

SUNSTONE Orion PJ

SUNSTONE Orion PJ Elite Pulse Arc Welder with Microscope Arm User Manual

Model: Orion PJ

1. INTRODUCTION

This manual provides essential instructions for the safe and effective operation and maintenance of your SUNSTONE Orion PJ Elite Pulse Arc Welder with Microscope Arm. The Orion PJ is a precision micro-welder designed specifically for permanent jewelry applications, offering seamless link closure with precise control.

2. SAFETY INFORMATION

WARNING: Always read and understand all safety warnings and instructions before operating this equipment. Failure to follow these instructions may result in electric shock, fire, serious injury, or death.

- **Eye Protection:** Always wear appropriate welding eye protection to shield against arc flash and sparks.
- **Ventilation:** Ensure adequate ventilation to avoid inhaling welding fumes.
- **Electrical Safety:** Do not operate in wet conditions. Ensure proper grounding.
- **Flammable Materials:** Keep flammable materials away from the welding area.
- **Authorized Personnel:** Only trained and authorized personnel should operate this equipment.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Orion PJ Welder/Power Supply and Stylus Hand Piece
- Microscope Arm Assembly
- Darkening Lens
- Power Cord (2 pieces)
- Shielding Gas Hose

- Electrode Vial (five 1.0 mm Electrodes)
- Fiberglass Brush
- Pulse-Arc Precision Tip Grounding Lead
- Diamond Disk for Rotary Tool
- Orion PJ User's Manual (this document)



Image 3.1: Contents of the Orion PJ Welder package, including the welder unit, stylus, microscope arm, power cords, gas hose, electrodes, brush, grounding lead, and diamond disk.

4. PRODUCT OVERVIEW

The Orion PJ welder features a compact design with an intuitive touchscreen interface for precise control. The model includes a microscope arm for enhanced visibility during delicate welding tasks.



Image 4.1: The Orion PJ Welder unit with the attached microscope arm and stylus.

4.1. Front Panel and Controls

The front panel features a touchscreen display for energy adjustment and settings, along with a power button and stylus connection port.



Image 4.2: Close-up view of the Orion PJ Welder's front panel, showing the touchscreen display with energy settings, power button, and control knob.

4.2. Rear Panel Connections

The rear panel provides connections for power, gas input, and the shutter control.



Image 4.3: Rear view of the Orion PJ Welder, highlighting the connections for gas, power (48V DC 2A), shutter, and stylus.

5. SETUP

1. **Unpacking:** Carefully remove all components from the packaging and inspect for any damage.

2. **Positioning:** Place the Orion PJ welder on a stable, level surface in a well-ventilated area.
3. **Microscope Arm Assembly:** Attach the microscope arm to the main unit as per the included diagram (not provided in this document, refer to physical manual).
4. **Power Connection:** Connect the power cord to the 'POWER 48V DC 2A' port on the rear panel and then to a suitable power outlet.
5. **Stylus Connection:** Connect the stylus hand piece to the 'STYLUS' port on the rear panel.
6. **Gas Connection:** Connect the shielding gas hose to the 'GAS' port on the rear panel and to your argon gas supply. Ensure all connections are secure to prevent leaks.
7. **Grounding Lead:** Attach the pulse-arc precision tip grounding lead to the workpiece or a suitable grounding point.

6. OPERATING INSTRUCTIONS

6.1. Power On/Off

Press the power button on the front panel to turn the unit on or off. The touchscreen display will illuminate upon startup.

6.2. Adjusting Welding Energy

The Orion PJ allows for precise energy control via its touchscreen interface. Energy can be adjusted from 1 Ws to 15 Ws in 0.5 Ws increments.

1. On the touchscreen, use the '+' and '-' buttons to increase or decrease the welding energy (J Energy).
2. Observe the displayed energy value to set the desired power level for your specific jewelry material and thickness.



Image 6.1: The touchscreen interface demonstrating energy adjustment in 0.5 Joule increments for fine-tuning welding power.

6.3. Welding Process

After setting the desired energy, position the stylus tip close to the joint of the jewelry piece. Activate the weld by pressing the foot pedal (if included) or the trigger on the stylus (if applicable). The microscope arm provides magnification for precise placement.

6.4. Customizing Display Background

The Orion PJ offers customizable display background colors to suit user preference.

CHOOSE A BACKGROUND COLOR TO MATCH YOUR BRAND OR YOUR MOOD!



Image 6.2: Various background color options for the Orion PJ welder's touchscreen display, allowing for personalization.

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Video 6.1: This video demonstrates the various screen color options available on the Sunstone Orion PJ Welder, showcasing how users can customize the display background.

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Video 6.2: An overview of the Sunstone Orion PJ Permanent Jewelry Welder, detailing its features and benefits for permanent jewelry artists.

7. MAINTENANCE

7.1. Electrode Sharpening

Regularly sharpen the welding electrodes using the provided diamond disk for the rotary tool to maintain optimal welding performance. Dull electrodes can lead to inconsistent welds.

7.2. Cleaning

Keep the welder unit, stylus, and microscope arm clean and free of dust and debris. Use a soft, dry cloth for cleaning. Avoid using abrasive cleaners or solvents.

7.3. Storage

When not in use, store the Orion PJ welder in a clean, dry environment, protected from extreme temperatures and humidity.

8. TROUBLESHOOTING

If you encounter issues with your Orion PJ welder, consider the following common solutions:

- **No Power:** Check power cord connections and ensure the power outlet is functional.
- **Inconsistent Welds:** Verify electrode sharpness, proper grounding, and gas flow. Adjust energy settings as needed.
- **Gas Flow Issues:** Ensure the gas hose is securely connected and the argon tank has sufficient gas.
- **Stylus Not Firing:** Check the stylus connection to the rear panel.

For persistent issues, contact customer support.


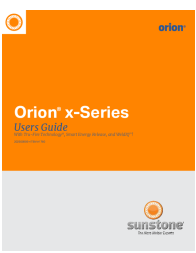
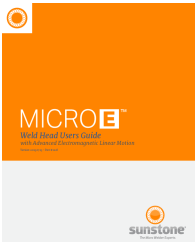

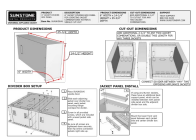
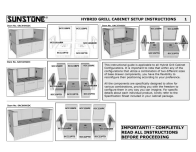
9. SPECIFICATIONS

- **Manufacturer:** Sunstone Welders
- **Item Model Number:** Orion PJ
- **Style:** Orion PJ with Microscope Arm
- **Power Source:** AC
- **Power Range:** 1 Ws to 15 Ws (in 0.5 Ws increments)
- **Weld Spot Sizes:** 0.3mm to 1.0mm
- **Product Dimensions:** 6 x 4 x 6 inches (main unit)
- **Item Weight:** 21.1 pounds
- **Material:** Orion PJ with Microscope Arm (referring to the overall product configuration)

10. WARRANTY AND SUPPORT

Sunstone Welders offers dedicated US-based support with over 15 years of industry experience. For assistance with your Orion PJ welder, including pre-purchase guidance or post-sale support, please contact us.

- **Customer Service:** Call or Text +1 801-658-0015
- **Seller:** Sunstone Welders

	<p>Sunstone Zapp User Guide: Permanent Jewelry Welder</p> <p>Comprehensive user guide for the Sunstone Zapp permanent jewelry welder, covering setup, operation, electrode care, and accessory mounting. Includes product specifications and information on related Orion models.</p>
	<p>Sunstone Orion x-Series Users Guide: Setup, Operation, and Features</p> <p>This user guide provides comprehensive instructions for setting up, operating, and maintaining the Sunstone Orion x-Series pulse arc welder, detailing its features, components, and welding procedures.</p>
	<p>Sunstone Micro E Weld Head Users Guide: Setup, Operation, and Maintenance</p> <p>Comprehensive user guide for the Sunstone Micro E Weld Head, detailing setup procedures, operational modes, maintenance instructions, and technical specifications for advanced electromagnetic linear motion micro welding applications.</p>
	<p>Sunstone Omega PA 250i User Guide: Setup, Operation, and Maintenance</p> <p>Comprehensive user guide for the Sunstone Omega PA 250i micro welder, covering setup, operation, interface overview, welding techniques, and troubleshooting. Learn to maximize your welding capabilities with this detailed manual.</p>
	<p>Sunstone 6" Jacket Divider Box Panel Installation Guide</p> <p>Instructions and specifications for installing the Sunstone 6" Jacket Divider Box Panel (Item No. SUNJKDIV6) to create jacket combinations within a single cut-out.</p>
	<p>Sunstone Hybrid Grill Cabinet Setup Instructions - Assembly Guide</p> <p>Detailed setup and assembly instructions for Sunstone Hybrid Grill Cabinets, including model numbers SAC44HGDC, SAC37HGDC, SAC52HGDC, and SAC66HGDC. Learn how to configure and install your grill cabinets with this comprehensive guide.</p>