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> AZZUNO AC/DC TIG Welder 200A User Manual

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AZZUNO AC/DC TIG Welder 200A User Manual

Model: ACDC-200

1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your AZZUNO AC/DC TIG Welder 200A. This versatile machine offers 7-in-1 welding capabilities, including AC TIG, AC Pulsed TIG, DC TIG, DC Pulsed TIG, Spot TIG, Stick welding, and Spot Stick. It is designed for precision welding on various materials such as aluminum, stainless steel, carbon steel, and iron. Please read this manual thoroughly before initial use to ensure proper setup, operation, and maintenance.

WIDE APPLICATION AC/DC TIG WELDER



The AZZUNO AC/DC TIG Welder 200A is suitable for a wide range of applications, from metal fabrication to automotive repair, and can be used on diverse materials.

2. SAFETY INFORMATION

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

- **Electric Shock:** This machine uses high voltage. Ensure proper grounding. Do not touch live electrical parts. Wear dry welding gloves and protective clothing.
- **Fumes and Gases:** Welding fumes and gases can be hazardous to your health. Work in a well-ventilated area. Use a fume extractor if necessary.
- **Arc Rays:** Arc rays can burn eyes and skin. Wear a welding helmet with appropriate shade filter and protective clothing.
- **Fire and Explosion:** Welding sparks and hot metal can cause fires. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Hot Parts:** Welded parts and equipment can be extremely hot. Allow them to cool before handling or wear appropriate heat-resistant gloves.
- **Machine Safety Features:** The AZZUNO AC/DC TIG Welder 200A includes a powerful cooling fan and an over-heat protective system to enhance operational safety. Do not obstruct ventilation openings.



The welder is equipped with a powerful fan and an over-heat protective system for enhanced safety during operation.

3. PACKAGE CONTENTS

Upon unpacking, please verify that all items listed below are included and in good condition:

- AZZUNO AC/DC TIG Welder 200A (Main Unit)
- TIG Torch (WP-26)
- Electrode Holder
- Ground Clamp
- Brush/Hammer
- 110V/220V Adapter Cord
- Argon Gas Regulator and Hose
- Nozzle (3 pieces)
- Collet (3 pieces)
- Tungsten Electrode (3 pieces)

ACCESSORIES

- 1 Electrode Holder
- 2 Ground Clamp
- 3 Brush/Hammer
- 4 Argon Gas Hose
- 5 TIG Torch Consumables
- 6 Argon Gas Regulator
- 7 110V-220V Adapter Cord
- 8 TIG Torch (WP-26)



The complete package includes the main welder unit and all necessary accessories for immediate use.

4. PRODUCT FEATURES & CONTROLS

The AZZUNO AC/DC TIG Welder 200A is equipped with an advanced MCU Digital control system, offering precise control over various welding parameters and modes.

4.1. Multi-Functional Welding Modes

This welder supports 7 distinct welding processes:

- **AC TIG:** For welding aluminum and magnesium alloys.
- **AC Pulsed TIG:** Provides enhanced control and cleaner welds on aluminum, reducing heat input.
- **DC TIG:** For welding stainless steel, carbon steel, copper, and other non-ferrous metals (except aluminum).
- **DC Pulsed TIG:** Offers precise control for thin materials and out-of-position welding in DC mode.
- **Spot TIG:** For quick, consistent tack welds.
- **Stick Welding (MMA):** For general purpose welding with coated electrodes.
- **Spot Stick:** For quick, consistent tack welds in Stick mode.

7-IN-1 MULTI-PROCESS WELDER

TIG

AC
HF TIG

AC
PULSED TIG

DC
HF TIG

DC
PULSED TIG

SPOT
TIG

STICK

STICK

SPOT
STICK

The welder supports a comprehensive range of TIG and Stick welding processes.

4.2. Intuitive Control Panel

The front panel provides easy access to all settings and indicators:

1. **Digital Display:** Shows current welding parameters.
2. **Operation Indicators:** Lights indicating active welding mode (AC, DC, MMA) and TIG switch mode (2T, 4T, SPOT).
3. **Knob/Button:** Multi-function control for navigating menus and adjusting values.

4. **"-" Terminal:** Negative output terminal.
5. **TIG Torch Socket:** Connection point for the TIG torch.
6. **Control Terminal:** For external control devices like a foot pedal (sold separately).
7. **"+" Terminal:** Positive output terminal.
8. **Foot Pedal Terminal:** Dedicated connection for a foot pedal.

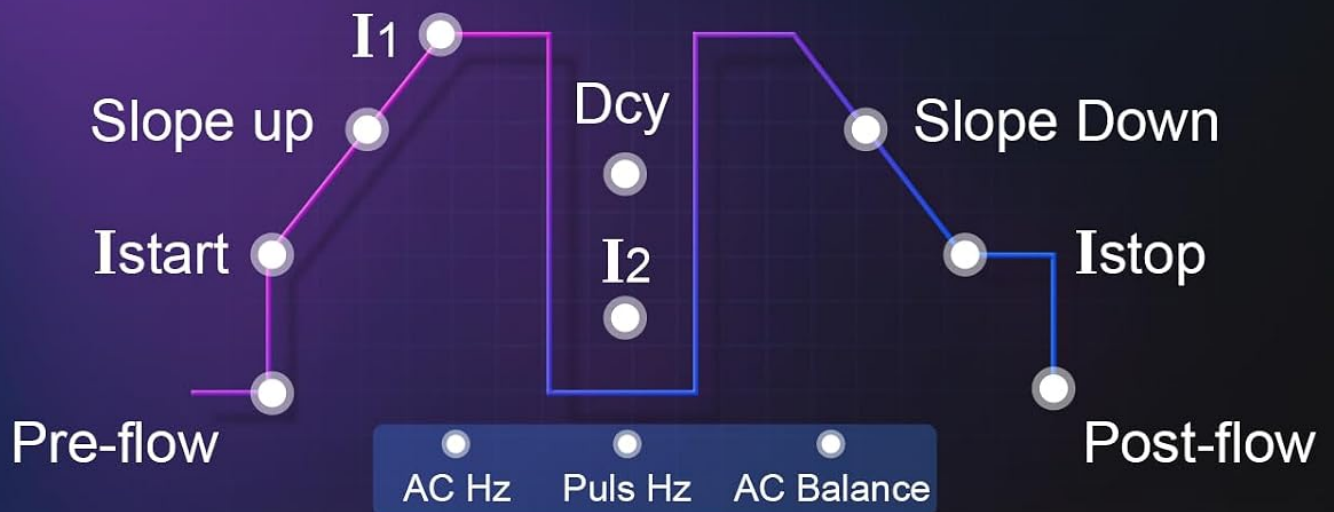


The control panel provides clear indicators and a multi-function knob for precise parameter adjustments.

4.3. Precision Parameter Settings & Persistence

The machine allows for fine-tuning of numerous parameters, including Pre-flow, Initial current, Slope-up, Peak current, Base current, Slope-down, Crater current, Post-flow, Pulse duty, AC frequency, AC balance, and Pulse frequency. An intelligent automatic save function ensures that your last used welding parameters are retained, allowing you to resume work without reconfiguring settings.

PRECISION PARAMETER SETTING



Adjusting these parameters allows for optimal control over the welding process for various materials and applications.

5. SETUP

Before connecting the welder, ensure your workspace is clean, well-ventilated, and free of flammable materials. Always wear appropriate personal protective equipment (PPE).

5.1. Power Connection (Dual Voltage)

The AZZUNO AC/DC TIG Welder 200A supports both 110V and 220V input voltages. Use the provided adapter cord to connect to the appropriate power supply. The machine automatically detects the input voltage.



The welder automatically adapts to 110V or 220V power sources, allowing for versatile use.

5.2. Gas Connection (TIG Welding)

1. Connect the argon gas hose to the gas inlet on the rear of the welder.
2. Attach the other end of the gas hose to the argon gas regulator.
3. Connect the argon gas regulator to your argon gas cylinder. Ensure all connections are secure to prevent gas leaks.

5.3. Torch and Ground Clamp Connection

The connection method varies slightly between TIG and Stick welding modes:

- **For TIG Welding (DCEN - Direct Current Electrode Negative):**
Connect the TIG torch to the negative (-) terminal and the ground clamp to the positive (+) terminal.
- **For Stick Welding (DCEP - Direct Current Electrode Positive):**
Connect the electrode holder to the positive (+) terminal and the ground clamp to the negative (-) terminal.



Proper connection of the TIG torch, electrode holder, and ground clamp is crucial for correct operation in TIG and Stick modes.

5.4. Foot Pedal (Optional)

If using an optional foot pedal (sold separately), connect it to the dedicated Foot Pedal Terminal on the front panel.

6. OPERATING INSTRUCTIONS

Once the welder is properly set up, you can begin operation. Always refer to the control panel for current settings and indicators.

6.1. Selecting Welding Mode

Use the control knob/button to navigate through the welding modes (AC TIG, DC TIG, MMA) displayed on the digital screen. Select the appropriate mode for your material and application.

MULTI-FUNCTIONAL TIG/MMA WELDING

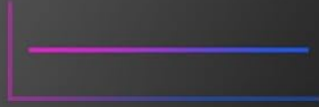
TIG AC



TIG AC PULSE



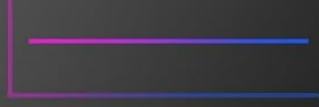
TIG DC



TIG DC PULSE



MMA



MMA SPOT



The welder offers multiple TIG and MMA welding functions, each with distinct waveform characteristics.

6.2. Adjusting Parameters

After selecting the welding mode, use the control knob to adjust specific parameters. The digital display will show the value being adjusted. Parameters include:

- **Pre-flow:** Time gas flows before arc ignition.
- **Initial Current:** Starting current for the weld.

- **Slope-up:** Time for current to ramp up to peak.
- **Peak Current (I1):** Maximum welding current.
- **Base Current (I2):** Minimum current during pulse cycle.
- **Slope-down:** Time for current to ramp down from peak.
- **Crater Current:** Current at the end of the weld to fill the crater.
- **Post-flow:** Time gas flows after arc extinction to protect the weld puddle.
- **Pulse Duty:** Percentage of time at peak current during pulse.
- **AC Frequency:** Controls arc cone width and direction in AC TIG.
- **AC Balance:** Controls cleaning action vs. penetration in AC TIG.
- **Pulse Frequency:** Number of pulses per second.

6.3. TIG Trigger Modes (2T, 4T, SPOT)

Select the desired trigger mode for TIG welding:

- **2T (Two-Touch):** Press and hold the torch trigger to start the arc; release to stop.
- **4T (Four-Touch):** Press and release to start the arc; press and release again to stop. Ideal for long welds.
- **SPOT:** For timed, consistent spot welds.

6.4. Welding Aluminum with Pulse TIG

The Pulse TIG function is particularly effective for welding aluminum, providing enhanced control over heat input and resulting in cleaner, more aesthetically pleasing welds. Experiment with Pulse Duty and Pulse Frequency to achieve desired results.

IDEAL TIG WELDER FOR ALUMINUM



Aluminum
110V 5/32" (4.0MM)



Aluminum
220V 5/16" (8.0MM)

The welder is optimized for aluminum welding, producing high-quality weld beads at various thicknesses.

7. MAINTENANCE

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

- **Cleaning:** Regularly clean the exterior of the machine with a dry cloth. Use compressed air to clear dust from ventilation openings. Ensure the machine is unplugged before cleaning.
- **Torch and Cable Inspection:** Inspect the TIG torch, electrode holder, ground clamp, and all cables for signs of wear, damage, or loose connections before each use. Replace damaged components immediately.
- **Consumables:** Regularly check and replace TIG torch consumables (tungsten electrodes, collets, nozzles) as they wear out to maintain arc stability and weld quality.
- **Storage:** Store the welder in a dry, clean environment, away from excessive dust, moisture, and corrosive substances.

8. TROUBLESHOOTING

This section addresses common issues you might encounter. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Welder does not power on.	No power supply; loose power cord; tripped circuit breaker.	Check power outlet and connections. Reset circuit breaker. Ensure adapter cord is fully inserted.
No arc or weak arc.	Improper ground connection; incorrect current setting; worn or contaminated tungsten/electrode; gas flow issue (TIG).	Ensure ground clamp has good contact. Adjust current. Clean or replace tungsten/electrode. Check gas cylinder and regulator.
AC TIG not working (e.g., on aluminum).	Incorrect AC balance or frequency settings; wrong tungsten type for AC; material contamination.	Adjust AC balance and frequency. Use pure tungsten or zirconiated tungsten for AC. Clean aluminum surface thoroughly.
Overheat indicator light is on.	Exceeded duty cycle; obstructed ventilation; high ambient temperature.	Allow machine to cool down. Ensure proper ventilation around the unit. Reduce welding time or current.
Poor weld quality (porosity, lack of penetration).	Insufficient gas shielding; incorrect travel speed; improper current/voltage settings; contaminated base metal.	Check gas flow rate and connections. Adjust travel speed. Optimize welding parameters. Clean workpiece.

9. TECHNICAL SPECIFICATIONS

Below are the detailed technical specifications for the AZZUNO AC/DC TIG Welder 200A (Model: ACDC-200).

SPECIFICATION

MODEL AC/DC200F		EN60974-1:2018			
	U ₀ =62V	U ₁ =110V~			
		10A/10.4V~120A/14.8V			
		X(%)	40	60	100
		I ₂ (A)	120	80	60
	U ₀ =62V	U ₁ =220V~			
		10A/10.4V~200A/18V			
		X(%)	40	60	100
		I ₂ (A)	200	160	120
	U ₀ =62V	U ₁ =110V~			
		I _{max} =23.3A I _{eff} =14.7A			
		U ₁ =220V I _{max} =27A I _{eff} =17A			
		20A/20.8V~120A/24.8V			
	U ₀ =62V	20A/20.8V~160A/26.4V			
		X(%)	40	60	100
		I ₂ (A)	160	100	80
		U ₂ (V)	26.4	24	23.2
	1-50/60 Hz	U ₁ =110V~			
		I _{max} =45A I _{eff} =25A			
		U ₁ =220V I _{max} =32A I _{eff} =20A			
		20A/20.8V~120A/24.8V			



Detailed electrical and performance specifications for the welder.

Specification	Value
Model Number	ACDC-200-2
Dimensions (L x W x H)	14.5 x 6.7 x 9 inches
Item Weight	17 pounds
Input Voltage	110V/220V (Dual Voltage)
Welding Processes	AC TIG, AC Pulsed TIG, DC TIG, DC Pulsed TIG, Spot TIG, Stick, Spot Stick
Max Output Current	200A
Control System	MCU Digital Control

10. WARRANTY AND SUPPORT

AZZUNO products are manufactured to high-quality standards. For information regarding warranty coverage, please refer to the warranty card included with your product or visit the official AZZUNO website. For technical support, troubleshooting assistance, or to inquire about replacement parts, please contact AZZUNO customer service through the contact information provided on the product packaging or the official brand store.

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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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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