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KKnoon MIG/MMA-160A

KKnoon 2-in-1 MIG/MMA Welding Machine User Manual

Model: MIG/MMA-160A

1. Introduction

Thank you for choosing the KKnoon 2-in-1 MIG/MMA Welding Machine. This versatile welding inverter is designed for reliable performance, compact size, and high efficiency, making it suitable for various welding tasks. It features a quality IGBT module for reduced energy loss and an efficient heat radiation fan for optimal cooling. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your welding machine.
This machine is suitable for welding metals such as low carbon steel, medium carbon steel, and alloy steel.

2. Safety Instructions

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

- **Eye Protection:** Always wear a welding helmet with appropriate shade lenses to protect your eyes from arc rays.
- **Body Protection:** Wear flame-resistant clothing, welding gloves, and safety shoes to protect against sparks, heat, and electric shock.
- **Ventilation:** Ensure adequate ventilation to remove welding fumes and gases, which can be hazardous to your health.
- **Electrical Safety:** Never operate the welder in wet conditions. Ensure all electrical connections are secure and properly grounded. Do not touch live electrical parts.
- **Fire Prevention:** Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Work Area:** Keep your work area clean and free of clutter. Ensure stable footing.
- **Gas Cylinders:** If using gas-shielded welding, handle gas cylinders with care and secure them properly to prevent tipping.

3. Product Overview and Components

The KKnoon 2-in-1 MIG/MMA Welding Machine is a compact and powerful unit designed for various welding applications. Below is an overview of the machine and its included components.

Image 3.1: The KKnoon 2-in-1 MIG/MMA Welding Machine shown with its included accessories, including the welding torch, ground clamp, welding wire, and welding mask.

Front Panel Description

Image 3.2: Detailed view of the welding machine's front panel, indicating the control panel, current indicator, selective switch, current adjustment knob for MMA/MIG, MIG/MMA torch euro connector, and negative polarity connection.

Packing List

Upon unboxing, please verify that all the following items are included:

- 1 x 2-in-1 Welding Machine (MIG/MMA-160A)
- 1 x 450g Welding Wire
- 1 x Brush
- 1 x Mask (Welding Helmet)
- 1 x MIG-14AK Torch
- 1 x 200A Holder (Electrode Holder for MMA)
- 1 x 300A Clamp (Ground Clamp)

Image 3.3: Visual representation of all items included in the product packaging.

4. Setup

4.1 Initial Inspection

Before connecting the machine to power, inspect it for any visible damage that may have occurred during shipping. Ensure all cables and connectors are intact.

4.2 Power Connection

Connect the welding machine to a suitable power outlet (220V). Ensure the power switch is in the OFF position before plugging in.

4.3 Installing Welding Wire (MIG Mode)

The machine features a built-in wire feeder for convenience.

1. Open the wire feeder compartment cover.
2. Place the 450g welding wire spool onto the spindle, ensuring it rotates freely.
3. Thread the welding wire through the guide tube and into the wire feeder mechanism.
4. Close the compartment cover.

Image 4.1: View of the internal built-in wire feeder mechanism.

Image 4.2: Demonstrates the process of installing the welding wire spool and threading it into the machine's built-in feeder.

4.4 Connecting Torch and Ground Clamp

- For MIG welding, connect the MIG-14AK Torch to the euro connector on the front panel.
- For MMA welding, connect the 200A Electrode Holder to the positive (+) terminal and the 300A Ground Clamp to the negative (-) terminal.
- Ensure the ground clamp is securely attached to the workpiece or a clean, conductive surface connected to the workpiece.

5. Operating Instructions

The KKnoon welding machine supports both MIG (Gas-shielded welding) and MMA (Manual Metal Arc) welding modes.

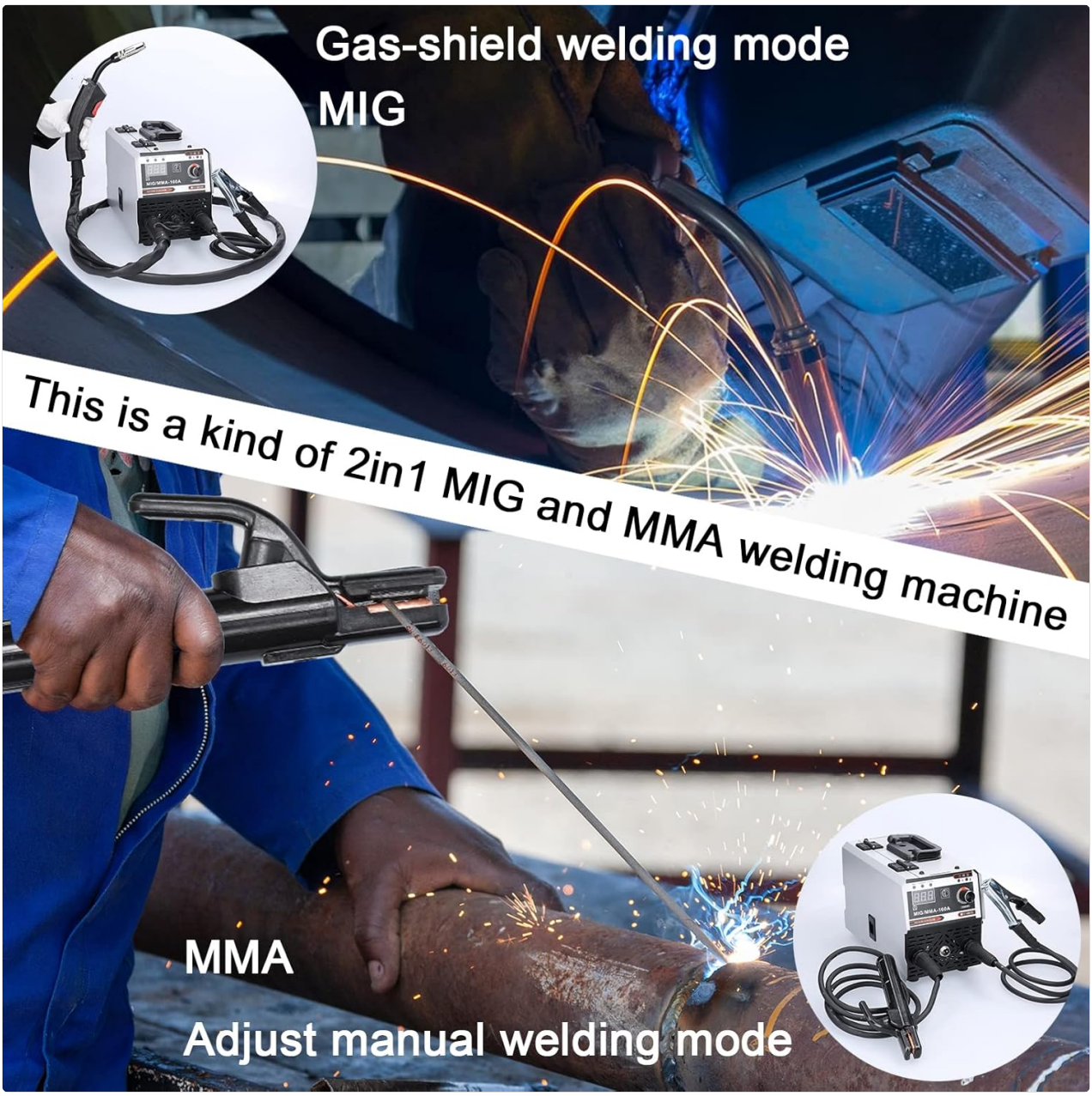

Image 5.1: Illustrates the two primary welding modes: Gas-shielded MIG welding and Manual MMA welding.

5.1 Selecting Welding Mode

Use the selective switch on the front panel to choose between MIG and MMA welding modes.

5.2 Adjusting Current and Voltage

The machine features a current adjustment knob on the front panel. Refer to the table below for recommended welding current and voltage settings based on electrode diameter.

Image 5.2: A reference table providing recommended welding current (A) and voltage (V) settings for various electrode diameters (mm). The output current adjustment range is 20-120A.

Reference Table of Welding Current Setting

Electrode dia. (mm)	Recommended welding current (A)	Recommended welding voltage (V)
1.0	20~60	20.8~22.4
1.6	44~84	21.76~23.36
2.0	60~100	22.4~24.0
2.5	80~120	23.2~24.8
3.2	108~148	23.32~24.92
4.0	140~180	24.6~27.2
5.0	180~220	27.2~28.8

Note: Output current adjustment range is 20-120A.

5.3 Suitable Materials

This welding machine is designed for welding various types of steel:

- Low carbon steel
- Medium carbon steel
- Alloy steel

Image 5.3: Visual examples of materials suitable for welding with this machine, including low carbon steel pipes, medium carbon steel bars, and alloy steel sheets.

6. Maintenance

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

- **Cleaning:** Regularly clean the machine's exterior with a dry cloth. Use compressed air to blow out dust from the ventilation openings to ensure proper airflow and cooling.

- **Cable Inspection:** Periodically inspect all welding cables, power cords, and connectors for signs of wear, cuts, or damage. Replace damaged components immediately.
- **Wire Feeder:** Keep the wire feeder mechanism clean and free of debris. Check the wire guide and drive rollers for wear.
- **Storage:** Store the welding machine in a dry, clean, and well-ventilated area when not in use. Protect it from dust and moisture.
- **Torch and Ground Clamp:** Clean the torch nozzle and contact tip regularly. Ensure the ground clamp makes good contact and is free of rust or paint.

7. Troubleshooting

This section provides solutions to common issues you might encounter.

Common Troubleshooting Guide

Problem	Possible Cause	Solution
Machine does not power on	No power supply; Power switch off; Faulty power cord	Check power outlet; Turn on power switch; Inspect and replace power cord if damaged
No welding arc	Poor ground connection; Incorrect welding mode selected; Insufficient current setting; Faulty torch/electrode holder	Ensure good ground contact; Select correct mode (MIG/MMA); Increase current; Check/replace torch or holder
Wire feeding issues (MIG)	Wire tangled; Incorrect drive roller tension; Clogged liner; Worn contact tip	Untangle wire; Adjust drive roller tension; Clean/replace liner; Replace contact tip
Overheating protection activated	Prolonged use at high current; Blocked ventilation; High ambient temperature	Allow machine to cool down; Clear ventilation openings; Operate in a cooler environment

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact KKnoon customer support for assistance.

8. Specifications

Detailed technical specifications for the KKnoon 2-in-1 MIG/MMA Welding Machine:

- **Material:** Metal
- **Voltage:** 220 V
- **Rated Input Power Capacity:** 6.3
- **Current Type:** Direct Current (DC)
- **Operating Mode:** Inverter Welding

- **Rated Output Voltage:** 230V
- **Model:** MIG-160A
- **Working Object:** Steel
- **Power Factor:** 0.93
- **No-load Voltage:** 65V
- **Package Dimensions:** 38 x 32.7 x 21.9 cm
- **Product Weight:** 5.85 kg

Image 8.1: Visual representation of the machine's dimensions (305mm length, 155mm width, 205mm height) alongside its specifications.

9. Warranty and Support

For any questions, technical assistance, or warranty claims, please contact KKnoon customer support through the retailer where you purchased the product or visit the official KKnoon brand store online. Please have your

model number (MIG/MMA-160A) and purchase details ready when contacting support.

Thank you for choosing KKnoon.