

Feature Selection	Recommended Setting	Notes
<b>POLARITY</b>	DC	Automatically sets output to DCEN
<b>PROCESS</b>	TIG HF Impulse	Standard setup for high-frequency (HF) starts
<b>OUTPUT</b>	RMT STD	Standard setting for remote foot control
<b>PULSER*</b>	OFF	Advanced control — see <i>Pulsed TIG</i> section
<b>SEQUENCER*</b>	N/A	Not used in RMT STD. Select RMT 2T Hold output to enable internal weld sequence control.
<b>GAS/DIG</b>	PREFLOW** : 0.2 sec	Provides gas shielding before the arc start
	POSTFLOW: AUTO	Automatically adjusts postflow time for maximum weld amps
<b>AC WAVESHAP</b>	DIG: N/A	STICK welding function — NOT used for TIG
	N/A	AC TIG function — NOT used in DC
<b>Tungsten Selection</b> See <i>Tungsten Selection and Prep</i> section.	Cerium Lanthanum Thorium	<b>PURE TUNGSTEN (green) is NOT recommended!</b> For best results use a sharpened cerium or lanthanum electrode when welding these alloys.

**Tip:** Select memory (if desired), then setup weld parameters from left to right.

Turn to Adjust Selected Parameter

Press to View and Adjust Main Amps

Press to Select Memory\*\*

LEDs indicate Polarity, Process and Output. | Select parameter above to view and adjust set value.

Feature Selection	Recommended Setting	Notes
<b>POLARITY</b>	AC	Automatically sets output to AC
<b>PROCESS</b>	TIG HF Impulse	Standard setup for high-frequency (HF) starts
<b>OUTPUT</b>	RMT STD	Standard setting for remote foot control
<b>PULSER*</b>	OFF	Advanced control — see <i>Pulsed TIG</i> section
<b>SEQUENCER*</b>	N/A	Not used in RMT STD. Select RMT 2T Hold output to enable internal weld sequence control.
<b>GAS/DIG</b>	PREFLOW** : 0.2 sec	Provides gas shielding before the arc start
	POSTFLOW: AUTO	Automatically adjusts postflow time for maximum weld amps
<b>AC WAVESHAP</b>	DIG: N/A	STICK welding function — NOT used for TIG
	EN/EP Amps** AC Balance AC Frequency	1:1 Ratio 70–75% EN 120 Hz           } See <i>AC Waveshape</i> section for complete descriptions.
<b>Tungsten Selection</b> See <i>Tungsten Selection and Prep</i> section.	Cerium Lanthanum	<b>PURE TUNGSTEN (green) is NOT recommended!</b> For best results use a sharpened cerium or lanthanum electrode when welding these alloys.

**Note:** Last procedure recall function stores settings for AC and DC welding in each memory level.

Turn to Adjust Selected Parameter

Press to View and Adjust Main Amps

Press to Select Memory\*\*

LEDs indicate Polarity, Process and Output. | Select parameter above to view and adjust set value.

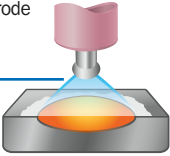
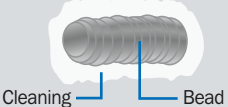
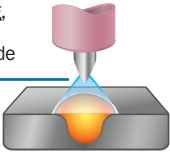
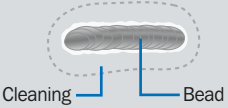
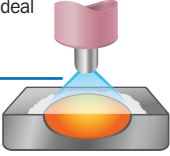
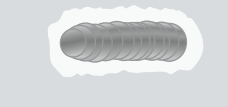
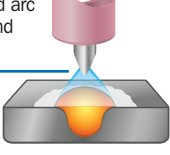
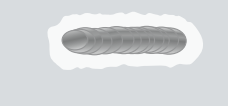
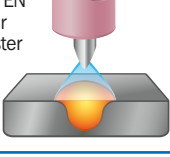
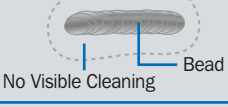
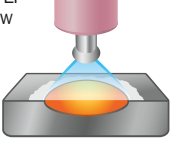
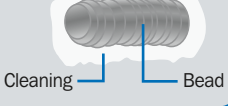
\* Feature only available on DX models.  
 \*\* Feature only available on 350 and 700 models.



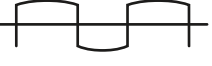




Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.

**Note:** These settings are intended to be a starting point for control panel setup — this is not a welding procedure specification nor a substitute for procedure qualification.




## AC Waveshape Controls

Feature	Setting	Arc Effect	Weld Effect
<b>AC Balance</b> Controls arc cleaning action. Adjusting the value controls the width of the cleaning zone surrounding the weld.  <i>Tip: Adjust the AC Balance for desired oxide cleaning. The weld pool should be shiny and clear with no visible oxide specs or peppering.</i>	50%	Increases electrode balling action  Shallow penetration	Wider bead and cleaning action 
	75%	Reduces balling, helps maintain point of electrode  Deep, narrow penetration	Narrow bead with reduced cleaning 
<b>AC Frequency</b> Controls arc cone width. Increasing the AC Frequency provides a more focused arc with increased directional control.  <i>Tip: Increase the AC Frequency to improve arc focus and stability.</i>	60 Hz	Wider, soft arc ideal for build-up 	Wider bead and cleaning action 
	120 Hz	Narrow, focused arc ideal for fillet and inside corners 	Narrower bead and cleaning action 
<b>Independent AC Amperage</b> 350 and 700 models only. Allows the EN and EP amperage values to be set independently for further control of the weld profile and arc cleaning action.  <i>Tip: Begin with a ratio of 1:1 for most applications and adjust the EN or EP based on the desired weld results.</i>	100A EP 200A EN	More current in EN than EP: Deeper penetration, faster travel, reduced balling action 	Narrow bead, with no visible cleaning 
	200A EP 100A EN	More current in EP than EN: Shallow penetration, increased balling and cleaning action 	Wider bead and cleaning action 

## AC Waveshape Options

Default: Soft Squarewave	AC Wave Options and Benefits: See Owner's Manual for instructions.
	 Advanced Squarewave: Travel Faster  Soft Squarewave: Max Puddle Control  Sine Wave: Traditional Arc  Triangle Wave: Reduced Heat Input
<i>Tip: Soft Squarewave is recommended for most applications. It provides good puddle control and arc stability.</i>	

## Tungsten Selection and Prep

Tungsten Type	Application Notes	Diameter	Amp Range
 2% Cerium	Good all-around tungsten for both AC and DC welding.	0.020" 0.040" 1/16"	5-20 10-80 10-150
 1.5-2% Lanthanum	Excellent low amp starts for AC and DC welding.	3/32" 1/8"	60-250 100-400
 2% Thorium	Commonly used for DC welding, not ideal for AC.	5/32" 3/16" 1/4"	160-500 190-750 325-1100



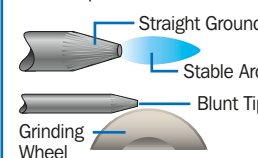
**PURE TUNGSTEN (green) is NOT recommended!**  
For best results in most applications use a sharpened cerium or lanthanum electrode for AC and DC welding.

See owner's manual for more information.

**Tungsten Preparation:** Sharpen tungsten for AC and DC welding with the Dynasty.

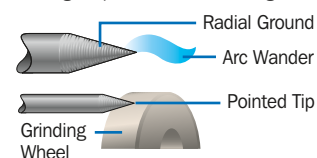
### CORRECT

Ideal Preparation—Stable Arc



### INCORRECT

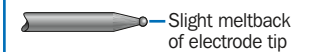
Wrong Preparation—Wandering Arc



### IDEAL GRIND ANGLE RANGE



### AC EFFECT



Note: Do not use wheel for other jobs or tungsten can become contaminated.

*Tip: Blunting the tip of the electrode is sometimes done to help maintain consistent geometry and resist tungsten erosion. This is especially helpful in AC when melt-back of the tungsten electrode is common.*

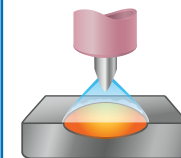
## Pulsed TIG Controls

The Pulsed TIG function switches the amperage from a high (peak) to a low (background) at a set rate (PPS). Pulsing can reduce heat input by lowering the average amperage, increasing control of the weld puddle, penetration and distortion. The following parameters can be adjusted for desired results:

Parameter	Control Panel Abbreviation	Adjustment
Pulses Per Second	PPS	Rate of pulsing between high and low
Peak Time	Peak t	% of pulse cycle at peak amps
Background Amps	BKGND A	% of peak amperage

### Low-Speed Pulse

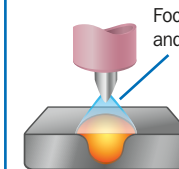
1 to 10 pulses per second (PPS) will produce a distinct ripple pattern in the weld bead. Can be used to time filler addition, reduce distortion and improve control.



Distinct ripple pattern

### High-Speed Pulse

100 pulses per second (PPS) and higher helps to focus the arc for increased stability, penetration and travel speed. Increased puddle agitation improves weld microstructure.



Focused arc increases travel speed and penetration

Narrow bead and HAZ

*Tip: Begin welding at factory default settings of 100PPS, 40% peak and 25% background amps. Adjust the frequency (PPS) to change width and appearance, fine tune with peak and background.*