

ALUMTIG™ 200

QUICK REFERENCE GUIDE

FRONT PANEL

VRD

MMA ONLY: Voltage Reduction Device reduces maximum unloaded voltage of output terminals to safe levels.

Power LED

When illuminated the power source is turned on.

Error LED

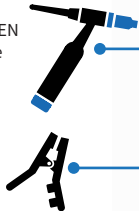
When illuminated refer to error code on display and resolve.

Control Dial

1. Rotate to choose setting.
2. Press to select setting.
3. Rotate to adjust setting.
4. Press to store setting.
5. Press and hold for GAS purge/check.
6. Press and hold then switch on for reset.

TIG DCEN

NOTE: In almost all TIG welding applications DCEN (Direct Current Electrode Negative) is used.



100% Argon 7-10 L/min

MMA DCEP or DCEN

NOTE: In most MMA welding applications DCEP (Direct Current Electrode Positive) is used. In some cases when welding very thin material using DCEN can be an advantage.



Argon Outlet

Torch/Foot Pedal Control

Position locating cut out facing to the top align and push in to connect. When using the foot pedal leave torch switch plug to the side.



DIGITAL DISPLAY

2T/4T Trigger Modes

2T MODE: Press and hold the switch. The program will cycle automatically. When the switch is released, the arc will downslope and terminate with post gas flow.

4T MODE: Switch is pressed and held to start the pre-flow then start amps part of the cycle. When released, upslope begins and continues until the amps are raised to the preset welding amps. When pressed and held again, downslope starts and ramps down to the end amp stage. When released, the arc terminates, and post flow begins.

HF OR Lift TIG

Weld using Lift TIG (for DC only) which requires contact with the workpiece to initiate the arc or High Frequency Start which allows non contact starting of the arc. (HF ON symbol as pictured).

Welding Amps

This displays the Amps in real time while welding and will hold for 5 seconds after weld is complete.

Main Menu

USER 1, 2 and 3 are user parameters. Every time you change a setting it is automatically stored in the program. In AUTO AC & DC modes some settings are pre-configured for ease of setup.

AC Frequency (Hz)

Controls the width of the welding arc. Increasing the AC frequency provides a more focused arc for better directional control.

PRO TIP: Settings from 80% - 120% are typically used.

AC Balance

Controls arc cleaning action when welding on AC. Adjusting the % electrode negative (EN) AC wave controls the width of the cleaning zone surrounding the weld. Lower percentage AC balance more cleaning action but less penetration. Higher percentage AC balance less cleaning action but more penetration.

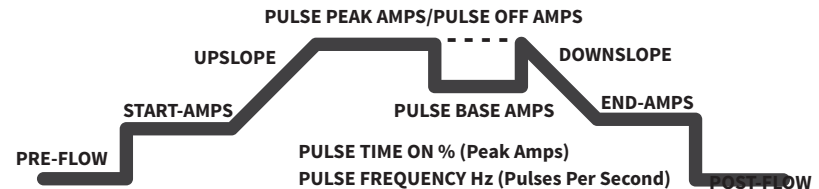
PRO TIP: Typically a range between 65% - 75% is used.

AC or DC

The unit features AC/DC operation and uses square wave for AC that has excellent wet in, and arc controllability.

Welding Sequencer

When the USER mode is selected from the main menu you have complete control over the welding parameters.



Pulse Frequency Hertz (Pulses per second)

Governs the number of times per second that the current switches from Peak Amps to Base Amps.

Pulse Base Amps

Governs the lower(base or background) amp value during the pulse cycle.

Pulse Time On (Balance) %

Defines the duty cycle (balance) of the pulse, by dividing the amount of time the pulse stays in the lower or upper stage of the pulse.

See back for recommended Amperage Values and Welding Techniques.

TIG Amperage Values

Material Type	Material Thickness				
	24 Ga (0.024 in) (0.6 mm)	16 Ga (0.060 in) (1.5 mm)	12 Ga (0.105 in) (2.7 mm)	10 Gauge (0.135 in) (3.4 mm)	3/16" (4.8 mm)
Steel (DC -)	25-35 A	70-85 A	80-100 A	90-120 A	130-160 A
Stainless Steel (DC -)	25-35 A	70-85 A	80-100 A	90-120 A	130-160 A
Aluminum (AC)	24 Ga (0.024 in) (0.6 mm)	1/16" (0.62 in) (1.6 mm)	0.090" (2.3 mm)	1/8" (0.125 in) (3.2 mm)	3/16" (4.8 mm)
	25-35 A	75-85 A	85-110 A	120-135	165-195 A

Suggested Tungsten Diameter	Material Thickness				
	24 Ga (0.024 in) (0.6 mm)	16 Ga (0.060 in) (1.5 mm) or 1/16" (0.62 in) (1.6 mm)	12 Ga (0.105 in) (2.7 mm) or 0.090" (2.3 mm)	10 Ga (0.135 in) (3.4 mm) or 1/8" (0.125 in) (3.2 mm)	3/16" (4.8 mm)
Suggested Tungsten Diameter	1/16" (1.6mm)	3/32" (2.4 mm)	3/32" (2.4 mm)	3/32" (2.4 mm)	3/32" (2.4 mm)
Suggested Filler Metal Diameter	1/16" (1.6mm)	1/16" (1.6 mm)	3/32" (2.4 mm)	3/32" (2.4 mm)	1/8" (3.2mm)

Stick Amperage Values

	Stick Electrode Diameter	12 Gauge (0.105 in) (2.7 mm)	10 Gauge (0.135 in) (3.4 mm)	3/16" (4.7 mm)
	Steel E6011 / E6013 (DC +)	3/32" (2.4 mm)	50-70A	60-80A
1/8" (3.2 mm)		65-85A	75-95A	90-110A
5/32" (4.0 mm)		90-110A	115-135A	130-150A
Steel E7018 (DC +)	3/32" (2.4 mm)	70-90A	80-100A	90-110A
	1/8" (3.2 mm)	90-110A	105-125A	115-135A
	5/32" (4.0 mm)	105-125A	115-135A	140-160A

E6011 Deeper penetrating electrode that can be used in all positions. Frequently used for joining pipe.

E6013 Shallower penetrating electrode that can be used in all positions. Commonly used for wide root openings, or conditions of poor fit up.

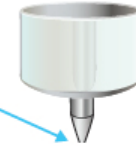
E7018 Low hydrogen electrode used for joints involving high-strength (structural), high carbon, or low alloy steels. Smooth arc with medium arc penetration. Can be used in all positions.

Tungsten Selection

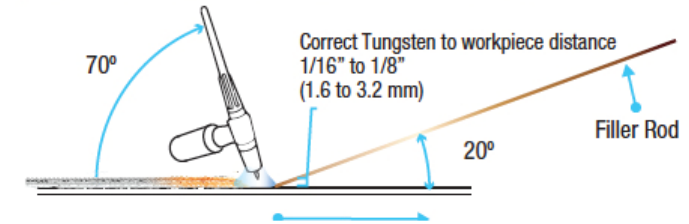
Color	Tungsten Types	AC Polarity	DC Polarity	Applications
Gold	1.5% Lanthanated		X	Good choice for welding titanium, nickel, copper, mild steel and stainless steel.
Blue	2% Lanthanated	X	X	
Grey	2% Ceriated	X	X	Good all around choice for both AC and DC, in welding low alloyed & non-corroding steels, aluminum, magnesium, titanium, nickel, and copper.
Chartreuse or Purple (E3@)	1.5% Lanthanum, 0.08% Zirconium, 0.08% Yttrium	X	X	
White	0.08% Zirconiated	X		A very good choice for aluminum or magnesium alloys.

Tungsten Preparation

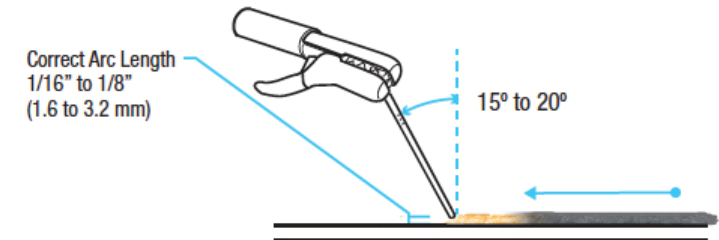
Tungsten should have a blunt tip.



TIG Technique



Stick Pull Technique



Recommended Helmet Shade Settings



Before you weld read and understand the operators manual from swswelding.com.au for additional safety information.

Welding Amps

	10	20	40	60	80	120	160	180	200
Stick			7			8-10		10-12	
TIG				8-10		8-12		10-14	