

HITBOX ARC200D

HITBOX ARC200D Mini 2-in-1 Stick/Lift TIG Welder Instruction Manual

Model: ARC200D

1. SAFETY INFORMATION

Always prioritize safety when operating welding equipment. Failure to follow safety guidelines can result in serious injury or death. This section outlines general safety precautions; always refer to local safety regulations and standards.

- **Electric Shock:** Welding current can cause fatal electric shock. Ensure proper grounding, wear dry welding gloves, and insulate yourself from the workpiece and ground. Never touch live electrical parts.
- **Fumes and Gases:** Welding produces fumes and gases that can be hazardous to health. Work in a well-ventilated area or use an approved respirator. Keep your head out of the fumes.
- **Arc Rays:** Arc rays can burn eyes and skin. Always wear a welding helmet with appropriate shade lenses and protective clothing (long sleeves, heavy gloves). Protect bystanders with welding screens.
- **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.
- **Burns:** Hot metal and slag can cause severe burns. Wear protective clothing and allow welded materials to cool before handling.

For detailed safety information, consult relevant industry standards and local safety authorities.

2. PRODUCT OVERVIEW

The HITBOX ARC200D Mini is a versatile 2-in-1 welding machine designed for both MMA (Stick) welding and Lift TIG welding. It features dual voltage compatibility (110V/220V) with automatic matching, synergistic control for simplified parameter setting, and advanced functions like Hot Start, Arc Force, and Anti-Stick. Its compact and lightweight design enhances portability for various applications.



Figure 2.1: The HITBOX ARC200D Mini Welder demonstrating its 2-in-1 ARC/MMA and Lift TIG capabilities.

Key Features:

- **2-in-1 Welding:** Supports MMA (Stick) and Lift TIG welding processes.
- **Dual Voltage:** Automatically adapts to 110V or 220V input power.
- **Synergic Control:** Simplifies current adjustment by automatically matching workpiece thickness and rod size.
- **Advanced Functions:** Includes Hot Start, Arc Force, and Anti-Stick for improved arc stability and performance.
- **Digital Display:** Intelligent LCD for easy operation, displaying welding current and alarm LEDs.
- **Portable Design:** Ultra-mini and lightweight with an adjustable shoulder strap for easy transport.
- **Safety Protections:** Built-in protection against overheating and overcurrent.

PANEL INTRODUCTION

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CURRENT ADJUST
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Figure 2.2: Front panel introduction of the ARC200D Mini, highlighting the digital display and control knob.

3. SETUP

Before operating the welder, ensure proper setup to guarantee safety and optimal performance.

3.1 Unpacking and Inspection

- Carefully remove the welder and all accessories from the packaging.
- Inspect the machine for any visible damage that may have occurred during shipping. Do not operate if damaged.
- Verify that all components listed in the packing list are present.

3.2 Power Connection

- The ARC200D Mini automatically detects and adapts to 110V or 220V input power.
- Connect the power cord to a suitable power outlet. Ensure the outlet is properly grounded and can

supply the required amperage (e.g., 20A for 110V, 30A for 220V for optimal performance).

- Turn on the main power switch located on the rear of the machine. The digital display should illuminate.

3.3 Connecting Welding Cables

- **Ground Clamp:** Connect the ground clamp cable to the negative (-) terminal on the front panel. Securely attach the ground clamp to the workpiece or a sturdy metal workbench that is in direct contact with the workpiece. Ensure a clean, bare metal connection for good conductivity.
- **Electrode Holder (MMA):** For MMA (Stick) welding, connect the electrode holder cable to the positive (+) terminal on the front panel. Insert the welding electrode into the holder.
- **TIG Torch (Lift TIG):** For Lift TIG welding, connect the TIG torch (not included) to the negative (-) terminal. Connect the ground clamp to the positive (+) terminal. Ensure the TIG torch has a gas connection if using shielding gas (though Lift TIG can be performed without gas for certain applications).

4. OPERATING INSTRUCTIONS

The ARC200D Mini offers two welding modes: MMA (Stick) and Lift TIG.

4.1 MMA (Stick) Welding

- **Mode Selection:** The machine defaults to MMA mode. If in Lift TIG mode, press the control knob for 5 seconds to switch back.
- **Current Adjustment:** Rotate the control knob to adjust the welding current. The synergistic function will assist in setting appropriate parameters based on the selected electrode size (1.6mm to 3.2mm, or 1/8 inch). The LCD will display the current.
- **Hot Start:** This function provides an initial surge of current to help ignite the arc easily, especially with difficult-to-start electrodes. It is automatically engaged.
- **Arc Force:** This feature automatically increases the current when the arc length becomes too short, preventing the electrode from sticking to the workpiece. It is automatically engaged.
- **Anti-Stick:** If the electrode does stick, the Anti-Stick function reduces the current to prevent overheating and allow for easy removal of the electrode.
- **Welding Procedure:** Hold the electrode at a slight angle to the workpiece. Strike the arc by lightly touching and quickly lifting the electrode. Maintain a consistent arc length and travel speed to create a uniform weld bead.

4.2 Lift TIG Welding

Lift TIG welding provides a cleaner weld and more precise control compared to MMA, especially for thinner materials.

- **Mode Selection:** To activate Lift TIG mode, press and hold the control knob for approximately 5 seconds until the display indicates TIG mode.
- **Current Adjustment:** Rotate the control knob to set the desired welding current for TIG.
- **Welding Procedure:** With the TIG torch connected and the tungsten electrode installed, gently touch the tungsten to the workpiece. Lift the tungsten slightly (approximately 1-3mm) to initiate the arc. Maintain a consistent arc length and feed filler rod (if required) into the weld puddle.
- **Gas Shielding:** For optimal TIG welding results, use an inert shielding gas (e.g., Argon) with a TIG torch

equipped for gas flow. Connect the gas hose from the regulator to the TIG torch.

5. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your HITBOX ARC200D Mini welder.

- **Cleaning:** Periodically clean the exterior of the machine with a dry, soft cloth. Use compressed air to blow out dust and debris from the ventilation openings, ensuring the cooling fan operates efficiently. Perform this with the power disconnected.
- **Cable Inspection:** Regularly inspect welding cables, electrode holder, and ground clamp for damage, fraying, or loose connections. Replace any damaged components immediately.
- **Terminal Connections:** Ensure all cable connections to the welder terminals are tight and secure. Loose connections can cause overheating and poor performance.
- **Storage:** Store the welder in a clean, dry environment, away from excessive dust, moisture, and corrosive materials.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
No power/Display off	Power cord disconnected, main switch off, circuit breaker tripped.	Check power cord, turn on main switch, reset circuit breaker.
No arc/Weak arc	Poor ground connection, incorrect current setting, damp electrode, damaged cables.	Ensure clean, secure ground. Adjust current. Use dry electrodes. Inspect and replace cables.
Overheat alarm (LED on)	Exceeded duty cycle, blocked ventilation, high ambient temperature.	Allow machine to cool down. Clear ventilation openings. Operate in a cooler environment.
Electrode sticks frequently	Low current, incorrect arc length, Anti-Stick not functioning.	Increase current. Maintain proper arc length. Ensure Anti-Stick is active.
Poor weld quality	Incorrect current, improper travel speed/angle, dirty workpiece.	Adjust current. Practice technique. Clean workpiece thoroughly.

The ARC200D Mini has built-in protection against overheating and overcurrent. If an alarm LED illuminates, allow the machine to cool or check for obstructions before resuming operation.

7. SPECIFICATIONS

Detailed technical specifications for the HITBOX ARC200D Mini Welder.



Figure 7.1: Product parameters and dimensions of the ARC200D Mini.

Parameter	Value
Model Number	ARC200D
Input Voltage	110V/220V (Automatic Matching)
Output Current (110V)	10-165A
Output Current (220V)	10-200A
Power Source Type	DC
Wattage	5 KW
Suitable Welding Rods	1.6mm - 3.2mm (1/8 inch)
Dimensions (L x W x H)	28.7 x 19.3 x 17.78 cm (Approx. 9 x 5 x 4 inches)
Weight	3.58 kg (Approx. 4.4 lbs)
Included Components	Stick Welder (main unit)



Figure 7.2: The compact size and weight of the ARC200D Mini, weighing 4.4 lbs.

8. WARRANTY AND SUPPORT

HITBOX stands behind the quality of its products.

8.1 Warranty Information

All HITBOX products, including the ARC200D Mini Welder, come with a **one-year warranty** from the date of purchase. This warranty covers manufacturing defects and ensures that your product performs as intended under normal use.

The warranty does not cover damage caused by misuse, unauthorized modifications, improper maintenance, or normal wear and tear.

8.2 Customer Support

If you encounter any problems with your HITBOX ARC200D Mini Welder or have questions regarding its operation, please contact HITBOX customer support. Our team is committed to providing efficient after-sales

service and will respond to inquiries within 24 hours.

Please have your product model number (ARC200D) and purchase details ready when contacting support to facilitate a quicker resolution.