

FEIFANKE TIG200P

FEIFANKE TIG200P AC DC Multiprocess Welder User Manual

Model: TIG200P

1. INTRODUCTION

The FEIFANKE TIG200P AC DC Multiprocess Welder is a versatile welding machine designed for various welding applications. It supports six welding methods: DC TIG, DC Pulse TIG, AC TIG, AC Pulse TIG, MMA (Stick), and Spot TIG. This welder is suitable for precision welding of aluminum alloys, magnesium alloys, carbon steel, and stainless steel, handling material thicknesses from 0.7mm to 10mm depending on the metal type.

This manual provides essential information for the safe and effective operation, setup, and maintenance of your FEIFANKE TIG200P welder. Please read it thoroughly before use.

2. SAFETY INFORMATION

WARNING: Welding can be dangerous. Always follow safety precautions to prevent injury or death.

- **Electric Shock:** Can kill. Do not touch live electrical parts. Wear dry welding gloves and protective clothing. Ensure the workpiece is properly grounded.
- **Fumes and Gases:** Can be hazardous to your health. Keep your head out of the fumes. Use adequate ventilation or exhaust at the arc.
- **Arc Rays:** Can burn eyes and skin. Wear a welding helmet with a proper shade filter and protective clothing.
- **Fire and Explosion:** Welding sparks can cause fire or explosion. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Hot Parts:** Can cause severe burns. Allow equipment to cool before touching.
- **Noise:** Excessive noise can damage hearing. Wear ear protection.
- **Power Supply:** This machine requires a 220V power supply with a NEMA 6-50 plug. Do not attempt to use it with a standard 110V outlet.

Always ensure the welding machine is turned off and disconnected from the power source before performing

any maintenance or adjustments.

3. PRODUCT OVERVIEW AND COMPONENTS

The FEIFANKE TIG200P is a compact and powerful welding unit. Below is an illustration of the main unit and its included accessories.



Figure 3.1: FEIFANKE TIG200P AC DC Welder and its complete accessory kit.

The complete kit includes:

- 1 x FEIFANKE TIG200P AC/DC 220V Welder
- 1 x 4m WP-26 TIG Torch
- 1 x 2m Earth Clamp
- 1 x 2m Electrode Holder
- 1 x Gas Meter
- 1 x 2m Gas Tube with 2 hoops
- 1 x Wire Brush
- 3 x Ceramic Nozzle (sizes 5, 6, 7)

- 3 x Tungsten Needle Clip (sizes 1.6mm, 2.4mm, 3.2mm)



Figure 3.2: Detailed view of the TIG200P welder and its full accessory kit, including torch, clamps, gas meter, and consumables.

4. SETUP INSTRUCTIONS

4.1 Power Connection

1. Ensure the welder's power switch is in the OFF position.
2. Connect the welder to a dedicated 220V power outlet. The welder is equipped with a NEMA 6-50 plug. Do not use adapters or extension cords that are not rated for the required amperage.

4.2 Gas Connection (for TIG welding)

1. Attach the gas meter to your inert gas cylinder (e.g., Argon).
2. Connect one end of the gas tube to the gas meter and secure it with a hoop.
3. Connect the other end of the gas tube to the gas input port on the rear of the welder and secure it with

the second hoop.

4. Slowly open the gas cylinder valve and check for leaks.

4.3 Torch and Clamp Connections

1. **TIG Torch:** Connect the WP-26 TIG torch cable to the appropriate TIG output terminal (usually negative for DC TIG, or as indicated for AC TIG) and the gas line from the torch to the gas output on the front panel. Ensure the gun control aviation socket is also connected.
2. **Earth Clamp:** Connect the earth clamp cable to the positive output fast socket for DC TIG or MMA welding, or as required for AC TIG. Securely attach the earth clamp to the workpiece or welding table, ensuring good electrical contact.
3. **Electrode Holder (for MMA/Stick welding):** Connect the electrode holder cable to the positive output fast socket.



Figure 4.1: Front and rear panel connections of the TIG200P welder.

5. OPERATING INSTRUCTIONS

5.1 Control Panel Overview

The FEIFANKE TIG200P features an LED display for clear parameter settings and control.

ULTRA LED DISPLAY

Clear Digital Parameter Set



Figure 5.1: The welder's LED display showing various welding parameters.

5.2 Welding Modes

The TIG200P supports six distinct welding processes:

- **DC TIG:** Direct Current Tungsten Inert Gas welding, ideal for stainless steel, carbon steel, and copper.
- **DC Pulse TIG:** DC TIG with pulsed current, offering better control over heat input, useful for thin materials and out-of-position welding.
- **AC TIG:** Alternating Current Tungsten Inert Gas welding, specifically designed for aluminum and magnesium alloys, providing a cleaning action.
- **AC Pulse TIG:** AC TIG with pulsed current, combining the benefits of AC for aluminum with enhanced heat control.
- **MMA (Stick):** Manual Metal Arc welding, suitable for a wide range of materials and outdoor conditions. Compatible with 1.0-5.0mm E6013, E6010, E7013, E7018 electrodes. Features hot start and arc force functions.
- **Spot TIG:** For precise, timed spot welds.

6 IN 1 -AC DC TIG WELDER

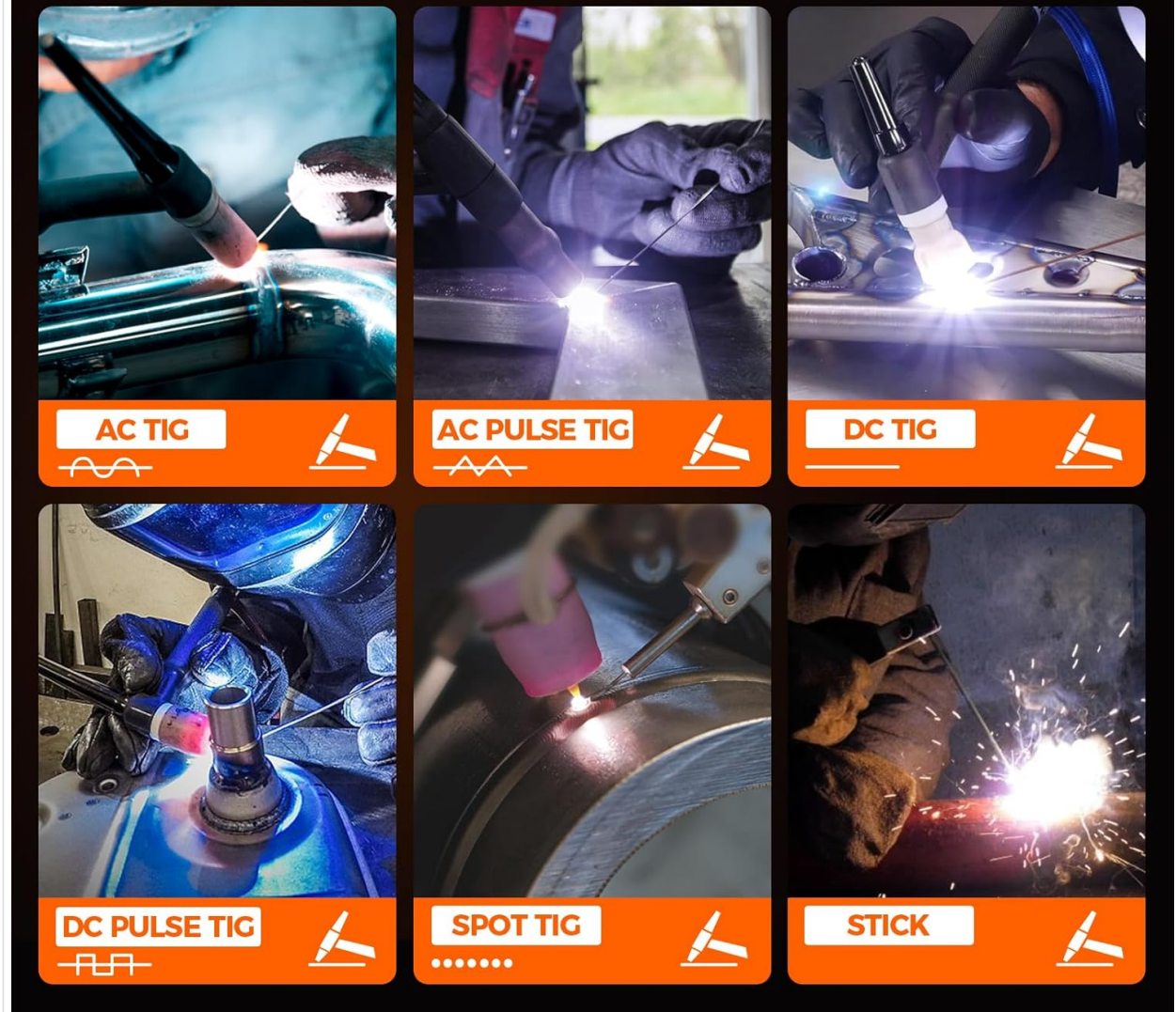


Figure 5.2: Visual representation of the six welding modes available on the TIG200P.

5.3 Parameter Settings

The MCU digital control allows for precise adjustment of various welding parameters, including:

- Pre-flow (T_{pre})
- Start Current (I_s)
- Up Slope (T_{up})
- Peak Current (I_p)
- Basic Current (I_b)
- Down Slope (T_{down})
- Finish Current (I_f)
- Post Flow (T_{post})
- Pulse Frequency
- Pulse Duty
- AC Frequency

- AC Duty
- Interval Time (Tspot)

The welder also supports 2T/4T/Spot/Foot Pedal welding steps and can store up to 10 sets of parameter settings for convenience.

5.4 Welding Process

1. Select the appropriate welding mode (TIG, Pulse TIG, or MMA) and current type (AC or DC) for your material.
2. Adjust welding parameters on the LED display according to the material thickness and desired weld characteristics.
3. Ensure proper personal protective equipment is worn.
4. Initiate the arc and perform the weld. Maintain a consistent arc length and travel speed.
5. For TIG welding, ensure adequate gas shielding throughout the process and during post-flow.



Figure 5.3: Example of TIG welding in progress.

EXCELLENT WELDING CAPABILITY

Easy welding of alloys and steel

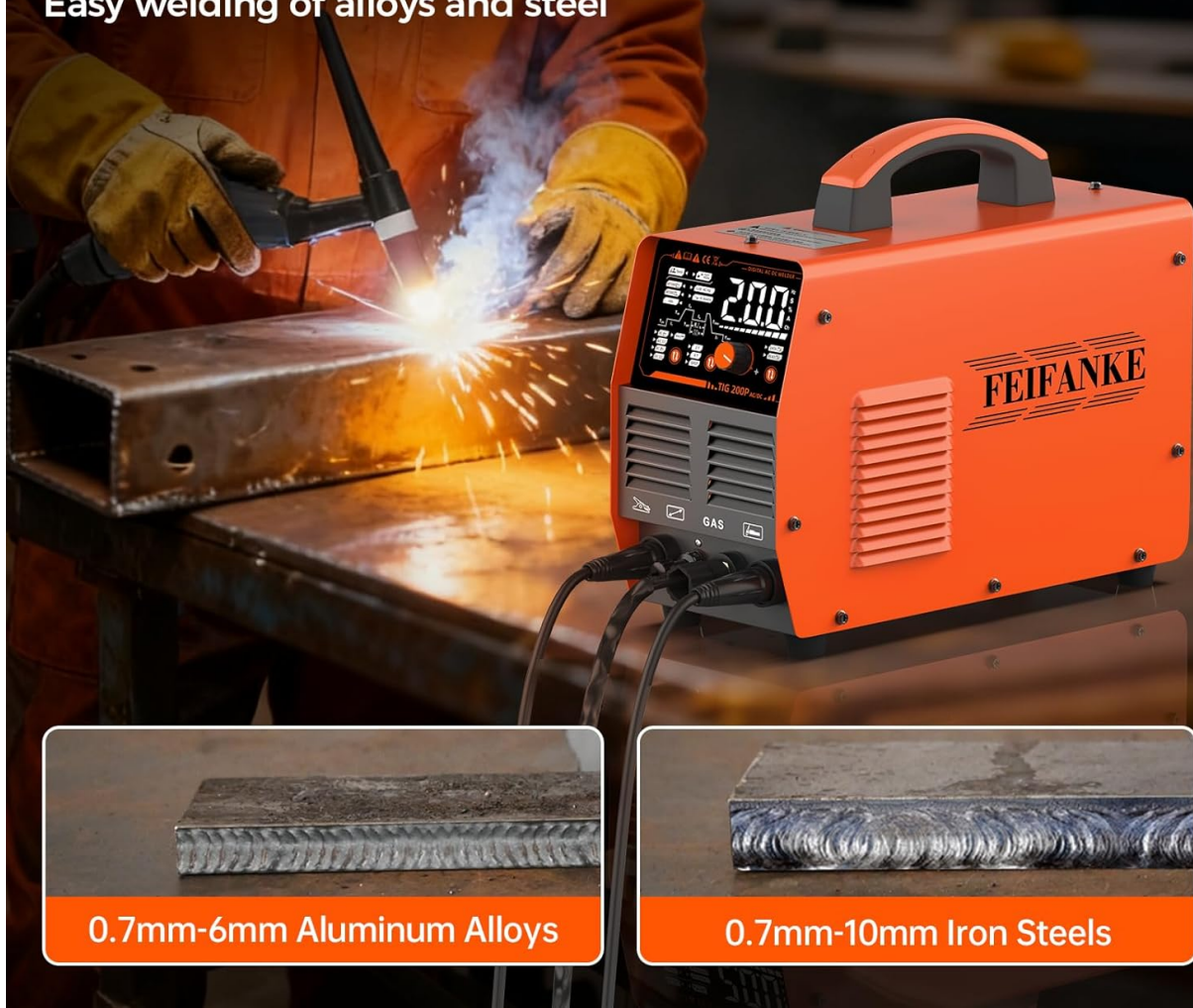


Figure 5.4: Welding capability demonstration, showing welds on 0.7mm-6mm aluminum alloys and 0.7mm-10mm iron steels.

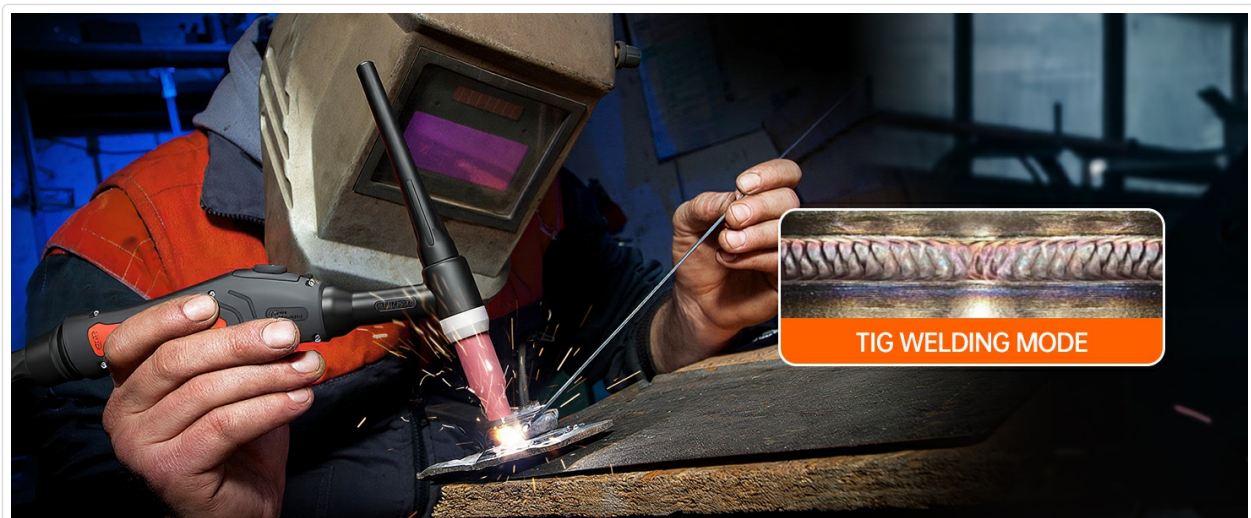


Figure 5.5: Example of MMA (Stick) welding in progress.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your welding machine.

- **Cleaning:** Periodically clean the welder's exterior and ventilation openings to prevent dust and debris buildup. Use compressed air to clear internal components if necessary, ensuring the machine is unplugged.
- **Cable Inspection:** Regularly inspect all welding cables, torch, and earth clamp for damage, cuts, or loose connections. Replace damaged components immediately.
- **Consumables:** Check and replace TIG torch consumables (ceramic nozzles, collets, collet bodies, tungsten electrodes) as they wear out. Sharpen tungsten electrodes as needed.
- **Gas System:** Check gas lines and connections for leaks. Ensure the gas meter is functioning correctly.
- **Storage:** Store the welder in a dry, clean environment when not in use.



Figure 6.1: The TIG200P features internal cooling and multiple protection mechanisms for durability.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Welder does not power on	No power supply; Power switch off; Faulty power cable	Check power outlet and circuit breaker; Ensure power switch is ON; Inspect power cable for damage.
No arc initiation	Poor earth clamp connection; Incorrect welding parameters; Tungsten electrode not sharpened; Gas flow issues (TIG)	Ensure good contact for earth clamp; Adjust current/voltage; Sharpen tungsten; Check gas supply and flow rate.
Weak or unstable arc	Low input voltage; Loose connections; Incorrect electrode size/type; Contaminated tungsten (TIG)	Verify input voltage; Tighten all connections; Use correct electrode; Clean or replace tungsten.
Poor weld quality (porosity, lack of fusion)	Insufficient gas shielding (TIG); Contaminated workpiece; Incorrect travel speed/arc length; Incorrect parameters	Increase gas flow/check for drafts; Clean workpiece thoroughly; Adjust welding technique; Fine-tune parameters.
Overheat protection activated	Exceeded duty cycle; Blocked ventilation	Allow welder to cool down; Ensure clear airflow to ventilation openings.

If problems persist, contact customer support.

8. TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	TIG200P
Input Voltage	220 Volts AC
Power Source	AC/DC
Max Output Current	200A (TIG/MMA)
Welding Methods	DC TIG, DC Pulse TIG, AC TIG, AC Pulse TIG, MMA (Stick), Spot TIG
Weldable Materials	Aluminum alloys, Magnesium alloys, Carbon steel, Stainless steel, Copper, Titanium
Aluminum Thickness	0.7mm - 6mm
Other Metals Thickness	0.7mm - 10mm
Electrode Compatibility (MMA)	1.0-5.0mm E6013, E6010, E7013, E7018, etc.
Item Weight	19.91 pounds
Product Dimensions	16.34 x 6.42 x 10.83 inches

Feature	Specification
Material	Iron
Included Components	Welder, TIG Torch, Earth Clamp, Electrode Holder, Gas Meter, Gas Tube, Wire Brush, Ceramic Nozzles, Tungsten Needle Clips

9. WARRANTY AND SUPPORT

FEIFANKE provides 24/7 customer service for the TIG200P welder. If your FEIFANKE TIG200P welder is faulty or you are not satisfied with the product, please contact FEIFANKE customer support for assistance. They will facilitate a replacement if necessary.

For support, please refer to the contact information provided with your purchase or visit the official FEIFANKE website.