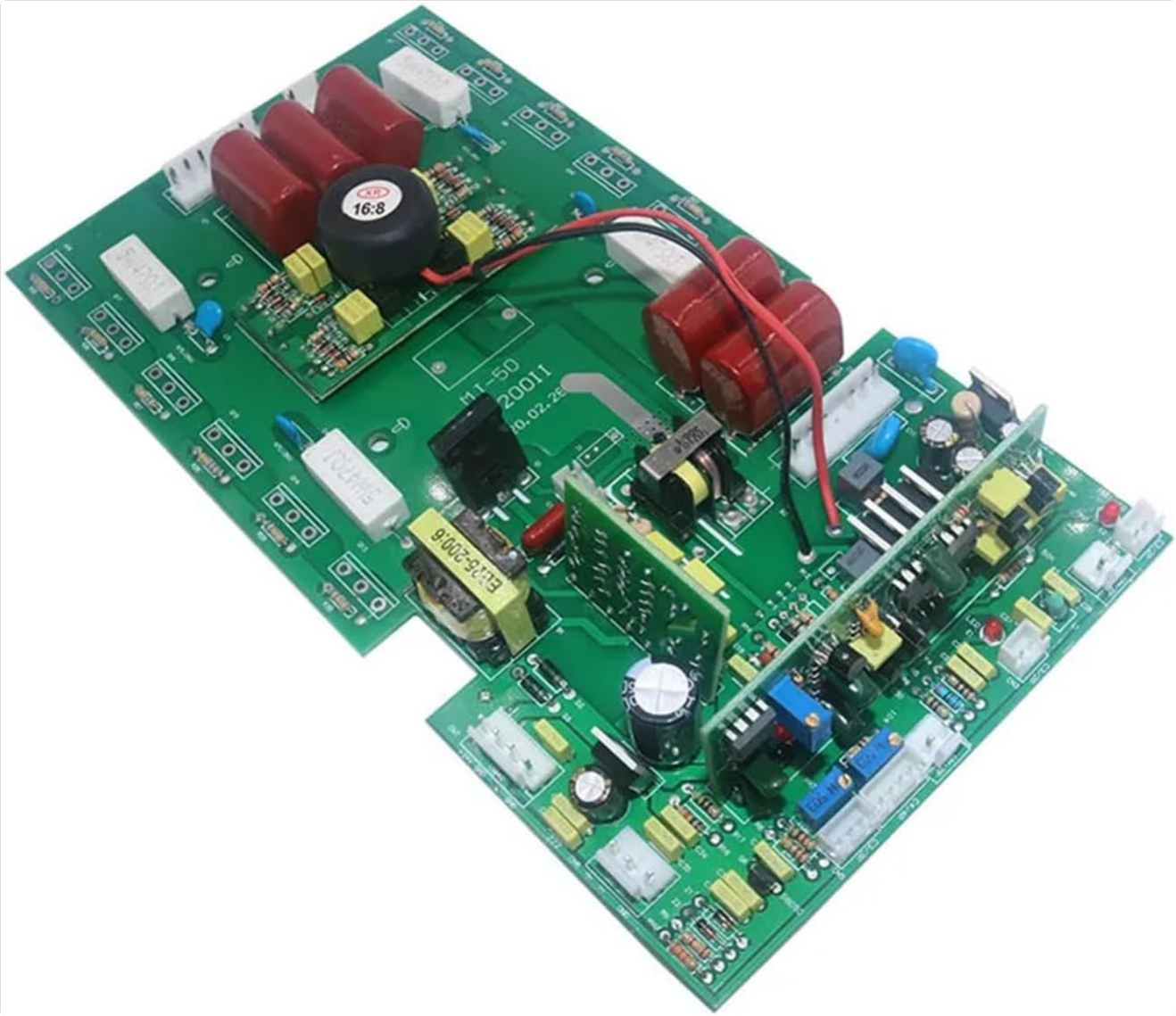


Figure 4: An angled perspective of the inverter plate, showing its modular design with several smaller circuit boards connected. This view emphasizes the complexity and interconnectedness of the components.

7. Troubleshooting

If the welding machine experiences issues after the inverter plate installation, consider the following general troubleshooting steps. *Note:* This section provides general guidance. For specific diagnostics, consult a qualified technician or the welding machine's service manual.

- **No Power / Machine Dead:**
  - Verify all power connections to the welding machine are secure and the power source is active.
  - Check internal wiring and connectors to the inverter plate for looseness or incorrect attachment.
  - Inspect for blown fuses within the welding machine (if accessible and applicable).
- **Erratic Welding Performance:**
  - Ensure all control signals and feedback loops to the inverter plate are correctly connected.
  - Check for any signs of component damage or overheating on the inverter plate.
- **Overheating:**
  - Confirm the welding machine's cooling fans are operational and not obstructed.
  - Ensure proper airflow within the machine casing.

If issues persist, discontinue use and seek professional assistance.

8. Warranty and Support

Specific warranty information for the TJGOPKUJ TIG-200 250 Inverter Plate is typically provided at the point of purchase or with the original product packaging. Please retain your proof of purchase for warranty claims.
For technical support or inquiries regarding this inverter plate, please contact your retailer or the manufacturer, TJGOPKUJ, through their official support channels. Refer to the contact information provided with your purchase or on the manufacturer's website.

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Disclaimer: This manual provides general guidance. Always refer to the specific service manual of your welding machine and consult qualified professionals for installation and repair.

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