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› FEIFANKE MIG145-110V 4-in-1 Multi-Process Welding Machine Instruction Manual

FEIFANKE MIG145

FEIFANKE MIG145-110V 4-in-1 Multi-Process Welding Machine Instruction Manual

Model: MIG145-110V | Brand: FEIFANKE

1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your FEIFANKE MIG145-110V 4-in-1 Multi-Process Welding Machine. This versatile unit supports MIG (Gas/Flux-Cored), MMA (Stick), and Lift TIG welding processes, optimized for 110V household outlets. Please read this manual thoroughly before initial use and retain it for future reference.



Image: The FEIFANKE MIG145-110V 4-in-1 Multi-Process Welding Machine with included accessories.

2. SAFETY INFORMATION

Welding operations involve inherent risks. Always prioritize safety to prevent injury or equipment damage. Adhere to the following general safety guidelines:

- **Eye and Face Protection:** Always wear a welding helmet with appropriate shade lenses to protect against arc flash and sparks.
- **Body Protection:** Wear flame-resistant clothing, welding gloves, and safety shoes.
- **Ventilation:** Ensure adequate ventilation to remove welding fumes, which can be hazardous.
- **Electrical Safety:** Ensure the machine is properly grounded. Do not operate in wet conditions. Inspect cables for damage before each use.
- **Fire Prevention:** Keep flammable materials away from the welding area. Have a fire extinguisher readily available.

- **Work Area:** Maintain a clean and organized workspace.

3. PACKAGE CONTENTS

The FEIFANKE MIG145-110V welding machine comes with a complete set of accessories to begin welding. Please verify all items are present upon unboxing:

- 1 x MIG145 110V Welding Machine
- 1 x 10ft Gas MIG Torch
- 1 x 6.5ft Ground Clamp
- 1 x Electrode Holder
- 2 x Contact Tips (0.030")
- 2 x Contact Tips (0.035")
- 2 x Contact Tips (0.04")
- 1 x 0.030"/0.035" K-type Drive Roller
- 1 x 0.035"/0.04" V-type Drive Roller
- 1 x 1.1 lb 0.030" Flux Core MIG Wire
- 1 x 1.1 lb 0.030" Solid Wire
- 5 x 5/64" Welding Electrodes
- 1 x 6.5ft Gas Hose
- 2 x Hose Clamps
- 1 x Brush
- 1 x Instruction Manual

PRODUCT ACCESSORIES

- 1 1x MIG145 Welder
- 2 1x 0.5KG/0.8mm Solid Wire
- 3 1x 0.5KG/1.0mm Flux-Cored Wire
- 4 1x 15AK Gas Torch 3m
- 5 1x2M Ground Clamp
- 6 1x 2M Welding Handle Clamp
- 7 1x 2m Gas Pipe
- 8 1x Instruction Manual (5 Languages)
- 9 2x Headband
- 10 1x 0.8/1.0K Wire Feeder Wheel
- 11 1x 0.8/1.0V Wire Feeder Wheel
- 12 3x Conductive Nozzle 0.8mm
- 13 2x Conductive Nozzle 1.0mm
- 14 5x Electrode ϕ 2.0mm
- 15 1x Slag Hammer



Image: All components included with the FEIFANKE MIG145-110V welding machine.

4. PRODUCT OVERVIEW

Familiarize yourself with the main components and controls of your welding machine.



Image: Front and side view of the welding machine highlighting key components.

1. Spool Holder
2. Wire Feed Mechanism
3. Handle
4. Voltage Display
5. Welding Voltage Knob
6. Current and Wire Speed Adjust Knob
7. Euro Connector for Torch
8. Output Terminal (-)
9. Current Display
10. Welding Mode Button
11. Output Terminal (+)
12. Power Switch
13. Gas Inlet
14. Cooling Fan
15. Power Cable

5. SETUP

5.1. Connecting Accessories

Connect the MIG torch, ground clamp, and electrode holder to the appropriate terminals as shown in the diagram below. Ensure all connections are secure.



Image: Diagram illustrating cable connections for Gas MIG, Gasless MIG, MMA, and Lift TIG modes.

5.2. Wire Installation (MIG/Flux-Cored)

For MIG welding, install the wire spool into the spool holder (1). Thread the wire through the wire feed mechanism (2) and ensure it passes through the correct drive roller (K-type for solid wire, V-type for flux-cored wire). Adjust the feed tensioner (8) as needed. The machine supports 2 LB rolls of 0.030" (0.8 MM), 0.035" (0.9 MM), or 0.040" (1.0 MM) Flux-Cored Wire and 0.030" (0.8 MM) Solid Wire.

WELDING WIRE INSTALLATION PROCEDURE

Compatible With 2 LB Rolls of 0.030" (0.8 MM), 0.035" (0.9 MM), or 0.040" (1.0 MM) Flux-Cored Wire and 0.030" (0.8 MM) Solid Wire



- | | | | |
|---|--------------------------|----|------------------|
| 1 | Welding Wire 0.8MM-1.0MM | 6 | Spool Knob |
| 2 | Spool Spindle | 7 | Wire Orientation |
| 3 | Spool Plate | 8 | Feed Tensioner |
| 4 | Spring | 9 | Idler Arm |
| 5 | Washer | 10 | Wire Wheel |

Image: Detailed steps for installing welding wire into the machine.

5.3. Gas Connection (for Gas MIG)

If performing Gas MIG welding, connect the gas hose to the gas inlet (13) on the rear of the machine and to your gas cylinder regulator. Ensure all connections are leak-free.

5.4. Power Connection

Connect the power cable (15) to a 110V household outlet. The machine is designed for this voltage. Ensure the power switch (12) is in the 'OFF' position before connecting.

6. OPERATING MODES

The FEIFANKE MIG145-110V offers four welding processes:

6.1. MIG Welding (Gas/Flux-Cored)

MIG welding is suitable for various metals. Use solid wire with shielding gas for clean, precise indoor welds, or flux-cored wire without gas for outdoor or windy conditions. The synergistic control feature simplifies setup by automatically adjusting voltage and wire feed speed based on your selected wire size and current. Fine-tuning options are available for experienced users.



Image: Illustration of MIG welding in progress.

6.2. MMA (Stick) Welding

MMA welding is ideal for thicker materials and outdoor use. Insert the welding electrode into the electrode holder. Adjust current settings using the control knobs. The machine features Hot Start, Arc Force, and Anti-Stick functions for improved arc stability and ease of use.

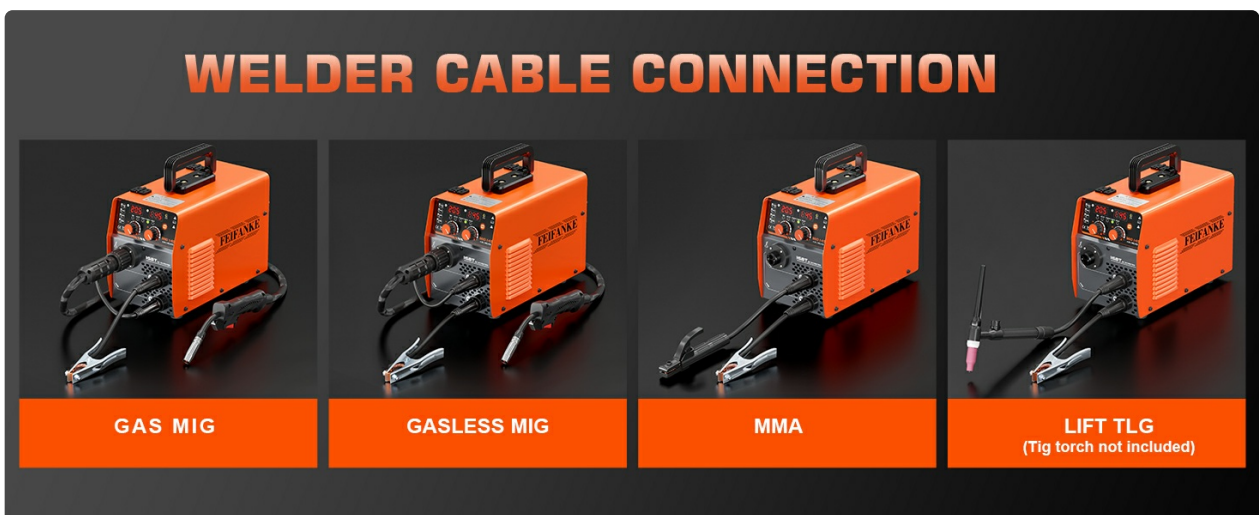


Image: Illustration of MMA (Stick) welding in progress.

6.3. Lift TIG Welding

Lift TIG welding provides precise control for high-quality welds on thinner materials. A TIG torch is not included with this kit and must be purchased separately. Connect the TIG torch and adjust settings as required for your application.



Image: Illustration of Lift TIG welding in progress (TIG torch not included).

7. SYNERGIC CONTROL

The FEIFANKE MIG145-110V features advanced synergic control technology. This system automatically sets the optimal voltage and wire feed speed once you select the wire size and desired current. This simplifies the welding process, making it easier for beginners to achieve professional results. Experienced users can fine-tune the voltage by $\pm 3V$ for specific arc characteristics.

SYNERGISTIC MIG WELDER

Automatic Adjustment of Voltage and Wire Feed Speed According to Wire Diameter



Image: Close-up of the control panel showing synergic settings and digital display.

8. ADVANCED DIGITAL CONTROL AND SAFETY FEATURES

This welding machine incorporates an IGBT inverter and MCU technology for precise control and stable performance. It includes multiple integrated safeguards to ensure safe operation and prolong equipment life:

- **Over-current Protection:** Prevents damage from excessive current.
- **Overload Protection:** Protects the machine from operating beyond its capacity.

- **Over-voltage Protection:** Safeguards against voltage spikes.
- **Overheating Protection:** Automatically shuts down the machine if internal temperatures become too high.



Image: Visual representation of the advanced digital control and safety features.

9. MAINTENANCE

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

- **Cleaning:** Remove dust and debris from the machine's interior and exterior regularly, especially from cooling vents. Use compressed air for internal cleaning.
- **Cable Inspection:** Periodically check all welding cables, connections, and the power cord for cuts, fraying, or loose connections. Replace damaged components immediately.
- **Torch and Electrode Holder:** Clean the MIG torch nozzle and contact tip. Replace worn contact tips and inspect the electrode holder for damage.
- **Drive Rollers:** Ensure drive rollers are clean and free of wire debris. Verify they are correctly sized for the wire being used.
- **Storage:** Store the machine in a dry, clean environment when not in use.

10. TROUBLESHOOTING

If you encounter issues with your welding machine, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No power	Power switch off, loose connection, circuit breaker tripped	Turn on switch, check connections, reset breaker
No arc/Poor arc	Improper grounding, wrong settings, dirty workpiece, worn contact tip	Ensure good ground, adjust settings, clean workpiece, replace contact tip
Wire feed issues	Incorrect drive roller tension, wrong drive roller size, tangled wire, clogged liner	Adjust tension, use correct roller, untangle wire, clean/replace liner
Overheat indicator on	Exceeded duty cycle, blocked ventilation	Allow machine to cool, clear vents, reduce welding time

For persistent issues not covered here, please contact customer support.

11. SPECIFICATIONS

- **Model Number:** MIG145
- **Input Voltage:** 110 Volts AC
- **Welding Processes:** MIG (Gas/Flux-Cored), MMA (Stick), Lift TIG
- **Item Weight:** 19.31 pounds
- **Package Dimensions:** 15 x 13.5 x 7.75 inches
- **Material:** Metal
- **Power Source:** AC/DC
- **Manufacturer:** FEIFANKE

12. WARRANTY & SUPPORT

Your FEIFANKE MIG145-110V welding machine is covered by a **2-year warranty**. We also offer a **30-day money-back guarantee**. For any questions, technical assistance, or warranty claims, please contact our customer support team, available 24/7.