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> AZZUNO MIG-145L Welder Instruction Manual

AZZUNO MIG-145L

AZZUNO MIG-145L Welder Instruction Manual

Model: MIG-145L | Brand: AZZUNO

1. INTRODUCTION

Thank you for choosing the AZZUNO MIG-145L Welder. This versatile 4-in-1 welding machine is designed for various welding applications, offering Gas MIG, Gasless Flux Core MIG, Lift TIG, and Stick welding capabilities. It operates on both 110V and 220V input power, providing flexibility for different work environments. This manual provides essential information for safe and effective operation, setup, and maintenance of your new welder.



Figure 1.1: The AZZUNO MIG-145L Welder, showcasing its compact design and the included solid MIG welding wire spool.

2. SAFETY INFORMATION

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

- **Electric Shock Can Kill:** Do not touch live electrical parts. Wear dry insulating gloves and protective clothing. Insulate yourself from work and ground.
- **Fumes and Gases Can Be Dangerous:** Keep your head out of the fumes. Use ventilation or exhaust to remove fumes from the breathing zone.
- **Arc Rays Can Burn Eyes and Skin:** Wear a welding helmet with a proper shade of filter to protect your face and eyes when welding or watching. Wear appropriate eye protection with side shields when not welding. Wear protective clothing made from durable, flame-resistant material.
- **Fire and Explosion Hazard:** Protect yourself and others from flying sparks and hot metal. Remove all flammables within 35 feet (10.7 m) of the welding arc. Have a fire extinguisher nearby.
- **Read the Entire Manual:** Before operating the welder, read and understand all instructions and safety warnings in this manual.

3. PACKAGE CONTENTS

Upon unpacking, please verify that all items listed below are present and undamaged. If any items are missing or damaged, contact AZZUNO customer support immediately.

- AZZUNO MIG-145L Welder Unit
- 0.030" x 1 Flux Cored Wire (2LBS)
- 0.030" x 2 Solid Wire (2LBS each)
- 14AK MIG Torch x 1
- Electrode Holder x 1
- Ground Clamp x 1
- Gas Hose x 1
- Hose Band x 2
- Contact Tips x 2
- V-groove Drive Roller x 1
- Brush & Hammer x 1
- 110V~220V Adapter x 1
- User Manual x 1 (this document)

ACCESSORIES



Electrode Holder



Ground Clamp



MIG Torck (14AK)



Contact Tip*2



Hose Band*2



Drive Roller



Hammer

13LBS



Gas Hose



**Flux Wire*1
Solid Wire*1**



**110V~220V
Adapter Cord**

Figure 3.1: A visual representation of the accessories included in the AZZUNO MIG-145L Welder package, such as the MIG torch, electrode holder, ground clamp, and various wires.

4. PRODUCT FEATURES

The AZZUNO MIG-145L Welder is equipped with advanced features to enhance your welding experience:

- **4-in-1 Welding Modes:** Supports Gas MIG, Gasless Flux Core MIG, Lift TIG, and Stick welding.
- **Dual Voltage Input:** Compatible with both 110V and 220V power supplies.

- **Large Clear LED Display:** An oversized screen provides crystal-clear visibility for intuitive operation and quick setting adjustments.
- **Synergic Control (SYN):** Automatically adjusts welding parameters for optimal performance, simplifying setup for various materials and thicknesses.
- **Welding Modes (2T/4T/SPOT):** Offers manual (2T), continuous (4T), and timed (SPOT) welding options to cater to diverse requirements.
- **Wire Feed Button:** A dedicated button for quick and easy wire feeding.
- **Portable Design:** Compact size (5.7" x 15" x 8.8") and lightweight (13 lbs) for easy transport.

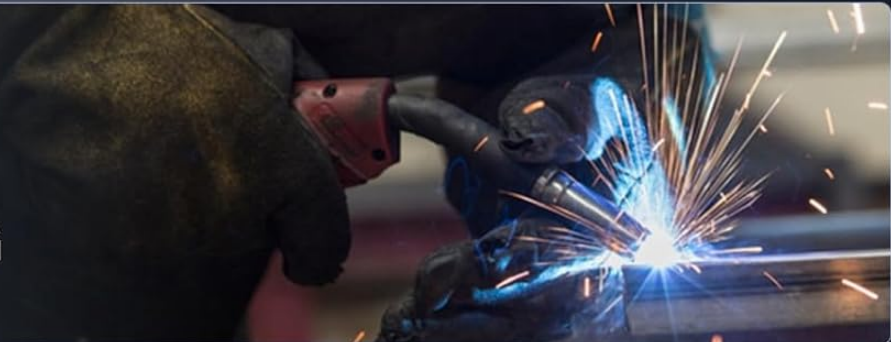
4-IN-1 WELDER



FLUX MIG



GAS MAG



STICK



LIFT TIG



Figure 4.1: The 4-in-1 functionality of the welder, showing Flux MIG, Gas MAG, Stick, and Lift TIG welding processes.

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4-IN-1 Multi-function

110V $\swarrow \searrow$ 220V
Dual Voltage Supply

Large LED Display

2T/4T/SPOT Functions

OTHERS

Only Flux MIG

Only 110V

Digital Display

NO 2T/4T/SPOT Function

Figure 4.2: A comparison highlighting the AZZUNO MIG-145L's superior features like 4-in-1 multi-functionality, dual voltage supply, large LED display, and 2T/4T/SPOT functions.

5. SETUP

5.1 Power Connection

- Ensure the welder is turned off before connecting to power.

- The AZZUNO MIG-145L supports both 110V and 220V input. Use the provided adapter if converting from 220V to 110V.
- Connect the power cord to a suitable grounded electrical outlet.

5.2 Wire Installation (MIG/Flux Core)

1. Open the wire feed compartment cover.
2. Place the wire spool onto the spool holder, ensuring it rotates freely.
3. Thread the wire through the guide tube and into the drive roller mechanism.
4. Adjust the drive roller tension to prevent slipping or crushing the wire. The V-groove drive roller is included for optimal feeding.
5. Close the wire feed compartment cover.
6. Press and hold the WIRE FEED BUTTON to feed the wire through the MIG torch liner until it exits the contact tip.

WIRE FEEDING SYSTEM

Ensures smooth and consistent wire feeding for stable arc performance and high-quality welds.

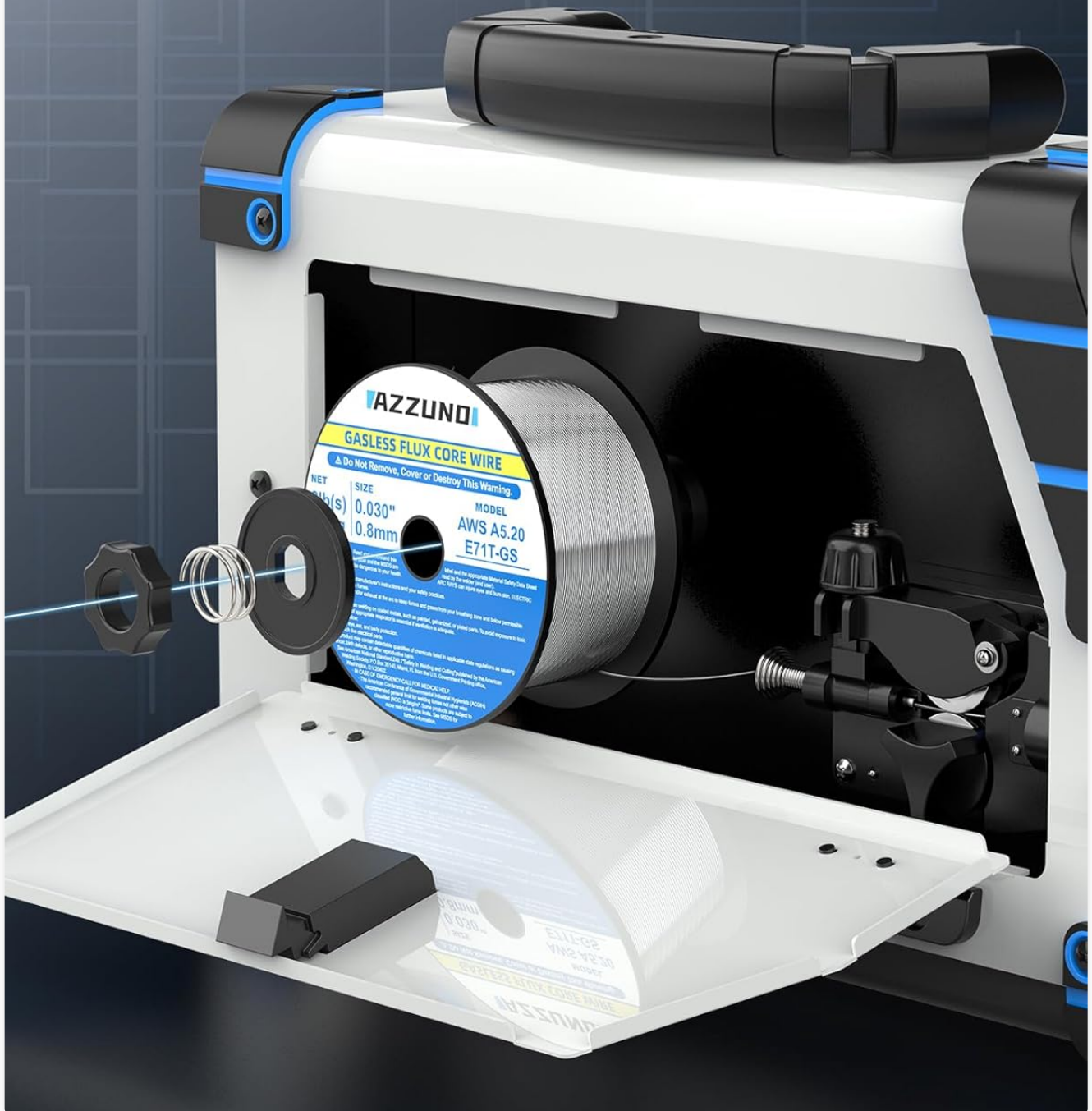


Figure 5.1: The internal wire feeding system, designed for smooth and consistent wire delivery for stable arc performance.

5.3 Gas Connection (Gas MIG)

- For Gas MIG welding, connect your shielding gas cylinder (e.g., CO₂/Argon mix) to the gas inlet on the rear of the welder using the provided gas hose and hose bands.
- Ensure all connections are tight to prevent gas leaks.

5.4 Connecting Accessories

- Connect the MIG torch to the appropriate connector on the front panel for MIG/Flux Core welding.
- Connect the electrode holder for Stick welding or the TIG torch (not included) for Lift TIG welding to their

respective terminals.

- Attach the ground clamp to the workpiece, ensuring a clean, bare metal connection for proper electrical circuit.

6. OPERATING INSTRUCTIONS

6.1 Control Panel Overview

The large LED display and intuitive controls allow for easy adjustment of welding parameters.

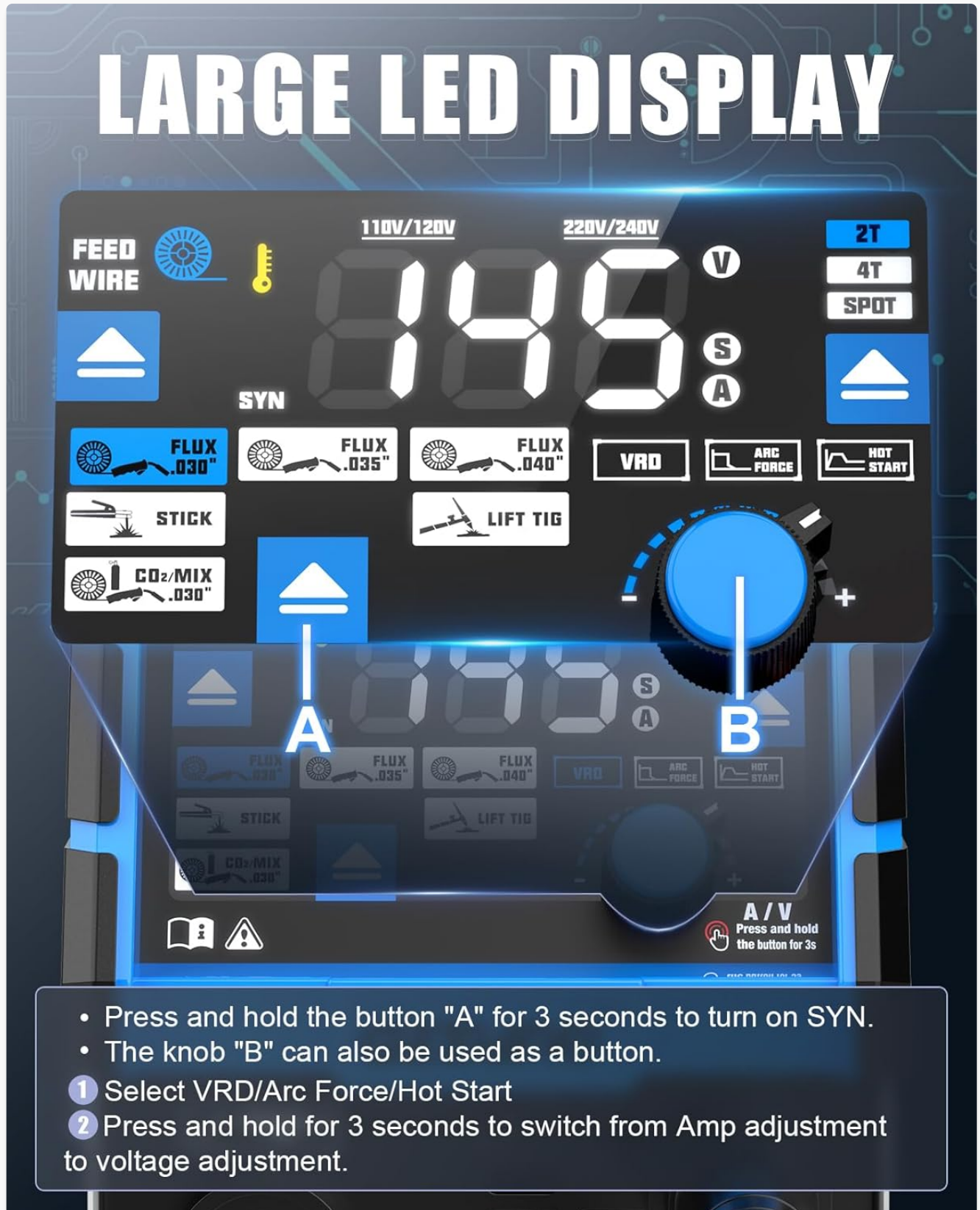


Figure 6.1: The upgraded oversized LED screen, providing clear visibility and intuitive controls for setting adjustments.

- **Power On/Off:** Use the main power switch located on the rear of the unit.
- **Mode Selection:** Use the buttons on the control panel to select between Flux MIG, Gas MIG, Stick, and Lift TIG modes.
- **Synergic Control (SYN):** Press and hold button "A" for 3 seconds to activate/deactivate Synergic mode. In SYN mode, the machine automatically sets optimal parameters.
- **Parameter Adjustment:** Use the knob "B" to adjust amperage or voltage. Press and hold "A/V" button for 3 seconds to switch between Amp and Voltage adjustment.
- **2T/4T/SPOT Settings:** Select these modes based on your welding needs.
 - **2T (Two-Touch):** Press and hold the trigger to weld, release to stop.
 - **4T (Four-Touch):** Press trigger to start, release, press again to stop. Ideal for long welds.
 - **SPOT:** For timed spot welds. Spot time can be adjusted.

2T/4T/SPOT SETTINGS

cater to diverse welding requirements.



⤴ **2T** ⤵
HOLD ——— RELEASE

⤴⤵ **4T** ⤴⤵
OPEN ——— CLOSE

Spot time can be
adjusted
----- **SPOT**

Figure 6.2: Explanation of 2T, 4T, and SPOT settings, which cater to diverse welding requirements.

6.2 Welding Process (General)

1. Ensure proper safety gear is worn (welding helmet, gloves, protective clothing).
2. Prepare the workpiece by cleaning off any rust, paint, or contaminants.
3. Select the appropriate welding mode and adjust parameters (amperage, voltage, wire speed) based on material thickness and type. Use Synergic mode for simplified settings.
4. Position the ground clamp securely on the workpiece.
5. Begin welding, maintaining a consistent arc length and travel speed.

6. After welding, allow the workpiece to cool before handling.

ALL POSITION WELDING



Figure 6.3: Examples of all-position welding capabilities, including Flat, Vertical, Up, and Corner welding.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your AZZUNO MIG-145L Welder.

- **Cleanliness:** Keep the welder clean and free from dust, metal particles, and moisture. Use compressed air to blow out internal components periodically.
- **Torch and Cable Inspection:** Regularly inspect the MIG torch, electrode holder, ground clamp, and all cables for signs of wear, damage, or loose connections. Replace worn parts immediately.
- **Contact Tip and Nozzle:** For MIG welding, regularly clean or replace the contact tip and nozzle as they are consumable parts and affect arc stability.
- **Drive Rollers:** Check the drive rollers for wear and ensure they are clean and free of debris to maintain consistent wire feeding.
- **Storage:** Store the welder in a dry, clean environment when not in use.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter. For problems not listed here, please contact AZZUNO customer support.

- **No Power:**

- Check if the power cord is securely plugged into a live outlet.
- Verify the main power switch on the welder is in the 'ON' position.
- Check the circuit breaker or fuse in your electrical panel.

- **No Arc:**

- Ensure the ground clamp is securely attached to bare metal on the workpiece.
- Check all cable connections (torch, electrode holder, ground clamp) for tightness.
- Verify the correct welding mode is selected.

- **Poor Wire Feeding (MIG/Flux Core):**

- Check drive roller tension; it should be firm enough to feed wire without slipping but not too tight to deform the wire.
- Inspect the contact tip for blockage or wear; replace if necessary.
- Ensure the wire spool is installed correctly and rotates freely.
- Check the MIG torch liner for kinks or debris.

- **Inconsistent Weld:**

- Adjust welding parameters (amperage, voltage, wire speed) to match the material and thickness.
- Ensure proper shielding gas flow (for Gas MIG).
- Maintain a consistent travel speed and arc length.

9. SPECIFICATIONS

Feature	Specification
Model	MIG-145L
Input Voltage	110V/220V Dual Voltage
Welding Processes	Gas MIG, Gasless Flux Core MIG, Lift TIG, Stick
Compatible Wire Sizes	0.030" / 0.035" / 0.040" Flux Core Wire, 0.030" Solid Wire
Compatible Electrodes	E6013 (for Stick welding)
Dimensions (L x W x H)	15" x 5.7" x 8.8"
Weight	13 LBS

Feature	Specification
Synergic Control	Yes
Welding Modes	2T, 4T, SPOT

9.1 Included Solid Welding Wire Specification

SPECIFICATION
Solid Welding Wire

4.2"

1.6"

Wire Model	ER70S-6	Wire Diameter	.030"
Net Weight	2LBS	Polarity	DCEP

Figure 9.1: Specifications for the included AZZUNO AWS ER70S-6 0.030" MIG solid welding wire, detailing its size, net weight, and polarity.

Feature	Specification
Wire Model	ER70S-6
Wire Diameter	0.030" (0.8mm)
Net Weight	2 LBS (0.9kg)

Feature	Specification
Polarity	DCEP

10. WARRANTY AND SUPPORT

AZZUNO stands behind the quality of its products. For warranty information, technical support, or service inquiries, please refer to the warranty card included with your product or visit the official AZZUNO website. Please have your product model number (MIG-145L) and purchase date ready when contacting support.

AZZUNO Official Store: [Visit AZZUNO Store on Amazon](#)



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Product specifications are subject to change without notice.