

ARCCAPTAIN ARC205

ARCCAPTAIN iControl ARC205 Pro Stick Welder Instruction Manual

Model: ARC205
Brand: ARCCAPTAIN

1. INTRODUCTION AND OVERVIEW

The ARCCAPTAIN iControl ARC205 Pro Stick Welder is a versatile 2-in-1 welding machine designed for both ARC (MMA) and Lift TIG welding. Featuring an enhanced MCU integrated with digital technology, it provides precise control over welding parameters, ensuring stable and consistent arcs for superior weld quality. Its large LED display and APP control functionality offer convenient operation and real-time monitoring. This welder supports both 120V and 240V input voltages, making it adaptable for various work environments. It is equipped with multiple safety features including VRD function, over current, over voltage, overload, and overheating protection.



Figure 1.1: ARCCAPTAIN iControl ARC205 Pro Stick Welder.

This image shows the compact and portable design of the ARCCAPTAIN iControl ARC205 Pro Stick Welder, highlighting its main features and control panel.

Your browser does not support the video tag.

Video 1.1: Overview of the ARCCAPTAIN iControl Arc205 Pro Stick Welder. This video demonstrates the key features and capabilities of the welding machine.

2. SAFETY INFORMATION

Always prioritize safety when operating welding equipment. This machine includes several built-in safety features:

- **VRD Function:** Voltage Reduction Device for enhanced safety, especially in damp conditions.
- **Over Current Protection:** Prevents damage from excessive current.
- **Over Voltage Protection:** Safeguards against high voltage spikes.
- **Overload Protection:** Protects the machine from excessive load.
- **Overheating Protection:** Automatically shuts down the machine if internal temperatures become too high, indicated by a smart fan and new cooling system.

Ensure proper ventilation, wear appropriate personal protective equipment (PPE) including welding helmet, gloves, and protective clothing, and follow all local safety regulations. Do not operate the machine if any components are damaged.



Figure 2.1: Visual representation of the welder's safety features, including alarm function, VRD, multiple protection, and smart fan.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1x ARCCAPTAIN ARC205 Pro Stick Welder
- 1x 10ft Electrode Holder
- 1x 10ft Ground Clamp
- 1x 240V to 120V Power Adapter
- 1x Dust Cover
- 1x Wire Brush
- 1x Shoulder Strap

- 10x E6013 Welding Rods

READY TO WELDING



Figure 3.1: All components included in the ARCCAPTAIN ARC205 Pro Stick Welder package.

4. SETUP

4.1 Power Connection

The ARC205 Pro supports both 120V and 240V power inputs. Use the provided 240V to 120V power adapter if connecting to a 120V outlet. The machine automatically detects the input voltage.

- For 120V: Current range 20A-150A.
- For 240V: Current range 20A-205A.

4.2 Connecting Accessories

Connect the 10ft Electrode Holder and 10ft Ground Clamp to the appropriate terminals on the front of the welder. Ensure connections are secure.

4.3 APP Control Setup

The iControl feature allows for mobile phone connectivity. Download the ARCCAPTAIN APP to adjust parameters within a 15m range, monitor machine status, select welding modes, and access FAQs. This feature is beneficial for both beginners and for machine maintenance.



Figure 4.1: Demonstrating the APP control feature for the ARCCAPTAIN welder.

The image shows a user interacting with the mobile app to control welding parameters.

Your browser does not support the video tag.

Video 4.1: Detailed demonstration of the ARCCAPTAIN iControl ARC205 Pro Stick Welder with APP Control. This video illustrates how to connect and use the mobile application for welding operations.

5. OPERATING INSTRUCTIONS

5.1 MMA (Stick) Welding

The ARC205 Pro is suitable for most 6010, 6011, 6013, and 7018 rods. It features adjustable hot start and arc force for

easier striking and smoother welds. Automatic anti-stick prevents electrode sticking.

- **Hot Start:** Adjustable feature to provide an initial boost of current for easier arc ignition.
- **Arc Force:** Adjustable feature to prevent the electrode from sticking and maintain arc stability.
- **Anti-Stick:** Automatically reduces current if the electrode sticks, allowing for easy removal.

5.2 Lift TIG Welding

The machine supports Lift TIG welding. A TIG torch is not included and must be purchased separately. Ensure proper gas flow settings for Lift TIG operations.

5.3 Automatic Current Matching (SYN Mode)

For ease of use, especially for beginners, select the electrode diameter or workpiece thickness, and the welder will automatically match the appropriate current and voltage. You can also manually adjust the current as needed.

5.4 LED Display

The newly upgraded LED interface displays imperial units and features fewer buttons for easier adjustment and data viewing without removing your helmet.

PERFECT FOR BEGINNERS

Get started in seconds by auto matching current

① SYN mode → ② Electrode diameter-5/32 → ③ Start weld



Figure 5.1: Close-up view of the welder's large LED display, showing current settings and electrode diameter options.

PLATE THICKNESS ADJUSTABLE

Automatically match the current by workpiece thickness



Figure 5.2: Illustration of automatic current matching based on workpiece thickness.

Table 5.1: MMA and Lift TIG Welding Parameters

MMA (Stick) Welding				Lift TIG Welding			
Electrode Diameter mm(inch)	Plate thickness mm(inch)	Recommended Welding Current(A)	Recommended welding voltage(V)	Electrode diameter mm(inch)	Plate thickness mm(inch)	Welding Current (A)	Gas flow (L/min)
1.6mm 1/16	1-2.5mm 0.04-0.11	30-65	21.2-22.8	1mm 1/32	1mm 0.04"	20-50	5
2.0mm 2/25	2.3-4mm 0.9-0.16	49-94	21.6-23.6	1mm 1/32	2mm 0.08"	51-80	6
2.4mm 3/32	3.5-4.5mm 0.14-0.18	78-123	22-24	1.6mm 1/16	3mm 0.12"	81-120	7

MMA (Stick) Welding				Lift TIG Welding			
Electrode Diameter mm(inch)	Plate thickness mm(inch)	Recommended Welding Current(A)	Recommended welding voltage(V)	Electrode diameter mm(inch)	Plate thickness mm(inch)	Welding Current (A)	Gas flow (L/min)
3.2mm 1/8	4.8-8.3mm 0.19-0.33	99-177	22.8-26	1.6mm 1/16	4mm 0.16"	121-165	8
4.0mm 5/32	8.6-10mm 0.34-0.39	178-205	25.6-27.2	2.4mm 3/32	5mm 0.20"	166-205	9

This table provides recommended parameters for both MMA and Lift TIG welding based on electrode diameter and plate thickness.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your ARCCAPTAIN welder.

- **Cooling System:** The machine is equipped with a smart fan and new cooling system for efficient heat dissipation. Ensure the air vents are clear of obstructions to maintain proper airflow.
- **Dust Cover:** Use the provided dust cover when the machine is not in use to keep it clean and tidy, preventing dust and debris from entering internal components.
- Regularly inspect cables and connections for any signs of wear or damage.
- Clean the exterior of the machine with a dry cloth.

2024 NEWEST STICK WELDER

Combination of MCU and digital control



80% ↑ Improved Heat Dissipation

50% ↑ Extended machine life

30% ↓ Reduced welder weight

Figure 6.1: Internal view highlighting the efficient heat dissipation and cooling system of the welder.

7. TROUBLESHOOTING

For common issues, refer to the FAQ section within the ARCCAPTAIN APP. The APP supports real-time detection and monitoring of welding machine status, which can assist in diagnosing problems.

- If the machine does not power on, ensure it is properly connected to a suitable power source (120V or 240V) and the power switch is in the 'ON' position.
- If the arc is unstable, check electrode type, current settings, and ensure proper grounding.
- If the machine overheats, allow it to cool down. Ensure proper ventilation and clear any obstructions from the fan and vents.

8. SPECIFICATIONS

Specification	Detail
Manufacturer	ARCCAPTAIN
Part Number	arc205pro
Item Weight	14.45 pounds
Package Dimensions	14.92 x 12.91 x 6.93 inches
Country of Origin	China
Item Model Number	ARC205
Size	ARC205 Pro Stick Welder
Power Source	Electric Corded
Batteries Included?	No
Batteries Required?	No
First Available Date	May 15, 2024

INTERNATIONAL AUTHORITIES CERTIFIED



Figure 8.1: Certifications and test reports for the ARCCAPTAIN welder, including TUV and ANSI standards.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official ARCCAPTAIN website or contact their customer service. Ensure you retain your proof of purchase for any warranty claims.

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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