YESWELDER MIG-185D PRO

YESWELDER MIG-185D PRO 185A Multi-Process Welder Instruction Manual

Model: MIG-185D PRO

1. Introduction

This manual provides essential instructions for the safe and effective operation, setup, and maintenance of your YESWELDER MIG-185D PRO 185A Multi-Process Welder. This versatile 5-in-1 welding machine supports Flux Core MIG, Gas MIG, Spool Gun MIG, Lift TIG, and Stick (MMA) welding processes. Please read this manual thoroughly before use to ensure proper functionality and safety.

Image 1.1: The YESWELDER MIG-185D PRO is a versatile 5-in-1 multi-process welding machine.

2. Safety Information

Welding can be hazardous. Always follow safety precautions to prevent injury or damage. Keep this manual for future reference.

- Always wear appropriate personal protective equipment (PPE), including a welding helmet, gloves, and protective clothing.
- Ensure adequate ventilation to avoid inhaling welding fumes.
- Protect bystanders from arc rays and sparks.
- Disconnect power before performing any maintenance or changing accessories.
- Do not operate the welder in damp or wet conditions.
- Ensure the work area is free from flammable materials.

3. Product Overview

3.1 Key Features

- **5-in-1 Multi-Process Welding:** Supports Flux Core MIG, Gas MIG, Spool Gun MIG, MMA (Stick),

and Lift TIG welding.

- **Aluminum MIG Welding Capability:** Can perform aluminum welds, requiring an additional aluminum spool gun (sold separately).
- **185A Robust Power:** Provides reliable and stable welding performance.
- **Wire Compatibility:** Works with 2LB/10LB welding wires of 0.6/0.8/1.0/1.2 mm.
- **Synergic MIG Control:** Automatically calibrates voltage to a recommended value when wire feed speed is adjusted, ideal for beginners.
- **Manual MIG Control:** Allows manual adjustment of wire feed speed and voltage for experienced users.
- **Advanced Arc Welding Functions:** Adjustable Hot Start, Arc Force, and Anti-Stick features.
- **Digital Display & Portability:** Advanced digital display for clear operation and a compact, 8.9 kg design with a carrying handle for easy transport.
- **Enhanced Safety Protections:** Includes automatic voltage fluctuation compensation, overcurrent, overload, and overheating protection. Features gas pre and post-flow control and 2T/4T switching mode.

3.2 Control Panel and Components

Familiarize yourself with the welder's control panel and included accessories.

Image 3.1: Overview of the MIG-185D PRO control panel with numbered functions.

Image 3.2: Standard accessories included with the MIG-185D PRO welder.

4. Setup

4.1 Power Connection

Connect the welder to a suitable 230V power supply. Ensure the power source meets the welder's requirements as specified in the technical specifications.

4.2 Wire Installation

Install the appropriate welding wire (0.6/0.8/1.0/1.2 mm, 2LB or 10LB spool) for your chosen welding process. Ensure the wire is fed smoothly through the drive roller and liner to the torch.

Image 4.1: The welder is compatible with both 2LB and 10LB welding wire spools.

4.3 Gas Connection (for Gas MIG/Lift TIG)

For Gas MIG or Lift TIG welding, connect the gas hose from your shielding gas cylinder to the welder's gas inlet. Ensure all connections are secure and leak-free.

4.4 Spool Gun Setup (for Aluminum MIG)

To perform aluminum MIG welding, an additional aluminum spool gun is required (sold separately). Connect the spool gun according to its specific instructions and the welder's manual.

Image 4.2: The MIG-185D PRO is compatible with a spool gun for aluminum welding.

4.5 General Setup Diagrams

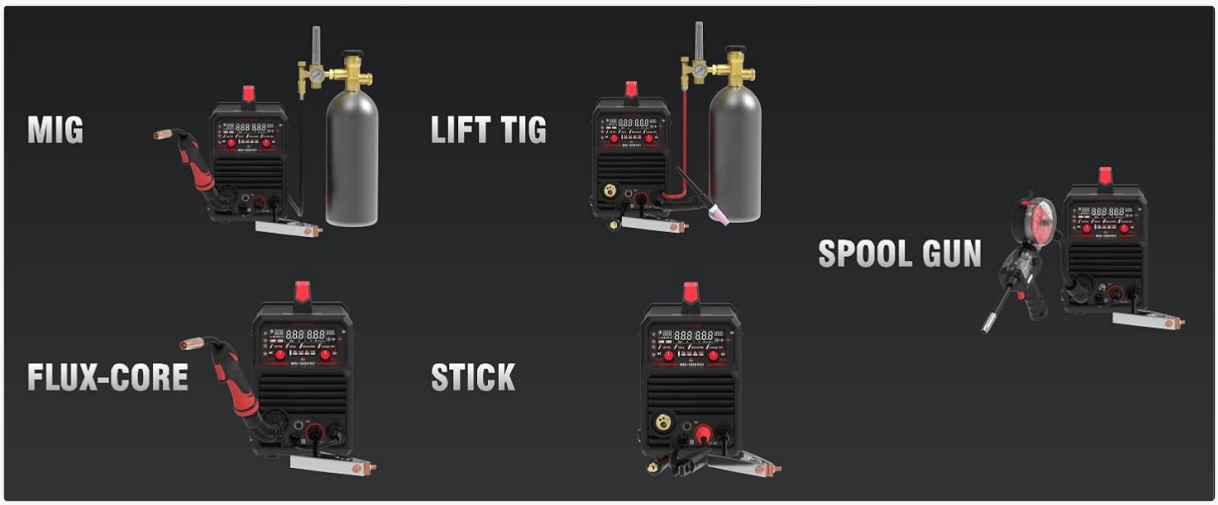

Image 4.3: Connection diagrams for various welding modes.

5. Operating Instructions

5.1 Digital Display and Controls

The MIG-185D PRO features an advanced digital display for clear parameter monitoring and adjustment.

Image 5.1: The intelligent digital screen display provides clear welding parameter feedback.

5.2 Selecting Welding Modes

Use the control panel to select your desired welding mode:

- **Flux Core MIG:** For gasless welding, suitable for outdoor use or when gas cylinders are impractical.
- **Gas MIG:** For welding with shielding gas, providing cleaner welds and better penetration.
- **Spool Gun MIG:** Specifically for welding softer wires like aluminum, preventing wire feeding issues.
- **Lift TIG:** For precise welding of thin materials, requires a separate Lift TIG torch.
- **Stick (MMA):** For welding with coated electrodes, suitable for various metals and conditions.

Image 5.2: The welder supports multiple welding processes.

5.3 Synergic vs. Manual MIG

The MIG-185D PRO offers both Synergic and Manual MIG control:

- **Synergic MIG:** Adjusting the wire feed speed automatically sets the recommended voltage, simplifying setup for beginners.
- **Manual MIG:** Allows independent adjustment of wire feed speed and voltage, providing greater control for experienced welders.

Image 5.3: Manual MIG and Synergic MIG modes cater to different skill levels.

5.4 Advanced Arc Welding Functions

For Stick (MMA) welding, the following adjustable functions enhance performance:

- **Hot Start:** Provides an initial boost of current to easily strike the arc.
- **Arc Force:** Prevents the electrode from sticking by increasing current when the arc length shortens.
- **Anti-Stick:** Reduces the current if the electrode sticks, allowing for easier removal.

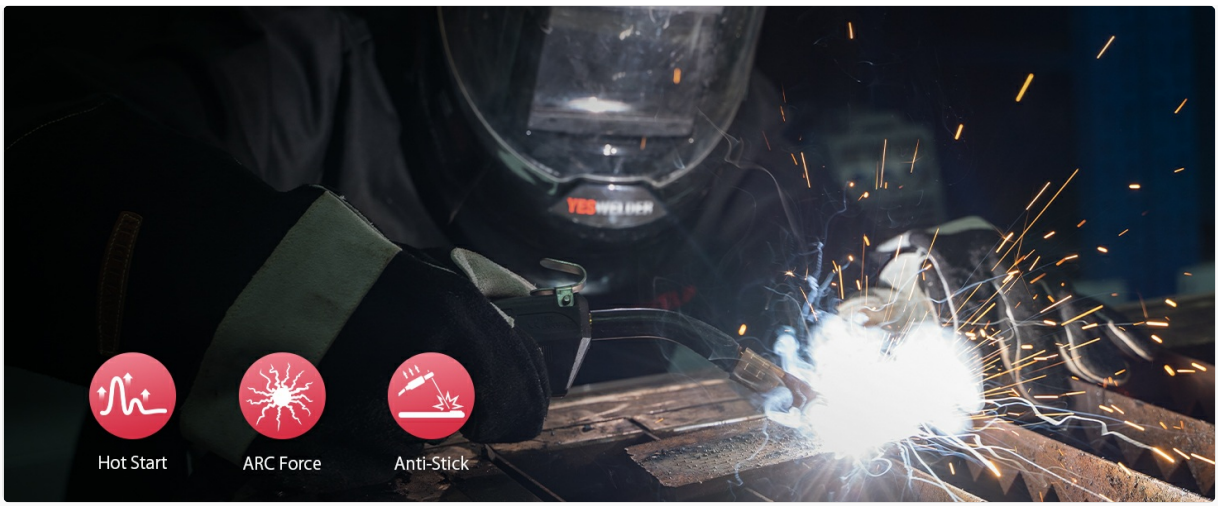

Image 5.4: Advanced features like Hot Start, Arc Force, and Anti-Stick improve arc welding performance.

5.5 Welding Parameter Guide

Refer to the following table for recommended welding parameters based on material, wire type, and plate thickness.

Material	Wire	Shield Gas (.57~.85m³/h)	Plate Thickness	20ga (0.9mm)			18ga (1.2mm)			16ga (1.6mm)			14ga (2.0mm)			1/8" (3.2mm)			5/32" (4.0mm)			3/16" (4.8mm)			1/4" (6.0mm)		
			Dia.	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm	0.6mm	0.8mm	1.0mm
Carbon Steel	ER70S Solid Wire Polarity: DCEP	100% CO_2	WFS(m/min)	2.87	2.87	-	4.54	3.55	5.13	5.13	7.62	7.11	7.92	8.61	7.92	8.61	7.92	10.9	13.1	12.5	-	14.5	13.6	-	14.9	14.7	-
			Current(A)	40	40	-	53	50	60	56	79	78	61	100	129	108	133	143	133	158	-	156	180	-	160	185	-
			Voltage(A)	13.7	15.2	-	14.6	15.7	19	14.8	19.2	20.7	15.4	20.2	21.2	16.4	23	23.3	17.3	24.1	-	17.6	24.8	-	17.8	25.2	-
		75% Argon 25% CO_2	WFS(m/min)	2.87	2.56	-	4.64	3.55	5.13	5.13	7.62	7.11	7.92	8.61	7.92	10.9	11.5	10.97	12.9	12.5	-	14.5	13.6	-	14.9	14.7	-
			Current(A)	40	40	-	53	50	60	56	79	78	61	100	129	108	133	143	133	158	180	156	180	185	160	185	185
			Voltage(A)	15.7	14.8	-	16.6	15.5	17.2	16.8	17.7	18.8	17.4	18.5	19.5	18.4	20.6	22.6	19.3	21.5	-	19.6	22.3	-	19.8	22.9	-
Carbon Steel	E71T Flux Core Wire Polarity: DCEP	None	WFS(m/min)	-	-	-	-	3.55	5.13	-	7.62	7.11	-	8.61	7.92	-	11.4	10.97	-	-	11.9	-	-	12.9	-	-	13.9
			Current(A)	-	-	-	-	70	80	-	80	90	-	100	129	-	133	143	-	158	180	-	180	185	-	185	185
			Voltage(A)	-	-	-	-	17.2	18.8	-	21.1	19.3	-	22.3	19.5	-	18.5	20.7	-	-	21.2	-	-	21.7	-	-	22.6
Carbon Steel	ER308L Stainless Steel Wire Polarity: DCEP	100% Argon 75% Argon 25% CO_2	WFS(m/min)	-	2.54	-	-	3.55	5.08	-	7.62	7.11	-	8.63	7.87	-	11.7	10.92	-	12.44	11.93	-	13.46	12.95	-	14.73	13.97
			Current(A)	-	40	-	-	50	60	-	19	78	-	100	129	-	133	143	-	158	180	-	180	185	-	185	185
			Voltage(A)	-	13.4	-	-	14.6	15.7	-	16.2	16	-	17	18	-	19	19	-	20	21	-	19	21	-	20.6	22.3

			Plate Thickness	18ga (1.0mm)		16ga (1.2mm)		14ga (1.6mm)		12ga (2.0mm)		1/8" (3.2mm)		5/32" (4.0mm)		3/16" (5.0mm)		1/4" (6.0mm)	
			Dia.	1.0mm	1.2mm	1.0mm	1.2mm	1.0mm	1.2mm	1.0mm	1.2mm	1.0mm	1.2mm	1.0mm	1.2mm	1.0mm	1.2mm	1.0mm	1.2mm
Aluminum	Er4043/ Er5356 Aluminum Wire Polarity: DCEP	100% Argon	WFS(m/min)	3.05	3.05	4.57	4.57	6.096	6.096	7.87	7.87	10.92	10.92	11.93	11.93	13.97	13.46	14.48	13.97
			Current(A)	56	81	80	100	90	120	120	140	150	160	160	180	180	182	185	185
			Voltage(A)	11	12	13	14	13.5	14.5	15.7	15	17.4	17	18	17.9	20	20	21	21

Mode	Polarity	Shield Gas/ Electrode Type	Plate Thickness / Dia.	18ga (1.2mm)	16ga (1.6mm)	14ga (2.0mm)	1/8" (3.2mm)	9/64" (3.5mm)	5/32" (4.0mm)	3/16" (4.8mm)	1/4" (6.0mm)
Lift TIG	DCEN	100% Argon	1/16"(1.6mm)	100~185A							
			3/32"(2.4mm)		120~160A	185A					
			1/8"(3.2mm)								
Stick	DCEP	E6011/ E7018/ E6013	1/16"(1.6mm)	80A	90A						
			3/32"(2.4mm)			100A					
			1/8"(3.2mm)				120A	130A			
			5/32"(4.0mm)						150A	160A	180A

Image 5.5: Comprehensive guide for setting welding parameters.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your welder.

- **Cleaning:** Periodically clean the welder's exterior and internal components (with compressed air) to remove dust and debris. Ensure power is disconnected.
- **Cable Inspection:** Regularly inspect all cables, connections, and torches for wear, damage, or loose connections. Replace damaged parts immediately.
- **Drive Roller:** Check the drive roller for wear and ensure it is clean and free of wire residue.
- **Nozzle and Contact Tip:** Clean or replace the MIG torch nozzle and contact tip as needed to maintain good arc performance.

7. Troubleshooting

If you encounter issues, refer to the following common troubleshooting steps:

- **No Power:** Check power cord connection, circuit breaker, and ensure the welder's power switch is on.
- **No Arc:** Verify work clamp connection, electrode/wire installation, and correct welding parameters. Ensure the torch trigger is functioning.
- **Poor Weld Quality:** Adjust wire feed speed, voltage, gas flow (if applicable), and ensure proper technique. Check for contaminated base metal or incorrect wire/electrode type.
- **Wire Feeding Issues:** Check drive roller tension, ensure the wire spool is installed correctly, and inspect the liner for blockages or kinks.
- **Overheat Protection:** If the welder stops due to overheating, allow it to cool down. Ensure adequate ventilation and avoid exceeding the duty cycle.

For persistent issues, contact YESWELDER customer support.

8. Specifications

Technical specifications for the YESWELDER MIG-185D PRO welder:

Specification	Value
Manufacturer	YESWELDER
Model Number	MIG-185D PRO
Dimensions (Package)	46.5 x 38.5 x 34 cm
Weight (Package)	14.63 kg
Power Type	DC/AC
Input Voltage	230V
Max Output Current	185A
Cooling Mode	Fan Cooling
Insulation Grade	F
Protection Class	IP21S

Specification	Value
Country of Origin	China

9. Warranty and Support

For warranty information, technical support, or spare parts inquiries, please refer to the official YESWELDER website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.