



TIGACDC250GD



Operator's Manual

LINLONG LIMITED
www.weldpro.com

**THANK
YOU**

**for your
purchase!**



Take a moment and subscribe to our youtube channel. Weldpro is committed to releasing lots of tutorial and how-to videos to help you fine tune your welding skill.



Dear Valued customer,

We at Weldpro would like to thank you very much for being our valued customer. We take great pride in providing quality welding equipment at an affordable price.

As an experienced welder, your feedback (no matter positive or negative) will be an important factor for us to improve the quality of our product and our customer service. We would greatly appreciate if you would take a moment to provide feedback for the product that you purchased.

Weldpro is always there to assist you should you have any questions.

Sincerely, your friends at Weldpro!



Linlong Limited

1307 West Valley Highway North, Suite 103, Auburn, Washington 98001
www.weldpro.com Tel:253-329-2179

Technical support: 651 329 2686

Email: support@weldpro.com



IMPORTANT

**For any questions, concerns, or
problems contact Weldpro**




**Support directly at
651-329-2686**

Introduction

This manual includes hardware description and operation introduction of the equipment. For safety, please read the manual carefully.

Attention

Pay attention to the words after the signs below.

Sign	Description
 DANGER	The words after this sign means there is great potential danger, which may cause major accident, damage or even death, if it is not followed.
 WARNING	The words after this sign means there is some potential danger, which may cause hurt or property lose, if it is not followed.
 ATTENTION	The words after this sign means there is potential risk, which may cause equipment fault or break, if it is not followed.

Edition

The contents of this manual are updated regularly for updating of product. The manual is only used as operation guide, except for promises. No warranties of any kind, either express or implied are made in relation to the description, information or suggestion or any other contents of the manual.

The images shown here are indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.

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For Arc
Welding
and Cutting
like a
Weldpro



Thank you for using Weldpro arc welding and cutting equipment.

We ask you to work like a weld-pro and weld-pros weld and cut safely. Please read and comply with the sample safety procedures outlined in this guide and the equipment Owner's Manual.



Always read and follow the Owner's Manual, the safety labels on the product, and all applicable safety standards, especially ANSI Z49.1, Safety in Welding, Cutting, (we recommend you get a copy and keep it handy).

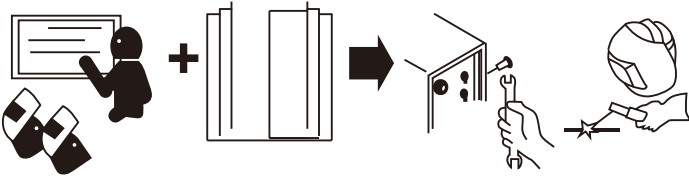


Only qualified persons should install, operate, maintain, and repair this equipment. A qualified person is defined as one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project and has received safety training to recognize and avoid the hazards involved.

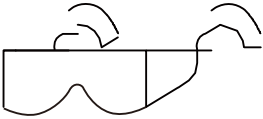
Thank you for working safely.

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1. General Safe Practices

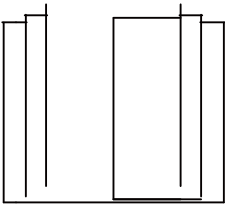


Become trained and read the instructions before working on the machine or welding or cutting. Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for adhesives, coatings, cleaners, consumables, coolants, degreasers, fluxes, and metals.



Wear approved safety glasses with side shields under your welding helmet or face shield and at all times in the work area.

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.



Wear a safety harness if working above floor level. Keep children away from all equipment and processes.

Do not install or place machine on or over combustible surfaces.

Use GFCI protection when operating auxiliary equipment in damp or wet locations.

Use only genuine replacement parts from the manufacturer.

Perform installation, maintenance, and service according to the Owner's Manuals, industry standards, and national, state, and local codes.

2. Arc Welding Hazards



Electric shock from welding electrode or wiring can kill.

Wear dry, hole-free insulating gloves and body protection. Do not touch electrode with bare hand. Do not wear wet or damaged gloves.

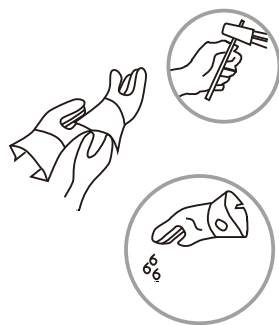
Do not touch live electrical parts.

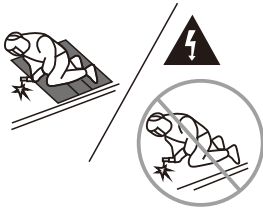
Do not use AC weld output in damp, wet, or confined spaces, or if there is a danger of falling.

Use AC output ONLY if required for the welding process.

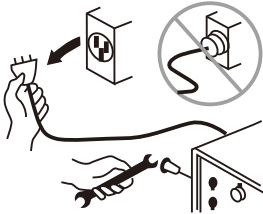
If AC output is required, use remote output control if present on unit. Do not use worn, damaged, undersized, or repaired cables.

Additional safety precautions are required when any of the following electrically hazardous conditions are present: in damp locations or while wearing wet clothing; on metal structures such as floors, gratings, or scaffolds; when in cramped positions such as sitting, kneeling, or lying; or when there is a high risk of unavoidable or accidental contact with the workpiece or ground. For these conditions, use the following equipment in order presented: 1) a semiautomatic DC constant voltage (wire) welder, 2) a DC manual (stick) welder, or 3) an AC welder with reduced open-circuit voltage.





Protect yourself from electric shock by insulating yourself from work and ground. Use non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material big enough to cover your full area of contact with the work or ground and watch for fire.



Disconnect input plug or power before working on machine. Do not make input connections if color blind.

Frequently inspect input power cord and ground conductor for damage or bare wiring – replace immediately if damaged – bare wiring can kill. Keep cords dry, free of oil and grease, and protected from hot metal and sparks. Be sure input ground wire is properly connected to a ground terminal in disconnect box or receptacle.

Properly install, ground, and operate all equipment according to its Owner's Manual and national, state, and local codes.



Breathing welding fumes can be hazardous to your health.



Keep your head out of the fumes. Do not breathe the fumes. Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area. The recommended way to determine adequate ventilation is to sample for the composition and quantity of fumes and gases to which personnel are exposed. Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for adhesives, coatings, cleaners, consumables, coolants, degreasers, fluxes, and metals.



Use enough forced ventilation or local exhaust (forced suction) at the arc to remove the fumes from your breathing area.



Use a ventilating fan to remove fumes from the breathing zone and welding area. If adequacy of ventilation or exhaust is uncertain, have your exposure measured and compared to the Threshold Limit Values (TLV) in the Safety Data Sheet (SDS).



Welding can cause fire or explosion.



Do not weld near flammable material or where the atmosphere can contain flammable dust, gas, or liquid vapors (such as gasoline). Move flammables at least 35 feet (11 meters) away or protect them with flame-proof covers (see NFPA 51B listed in Section.



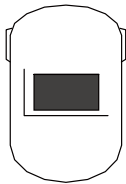
Welding sparks can cause fires. Have a fire extinguisher nearby and have a trained fire watcher ready to use it. After completion of work, inspect area to ensure it is free of sparks, glowing embers, and flames.



Do not weld on containers that have held combustibles, or on closed containers such as tanks, drums, or pipes unless they are properly prepared according to AWS F4.1 and AWS A6.0 (see Safety Standards in Section 9).



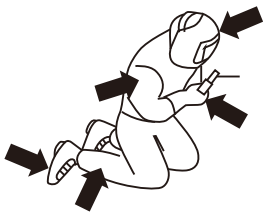
Welding can cause fire or explosion.



Use welding helmet with correct shade of filter (see Section to choose the correct shade).



Wear welders cap and safety glasses with side shields. Use ear protection when welding out of position or in confined spaces. Button shirt collar.



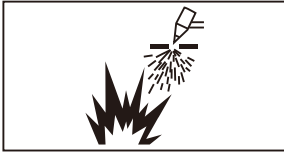
Wear body protection made from durable, flame-resistant material (leather, heavy cotton, wool). Body protection includes oil-free clothing such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.



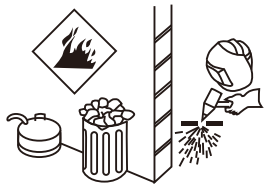
Moving parts can injure.

Keep hands, hair, loose clothing, and tools away from moving parts such as fans, belts, wire drive rolls, and rotors. Keep all doors, panels, and guards closed and secured.

3. Plasma Arc Cutting Hazards



Cutting sparks can cause fire or explosion.



Do not cut near flammable material or where the atmosphere can contain flammable dust, gas, or liquid vapors (such as gasoline). Move flammables at least 35 feet (11 meters) away or protect them with flame-proof covers (see NFPA 51B listed in Section 9).



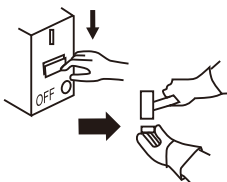
Cutting sparks can cause fires. Have a fire extinguisher nearby, and have a trained fire watch ready to use it. After completion of work, inspect area to ensure it is free of sparks, glowing embers, and flames.



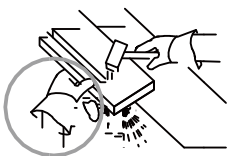
Do not cut on containers that have held combustibles, or on closed containers such as tanks, drums, or pipes unless they are properly prepared according to AWS F4.1 and AWS A6.0 (see Safety Standards in Section 9).



Plasma arc can injure.



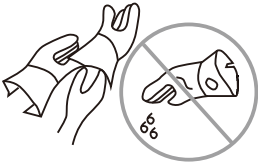
Turn off power before disassembling torch.



Do not grip material near cutting path.
Do not touch hot parts bare-handed.

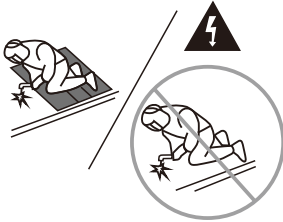


Electric shock from torch or wiring can kill.

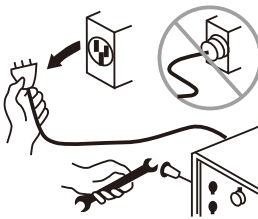


Wear dry insulating gloves. Do not wear wet or damaged gloves. Do not touch live electrical parts.

Do not use worn, damaged, undersized, or repaired cables.



Protect yourself from electric shock by insulating yourself from work and ground. Use non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material big enough to cover your full area of contact with the work or ground. Watch for fire, smoke, and sparks.



Disconnect input plug or power before working on machine. Do not make input connections if color blind.

Frequently inspect input power cord and ground conductor for damage or bare wiring – replace immediately if damaged – bare wiring can kill. Keep cords dry, free of oil and grease, and protected from hot metal and sparks. Be sure input ground wire is properly connected to a ground terminal in disconnect box or receptacle.

Properly install, ground, and operate this equipment according to its Owner's Manual and national, state, and local codes.

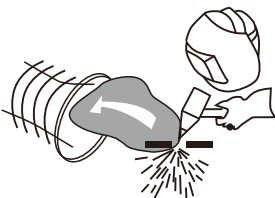


Breathing cutting fumes can be hazardous to your health.

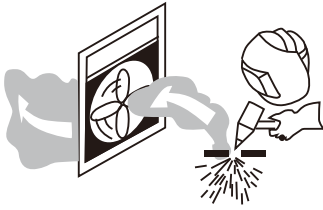


Keep your head out of the fumes. Do not breathe the fumes. Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area. The recommended way to determine adequate ventilation is to sample for the composition and quantity of fumes and gases to which personnel are exposed.

Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for adhesives, coatings, cleaners, consumables, coolants, degreasers, fluxes, and metals.



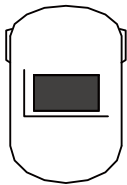
Use enough forced ventilation or local exhaust (forced suction) at the arc to remove the fumes from your breathing area.



Use a ventilating fan to remove fumes from the breathing zone and cutting area. If adequacy of ventilation or exhaust is uncertain, have your exposure measured and compared to the Threshold Limit Values (TLV) in the Safety Data Sheet (SDS).



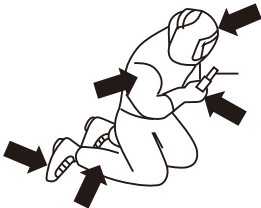
Arc rays can burn eyes and skin.



Use welding helmet or face shield with correct shade of filter (see Section to choose the correct shade).



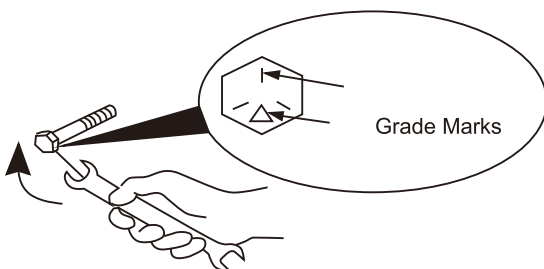
Wear welders cap and safety glasses with side shields. Use ear protection when cutting out of position or in confined spaces. Button shirt collar.



Wear body protection made from durable, flame-resistant material (leather, heavy cotton, wool). Body protection includes oil-free clothing such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.

Periodically double-check all nuts and bolts for tightness and condition

Loose or incorrect hardware and fasteners can injure, and damage equipment.



If necessary, always replace any fastener with one of equal size, grade, and type. Be sure the grade marks on replacement fastener match the original bolt. The manufacturer's identification mark.

4. Special Situations & Equipment



Confined spaces can be hazardous.

Confined spaces are areas which lack room for full movement and often lack ventilation, such as storage tanks, vats, tunnels, boilers, pipes, hold of a ship, corners of a room, near a ceiling or floor corner, or in a pit. Gases can collect and form dangerous concentrations.

Always open all covers, remove any hazardous or toxic materials, provide forced ventilation, and provide a means to turn off power and gas from the inside.

Never work alone — have constant communication with someone outside who can quickly turn off power and gas, is trained in rescue procedures, and is able to pull you out in case of emergency.

Do not use AC weld output in confined spaces.

Insulate yourself from work and ground using non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material big enough to cover your full area of contact with the work or ground, and watch for fire.

Always check and monitor the air quality in the space. Welding or cutting fumes and gases can displace air and lower the oxygen level — use ventilation and, if needed, an air-supplied respirator. Be sure the breathing air is safe. The recommended way to determine adequate ventilation is to sample for the composition and quantity of fumes and gases.

Always remember: All normal arc welding and cutting hazards are amplified in confined spaces. See ANSI Z49.1 listed in Principal Safety Standards (Section 9).



Cylinders can explode if damaged.

Confined spaces are areas which lack room for full movement and often lack ventilation, such as storage tanks, vats, tunnels, boilers, pipes, hold of a ship, corners of a room, near a ceiling or floor corner, or in a pit. Gases can collect and form dangerous concentrations.

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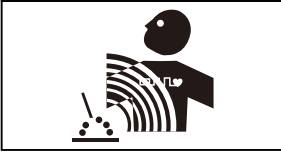
Never work alone — have constant communication with someone outside who can quickly turn off power and gas, is trained in rescue procedures, and is able to pull you out in case of emergency.

Do not use AC weld output in confined spaces.

Insulate yourself from work and ground using non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material big enough to cover your full area of contact with the work or ground, and watch for fire.

Always check and monitor the air quality in the space. Welding or cutting fumes and gases can displace air and lower the oxygen level — use ventilation and, if needed, an air-supplied respirator. Be sure the breathing air is safe. The recommended way to determine adequate ventilation is to sample for the composition and quantity of fumes and gases.

Always remember: All normal arc welding and cutting hazards are amplified in confined spaces. See ANSI Z49.1 listed in Principal Safety Standards (Section 9).



Electric and magnetic fields (EMF) can affect Implanted Medical Devices.

Wearers of Pacemakers and other Implanted Medical Devices should keep away. Implanted Medical Device wearers should consult their doctor and the device manufacturer before going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations.



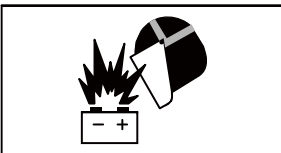
Hot parts can burn.

Do not touch hot welded or cut parts with bare hand. If handling is needed, use proper tools and/or wear heavy, insulated welding gloves to prevent burns. Allow cooling period before handling parts or working on equipment.



Falling equipment can injure, and damage equipment.

Use lifting eye to lift unit only, NOT running gear, gas cylinders, trailer, or any other accessories. Use correct procedures and equipment of adequate capacity to lift and support unit. If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit. Do not place unit where it can easily tip over or fall.



Battery charging output and battery explosion can injure.

Sparks can cause battery gases to explode. Do not smoke and keep matches and flames away from battery. Wear a face shield or safety glasses when working near or on a battery. Do not use welder or plasma cutter to charge batteries or jump start vehicles unless the unit has a battery charging feature designed for this purpose.

5. EMF Information

Electric current flowing through any conductor causes localized electric and magnetic fields (EMF). The current from arc welding (and allied processes including spot welding, gouging, plasma arc cutting, and induction heating operations) creates an EMF field around the welding circuit. EMF fields can interfere with some medical implants, e.g. pacemakers. Protective

measures for persons wearing medical implants have to be taken. For example, restrict access for passers-by or conduct individual risk assessment for welders. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

1. Keep cables close together by twisting or taping them or using a cable cover.
2. Do not place your body between welding cables. Arrange cables to one side and away from the operator.
3. Do not coil or drape cables around your body.
4. Keep head and trunk as far away from the equipment in the welding circuit as possible.
5. Connect work clamp to workpiece as close to the weld as possible.
6. Do not work next to, sit or lean on the welding power source.
7. Do not weld whilst carrying the welding power source or wire feeder.

About Implanted Medical Devices:

Implanted Medical Device wearers should consult their doctor and the device manufacturer before performing or going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations. If cleared by your doctor, then following the above procedures is recommended.

6. California Proposition 65 Warnings



WARNING: The machine is mainly used for industrial purpose. It will cause radio interference indoor, operators shall take fully preventative measures.

For more information, go to www.P65Warnings.ca.gov.



WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov.

For Diesel Engines:



WARNING: Breathing diesel engine exhaust exposes you to chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information, go to www.P65Warnings.ca.gov.

7. Principal Safety Standards

Safety in Welding, Cutting, and Allied Processes, American Welding Society standard ANSI Standard Z49.1. Website: www.aws.org.

Safe Practices for the Preparation of Containers and Piping for Welding and Cutting, American Welding Society Standard AWS F4.1 from Global Engineering Documents.

Website: www.global.ihs.com.

Safe Practices for Welding and Cutting Containers that have Held Combustibles, American Welding Society Standard AWS A6.0 from Global Engineering Documents.

Website: www.global.ihs.com.

National Electrical Code, NFPA Standard 70 from National Fire Protection Association. Website: www.nfpa.org and www.sparky.org.

Safe Handling of Compressed Gases in Cylinders, CGA Pamphlet P-1, from Compressed Gas Association. Website: www.cganet.com

8. Lens Shade Selector Guide

Operation/Process	Electrode Size in. (mm)	Arc Current (Amperes)	Minimum Protective Shade	Suggested* Shade No. (Comfort)
Shielded metal arc welding (SMAW)	Less than 3/32 (2.5)	Less than 60	7	—
	3/32–5/32 (2.5–4)	60–160	8	10
	5/32–1/4 (4–6.4)	160–250	10	12
	More than 1/4 (6.4)	250–550	11	14
Gas metal arc welding (GMAW) and flux cored arc welding (FCAW)		Less than 60	7	—
		60–160	10	11
		160–250	10	12
		250–550	10	14
Gas tungsten arc welding (GTAW)		Less than 50	8	10
		50–150	8	12
		150–500	10	14
Air carbon arc cutting (CAC–A)	(Light)	Less than 500	10	12
	(Heavy)	500–1000	11	14
Plasma arc welding (PAW)		Less than 20	6	6 to 8
		20–100	8	10
		100–400	10	12
		400–800	11	14
Plasma arc cutting (PAC)		Less than 20	4	4
		20–40	5	5
		40–60	6	6
		60–80	8	8
		80–300	8	9
		300–400 400–800	9 10	12 14
Torch brazing (TB)		—	—	3 or 4
Torch soldering (TS)		—	—	2
Carbon arc welding (CAW)		—	—	14
	Plate thickness			
	in.	Mm		
Oxyfuel gas welding (OFW)	Light	Under 3.2		4 or 5
	Medium	3.2 to 12.7		5 or 6
	Heavy	Over 12.7		6 or 8
Oxygen Cutting (OC)	Light	Under 25		3 or 4
	Medium	25 to 150		4 or 5
	Heavy	Over 150		5 or 6

As a rule of thumb, start with a shade that is too dark to see the weld or cut zone. Then go to a lighter shade which gives sufficient view of the weld or cut zone without going below the minimum. In oxyfuel gas welding, cutting, or brazing where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

Guide adapted from ANSI Z49.1, 2012.

PRODUCT DESCRIPTION

Congratulations on your purchase. Please take a few moments to completely read through this manual. Doing so will make your welding experience much more pleasant and understandable. And remember, should you need, seek or desire further understanding of welding principals and practices, the internet is your friend! Take advantage of today's information highway. The internet holds a wealth of information and knowledge. Enjoy!

This welder is an inverter based machine the utilizes the most advanced inverter technology. IGBT circuits along with PWM technology along with the greatly reduced size and weight, enable this welder to not only be more efficient by 30%, but also as a result of the electronic circuitry, enables this welding machine to afford the user far more and better range of settings for each specific weld. The TIGACDC250GD also has a 30% duty cycle at full amperage which, explained another way, allows for a full four minutes of uninterrupted continuous welding at full amperage within a ten minute period. Far more capable than any user would dream of attempting.

The TIGACDC250GD is capable of welding with either AC or DC current. This allows the user to choose DC current welding for carbon steel, stainless steel, copper and many other metals, while also being equipped with the ability to switch over to AC welding used in welding aluminum and aluminum alloys. In addition to its advanced TIG welding functions, the TIGACDC250GD is also a very good MMA / Stick welder.

This AC/DC TIG welder adopts our company's exclusive High Frequency technology as well as a pure square wave output, excellent arc force and a wide range of balance control for aluminum cleaning.

This AC/DC TIG welder also offers a feature not always found in this price range. That is a completely dedicated foot control with no interim current control on the foot pedal. This design is a much sought after feature of advanced welders who dislike greatly the idea of inadvertently changing amperage settings while readjusting the foot pedal with their feet while changing their welding positions. This is no longer a concern with the Weldpro TIGACDC250GD since all amperage control settings are made from the console on the machines face.

The TIGACDC250GD also has provisions on the back side for connecting an optional water cooler that must be used in conjunction with optional water cooled tig torch set.

Thank you for purchasing our product. We are sure you will soon realize the great value and quality that went into the design of this welder as well as all of the advanced features and functions.

THREE YEARS WARRANTY

WELDPRO Warranty and Return Terms
Welders and Plasma Cutters

All Weldpro welders and plasma cutters are covered under the following specific terms of warranty. All welders and plasma cutters are warranted to the original purchaser only, when purchased through an authorized seller of Weldpro products for a period of three (3) years from the date of purchase, to be free of manufacturers defect or failure. Proof of purchase and date of purchase paperwork will be required by Weldpro at the time of the claim.

Extended warranty coverage may be available for Weldpro welders and plasma cutters at an additional cost. Always check with Weldpro.

The Weldpro warranty is limited to defects, malfunctions or failure of the equipment to operate properly based specifically and solely from manufacturer defects. Any malfunctions from improper use, lack of maintenance, incorrect or insufficient source supply power to the units, shipping damage, and similar failures not related to specific manufacturers defect will not be honored.

Weldpro will not be responsible in the event of a product failure, for lost time in operation or use of said product. Rather it will honor solely the product itself only.

Further, the warranty will cover the repair or replacement of the unit in question for the term of the warranty with either a new or a refurbished unit, or in some cases replacement parts of the same model, at the discretion of Weldpro. As a term of the Weldpro warranty, if and when applicable, individual parts are needed, they may be supplied to the customer rather than replacing the entire unit. Situations like this may include, but are not limited to items such as foot pedals, torches, mig wire rollers, feed spools, or any other item Weldpro deems more practical to supply individually.

Weldpro will provide free shipping return of the damaged product due to manufacturers defect for the first 30 days of the warranty term if shipping is within the lower 48 United States. Customers outside this area must check with Weldpro for further shipping instructions. Failures after the initial 30-day period, and due to manufacturers defect, may not enjoy free return shipping.

If it is determined when the product is returned to Weldpro that there is no malfunction, or that the assumed malfunction by the customer was user error, Weldpro may request a shipping fee refund prior to the return of the item to the customer.

Prior to returning any item thought to be malfunctioning or damaged due to manufacturers defect, customers are required to contact Weldpro first, to explain the failure and to obtain a Return Merchandise Authorization number, or the item may not be covered under the terms of this warranty.

Weldpro ships in the USA from third party shippers such as, but not limited to UPS, FedEx, and the USPS. Weldpro is not responsible for damage that occurs during shipping. It is the customer's responsibility to check the item at the time of delivery. If a customer receives an item damaged, they must immediately contact both Weldpro and the shipper to document and report the damage as soon as possible, and in no circumstances later than 48 hours after delivery. All shipping and delivery dates are tracked for arrival. Weldpro may require photo image of the damage at their discretion.

Returned items within the first 30 days. Undamaged items in good working condition may be returned within the first 30 days of purchase. In such a case, these items are not eligible for the free return shipping policy associated with items that have manufacturers defects. A restocking fee will be charged for said return of up to 25% on any item returned with a valid RMA number that are undamaged and not covered or subject under the terms of this warranty. The amount of the restocking fee is solely at the discretion of Weldpro and based on the condition of the returned item and its accessory parts and packaging. Further, should Weldpro receive an item in good working condition that has sustained physical damage, Weldpro has the right to refuse acceptance of said returned item completely, and the customer will be responsible for return shipping of the product to them.

Weldpro does not imply or suggest any interpretation of the above warranty beyond what is stated in this print of its terms.

Weldpro is not responsible for injury due to improper use of the equipment or failure to heed all of the safety precautions associated with the dangers of welding or cutting metals.

The terms and conditions of the Weldpro warranty are subject to change without notice. Be sure to check the terms of the Weldpro warranty prior to your purchase.

TECHNICAL PARAMETERS

Model	TIGACDC250GD	
Parameters		
Supply voltage (V)	AC 115V±15%	AC 230V±15%
Frequency (Hz)	50/60	
Rated input current (A)	TIG: 26.4 MMA: 44.3	TIG: 37.2 MMA: 47.2
No-load voltage (V)	65	
Output current (A)	TIG: 120 MMA: 120	TIG: 250 MMA: 220
Output voltage (V)	TIG: 14.8 MMA: 24.8	TIG: 20 MMA: 28.8
Arcing way	HF	
Pre-flow (S)	0.1-1	
Current descending (S)	0-25	
Post flow (s)	0-15	
Duty cycle (%)	30	
No-load loss (W)	40	
Efficiency (%)	80	
Power factor	0.73	
Insulation class	F	
Housing protection class	Ip21	
Weight (lb)	51.7	
Dimensions (in)	20.3x9.7x22.6	

INSTALLATION

Component setup of this welding machine is a simple, straight forward process. This welder is fitted with a Power Voltage Compensator that takes into consideration a + / - 15% of the rated voltage for this machine. However it is most important to be sure your power supply to this welding is of the proper voltage and is in good condition with clean connections, proper wiring and the correct circuit breakers. It is strongly suggested that if longer leads are used for grounding that larger wire gauge is used to reduce the possibility of line loss due to resistance.

Be sure when you are setting up your welding machine that the vents and fans are not obstructed and are allowed to flow air freely.

CONNECT SHIELDING GAS

The required Argon gas cylinder should only be connected to the welder through a proper regulator / flowmeter. The working range of the gas flow (depending on the work being done) is approximately 20 cubic feet per hour (CFH) or 9.5 litres per minute (LPM). All press on connection hoses should be further secured with a clamp to prevent inadvertent disconnects. Snug connections to both the regulator, argon tank and welding machine. Over tightening any of these connections can damage the equipment. After connecting your flow regulator to both the argon tank and the back of your TIG welder, your connections are complete. When initially opening the valve on your argon tank, take care to gently crack it open at first so as not to shock the flow regulator. Once argon reaches the flow regulator you can proceed to open the argon tank valve fully.

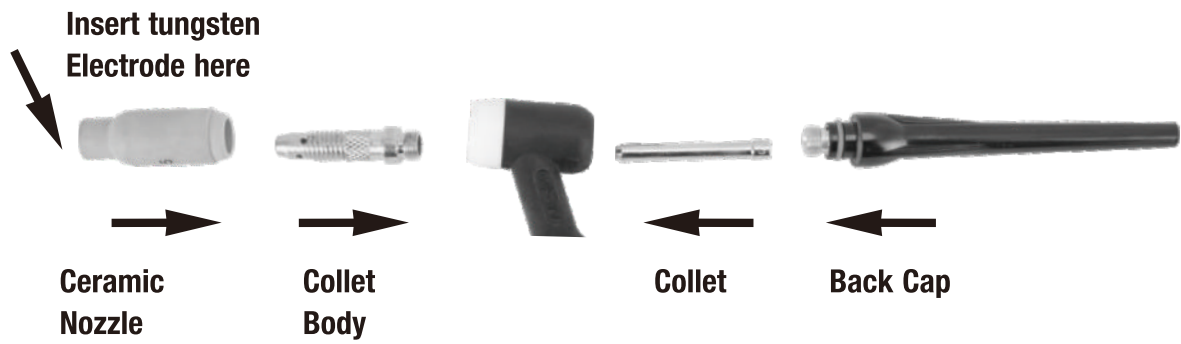
SHARPEN TUNGSTEN ELECTRODE

Note : WARNING! Some Electrodes may have materials added to them that are hazardous to breathe. Wear a respirator and ANSI-approved Safety goggles when grinding an Electrode.

The tungsten electrode needs to be properly shaped to a point. When doing so it is recommended you use a dedicated grinding wheel. Preferably a diamond coated wheel inexpensive and effective. Also note that while grinding the tungsten to a point, the grinding marks should run longitudinally with the length of the tungsten rather than across the width of the tungsten to avoid arc wander while the arc is finding ground as it welds. The general rule of thumb for sharpening your tungsten is to sharpen it twice to 2 ½ times the diameter of the tungsten you have chosen to use. One technique you may find useful is to place the unshaped tungsten in your cordless drill while sharpening it. That can help produce a more uniform taper.

ASSEMBLE TIG TORCH

The TIG torch consists of the pink in color ceramic end called a “cup”, the white insulator on the torch body, the “collet body” the “collet” the “back cap” (which comes in different lengths) and of course the tungsten. Screw your “collet body” into the front of the TIG torch past the white insulator. Slide your “collet” into the back side of your torch head with the larger end sticking out. From the back side, slide your shaped tungsten into the “collet” and allow it to protrude slightly out the front of the torch. Then install your “back cap” and gently snug it. Screw your “cup” onto the front of your torch until it gently snugs against the white insulator. Tungsten cups all have numbers on them. The numbers designate the diameter of the opening of that “cup” in 1/16ths of an inch. So a number 8 cup for example has a ½ inch opening. As a general rule of thumb, the tungsten should protrude past the opening of the “cup” no more than the diameter of that cup.

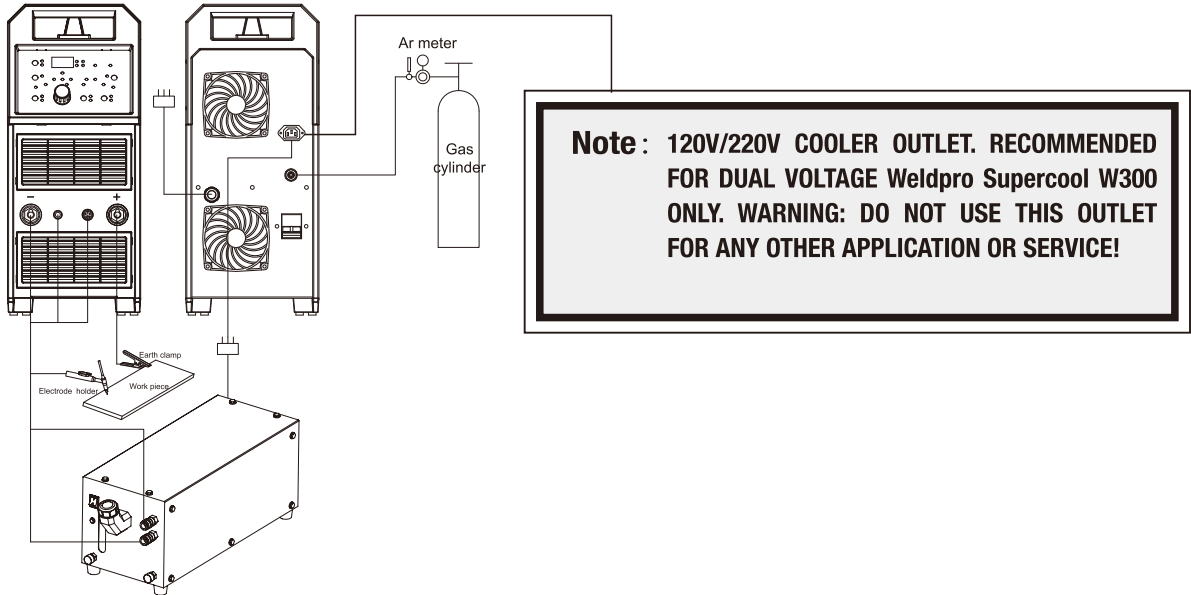


Connecting the electrode and work (also called ground) cables correctly to your welder. Lets take a moment here to clarify what can be a confusing subject to new users. Generically, when welding, the user has a choice of polarity connections. What is correct for one type of welding may be totally wrong for another type of welding.

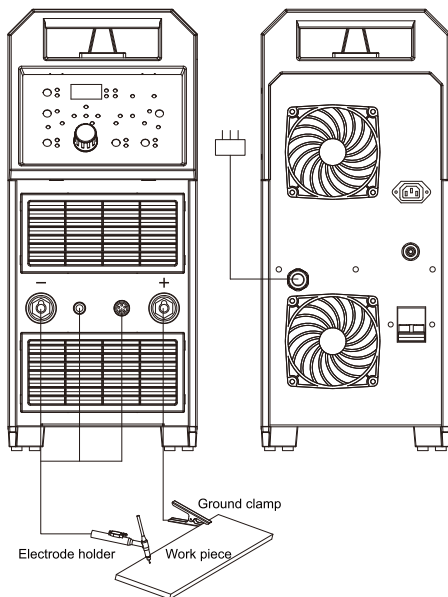
On the following page we will explain what is happening and which way to connect for which type of welding.

- Installation diagram for TIG

Set up for water cooled TIG torch



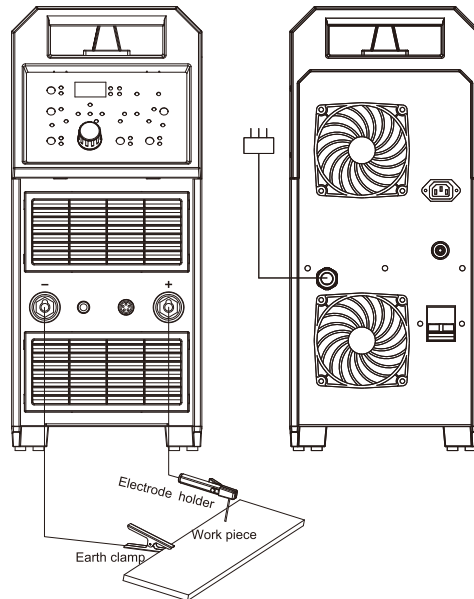
- Set up for air cooled TIG torch



TIG WELDING

Electric current flows from negative to positive. When TIG welding the polarity settings should always be **Straight Polarity Electrode Negative**. That means that the Work clamp (aka ground) is connected to the Plus (+) Dinse connector, and not the negative as some consider normal. When connecting the TIG Torch, a gentle snug connection is all that is needed. **DO NOT OVER TIGHTEN THE BRASS CONNECTOR.**

MMA WELDING



When using the TIGACDC250GD in the MMA or Stick mode, the connection to the front of the welding machine is usually just the opposite. Stick or MMA welding is done for the most part with **Reverse Polarity Electrode Positive**. That means when you are going to stick weld with the TIGACDC250GD you would normally connect your electrode holder (the one that holds your welding rod) to the **Positive Dinse Connector** and you connect your work clamp (aka ground) to the **Negative Dinse Connector**. There are exceptions to the standard reverse polarity MMA. Consult your welding rod MFG. For their suggested polarity settings.

- **CONNECTING FOOT PATEL**

In TIG welding mode, connecting the foot pedal or the TIG trigger button to the face of the welder for TIG Mode. When using the foot pedal which is the most common way to TIG weld, connect the foot pedal to the push pin connector on the front of the welder.

Note : Be sure the 2T function is the active setting on the face of the welder when using the foot pedal. While this may be mentioned later in this manual, please remember that when using your foot pedal control, **BE SURE YOUR STARTING AND ENDING AMPS ARE SET TO THEIR LOWEST POSSIBLE SETTING, AND BE SURE YOUR UPSLOPE AND DOWNSLOPE ADJUSTMENTS ARE SET TO ZERO.**

- **TORCH TRIGGER SWITCH**

Connecting the torch trigger switch to the welder requires disconnecting the foot pedal plug, and instead plugging in the round small push connector plug which is attached to the TIG Torch cable in its place. When using the TIG Trigger, you can choose between 2T or 4T function. While the 2T function is the most common choice for TIG Trigger button use, the 4T may be an option you wish to explore.

Simply put, the 2T function requires 2 Trigger button movements to start and end a weld. 1 push to start the weld, and 2 release to end the weld.

The 4T function requires 4 Trigger button movements to start and end a weld. 1 push to start the weld, 2 release to maintain the weld and continue, 3 push the trigger button once again as the first step to ending the weld, and finally 4, release the button to stop the weld.

- **NOTE REGARDING 4T MODE**

While under special circumstances the 4T option may be something to explore, all features including such as **upslope and downslope as well as starting and ending amps can be used in 2T mode** and you may find that 2T mode a much more user friendly mode to operate in. In fact, you may never find the need for 4T at all. **Remember when using the foot control pedal, always choose 2T and set all upslope, downslope settings to zero, and set starting and end amps to their lowest value.**

Note : When switching between Trigger Button and Foot Control, it may be necessary to “reindex” the amperage setting. This simply means to adjust and reset the amperage knob on the face of the welder, even if the same current setting is being used in either mode. Reindexing tells the machine to recognize the newly attached device, be it the button or foot control.

OPERATION

The TIGACDC250GD welder front panel is designed to be intuitive and easy to use while offering a wide variety of advanced function settings. As a result of the many options the user has at his or her disposal, the Main Control Knob is designed to be a “multi-function” knob capable of setting many parameters.

At the top of the front panel and to the immediate right side of the digital numeric display you will find four (4) LED lights, each of which designate the current mode that the welder is in. Regardless of which mode the welder is currently in, the “Multi-Function” knob controls all the settings of those modes. The four (4) LED lights represent the following values for adjustment. From left to right and from top to bottom, those modes are... A= Amps, %= percent, S= seconds, HZ= Hertz. As you touch the menu buttons on either side of the welder’s face, you will toggle along the graph line from left to right or right to left among the various options. When doing so, the LED mode lights will change and light up to represent the current numeric display value settings.

Below is a brief description of what each TIG function is used for.

Broken up into three horizontal rows, the top row from left to right represents 1. Welding mode MMA (which is stick welding) or TIG which is Tungsten Inert Gas welding mode. Next is the digital display panel explained above. Next, the O.C light which designates an over temp condition which requires waiting and possibly rebooting the system. Lastly, the REM remote light lights with use of the foot pedal.

Along the middle / center row of functions you will find a selection of all the advanced features of the TIGACDC250GD machine. At each end of the center row you **will** find a menu button. Depending on how far along the line of options you are, you can click either menu button to proceed left to right or right to left.

Some of the functions are not necessary when using the foot pedal controller because the user has complete control some of these options with that foot pedal. These functions are as follows, and will be explained in further detail later. START AMPS, UP SLOPE, DOWN SLOPE, END AMPS. When using the foot pedal it is recommended given the choice to lower these values to zero since the user can use the foot pedal rheostat to control every one of those settings in real time while welding.

Preflow is the time in seconds that Argon gas will flow prior the TIG arc being initiated. The purpose of preflow is to insure the area to be welded is protected from the outside environment and air before actual welding begins. This prevents contamination of the weld zone.

When using the foot pedal, a tap of the pedal prior to positioning yourself for weld will help purge the Argon line if the welder has been idle for any period of time and if the TIG torch is directed at the work area, it will shield that are from the environment prior to welding.

When using the TIG Torch trigger, the user cannot directly modulate current as they can with the foot pedal, although techniques are available to simulate this given some practice. They will also be discussed. This is where the Preflow, Start Amp and Up Slope features come in very handy.

When initiating the weld often, if not always, the user wants to gently “ramp up” to full current rather than shock the work instantly. The Start Amp feature allows the user to set the amperage at the initial start of the arc. The Up Slope function allows the user to set the time period in seconds it will take the current to reach full amperage. The “Full Amperage” will be the Peak Amps. Conversely, when the weld is being terminated (while using the TIG Trigger Button) the Down Slope, End Amps, and Post Flow functions are able to be set to finish the weld.

The TIGACDC250GD welder has a very adjustable Pulse feature which can be adjusted multiple ways to offer an almost infinite range of variables.

Pulse is just as it implies, a pulsing of amperage power while welding.

Pulse Frequency is the number of times per second amperage pulses will occur. The range is 0.5 to 200 HZ, or times per second. Peak time on allows the user to set the time within that second that the amperage will be at the dialed in peak setting (highest amperage). Base amps is the measure of what the lesser amperage will be during the pulse, and is represented in a percentage of whatever the user has chosen for the peak amps.

AC Welding

When welding carbon steel using the TIG function, the welder's polarity is set to DC current, Straight Polarity Electrode Negative. The current flows in one direction only. Doing so directs the heat / current, from the tungsten into the metal to be welded. This polarity helps keep the TIG tungsten cool, and heats the work.

Welding Aluminum presents an entirely different set of problems that welding with DC Straight Polarity does not do well with. Aluminum forms a very thin layer / skin over itself called aluminum oxide. Interestingly, aluminum oxide melts at about 3500 degrees F. while the actual aluminum itself we want to weld, melts at a much lower 1500 degrees F. So attempting to weld with DC current flowing from the tungsten to the work metal, the aluminum melts UNDER the oxide coating layer without actually melting the aluminum oxide. This results in an what looks like trying to weld through a glob of mud, or even a mercury like consistency covering. This does not make for a good weld.

The solution, while a bit complicated, provides excellent results. Choosing DC Reverse Polarity will create a current flow reversing from the metal work back up into the TIG Torch tungsten, bursting through the aluminum oxide layer very well, but ... we cannot choose to weld with DC Reverse Polarity where the current flows from the metal work into the Tungsten, because we would quickly melt our TIG Torch, tungsten, and collets. The solution is to weld using AC or Alternating Current. Current that switches back and forth between DC Electrode Negative and DC Electrode Positive, back and forth many times per second.

While it is the DC Electrode Positive cycle that cleans up the aluminum oxide, it is also the cycle that can melt away our tungsten, so we have to carefully meter the amount of time our welding current spends in the DC Electrode Positive phase.

AC Balance feature allows for the adjustment of time during the alternating current cycle that the current spends in electrode positive. The least amount of time in this cycle will provide the best cooling of our TIG tungsten. This is why cleaning the aluminum to be welded prior to welding is so important. It allows us to keep our current in the straight polarity electrode negative cycle longer. An initial setting of 30 % to 35% is recommended to help keep the tungsten cool.

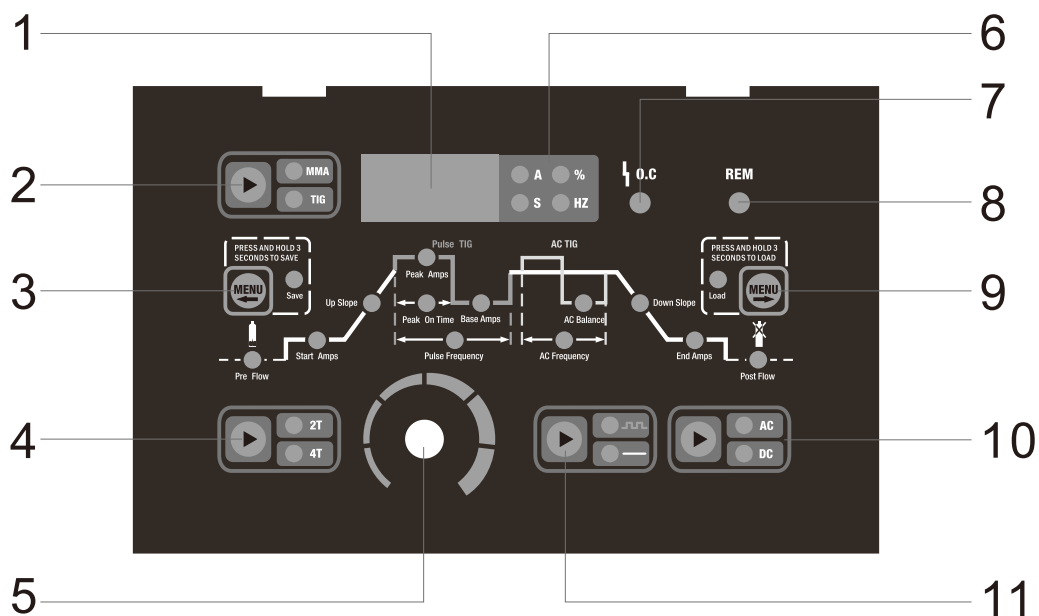
AC Frequency setting is a setting that allows for the adjustment of how many times per second your chosen AC balance setting cycles. It is adjustable from 0.5 to 200 HZ (times per second).

After completing the above steps you are ready to weld. Be sure to follow all safety procedures. One last note here. When opening your Argon tank, the valve on the Argon tank is designed to seat and seal the Argon from leaking from the tank in the fully closed or fully open positions. Do not merely crack open the Argon tank valve. Doing so may result in loosing valuable and costly Argon gas to the outside air for no good reason, so seat your Argon valve full open to use and full closed for storage.

Any questions or concerns please contact Tech Support at 1-651-329-2686

Below is an illustrated explanation of the functions

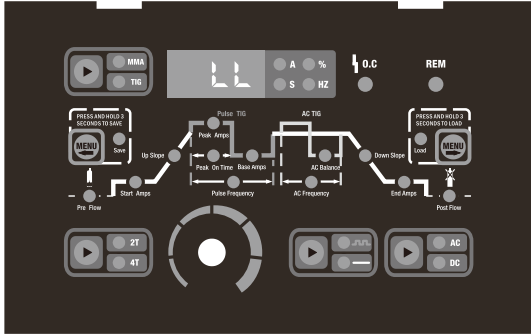
1 Panel Layout



1	Digital Display Meter	7	Abnormal Indicator Light
2	STICK/TIG Selector Button	8	Remote Control Indicator Light
3	Move Left Selector Menu Button	9	Move Right Selector Menu Button
4	2T/4T Selector Button	10	AC/DC Selector Button
5	Parameter Adjustment Knob (Pressed in the knob tuning parameters is for coarse adjustment, not pressed in is for fine tuning.)	11	Pulse /No pulse Button
6	Unit of parameter Indicator Light		

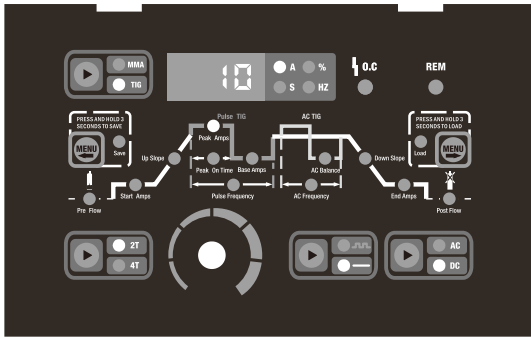
The panel picture above is for reference only. If any difference with the real machine, please follow with the real machine.

2 Operation interface specification



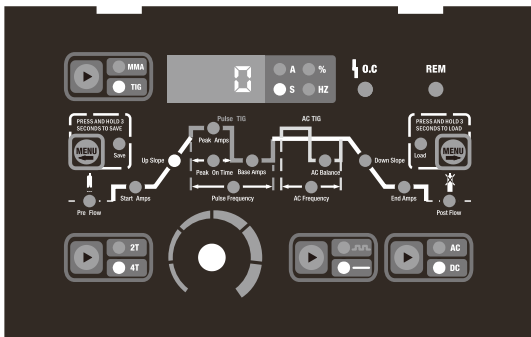
Picture 2

The picture 2 shows the digital display meter reads “LL”when the machine starts working.



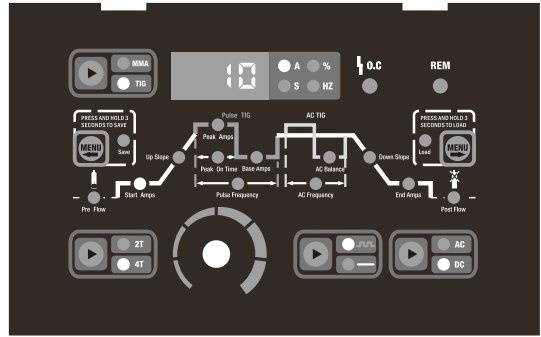
Picture 3

The picture3 shows when under TIG mode, the Peak Amps indicator light on, adjust the parameter knob,meter reads 5-250A ajustable, press the Move Left/Right Selector Menu Button to choose other parameter settings. NOTE* Welding above 200 amps requires optional liquid cooling.



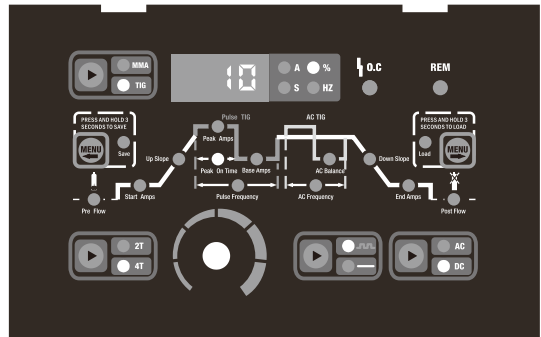
Picture 4

Picture 4 shows when under 4T mode,(2T is acceptable) press the Move Left Selector Menu Button to upslope indicator light on, adjust the parameter knob, the meter reads 0-15s adjustable.



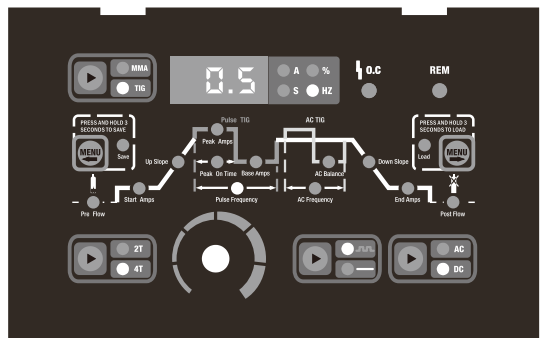
Picture 5

The picture 5 shows press the Move Left Selector Menu Button to Start Amps indicator light on, adjust the parameter knob, the meter reads 5-250A adjustable.



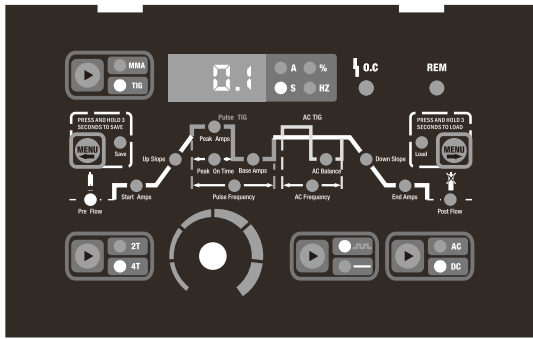
Picture 6

The picture 6 shows when under pulse mode, press the Move Right Selector Menu Button to Peak On Time indicator light on, adjust the parameter knob, the meter reads 10-90% adjustable.



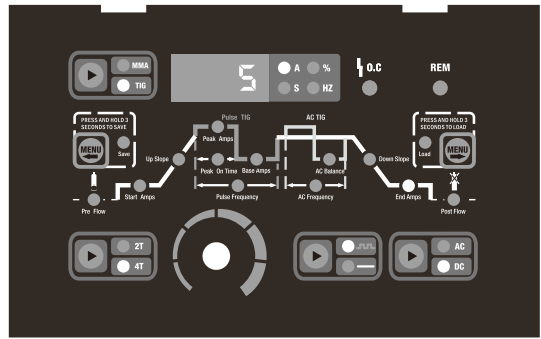
Picture 7

The picture 7 shows press the Move Right Selector Menu Button to Pulse Frequency indicator light on,adjust the parameter knob, the meter reads 0.5-200 HZ adjustable.



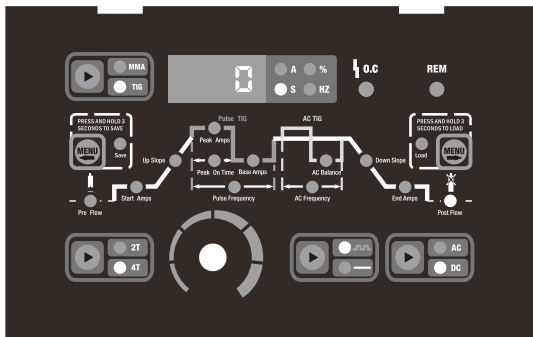
Picture 8

The picture 8 shows press the Move Left Selector Menu Button to Pre flow indicator light on, adjust the parameter knob, the meter reads 0.1-1S adjustable.



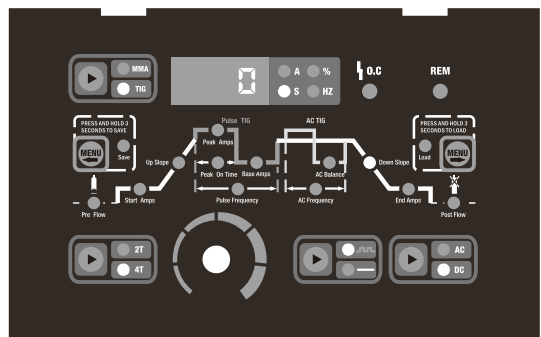
Picture 11

The picture11 shows press the Move Right Selector Menu Button to End Amps indicator light on, adjust the parameter knob, the meter reads 5-250A adjustable.



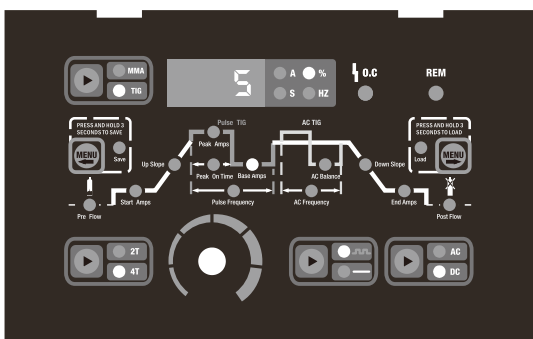
Picture 9

The picture 9 shows press the Move Right Selector Menu Button to Post flow indicator light on, adjust the parameter knob, the meter reads 0-15S adjustable.



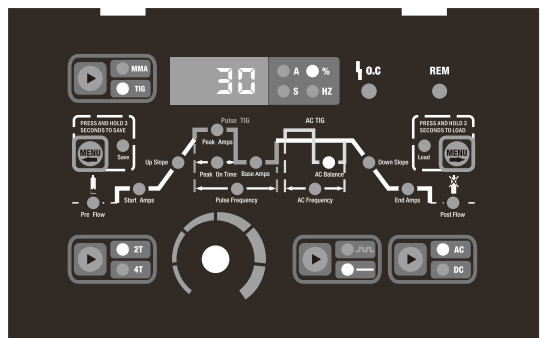
Picture 12

The picture12 shows press the Move Right Selector Menu Button to Down Slope indicator light on, adjust the parameter knob, the meter reads 0-25S adjustable.



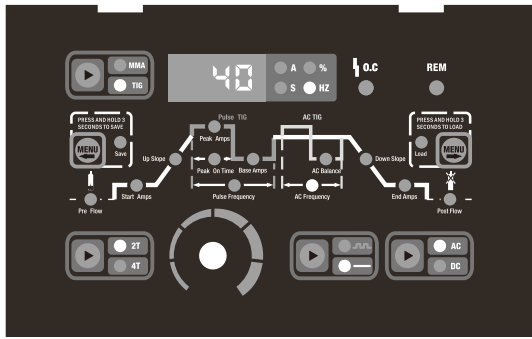
Picture 10

The picture10 shows press the Move Right Selector Menu Button to Base Amps indicator light on, adjust the parameter knob, the meter reads 5-95% adjustable.



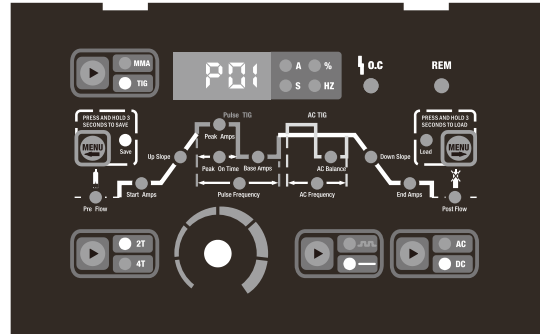
Picture 13

The picture13 shows when choose under AC mode, press the Move Right Selector Menu Button to AC balance indicator light on, adjust the parameter knob, the meter reads 30-70% adjustable.



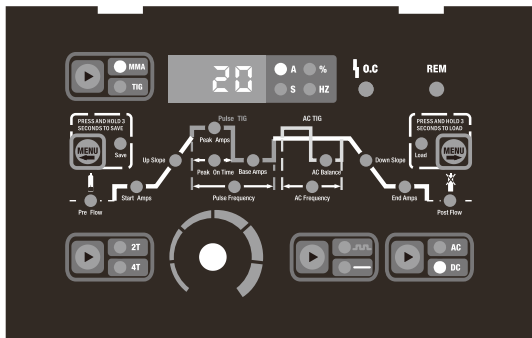
Picture 14

The picture14 shows when choose under AC mode, press the Move Right Selector Menu Button to AC Frequency indicator light on, adjust the parameter knob, the meter reads 40-200HZ adjustable.



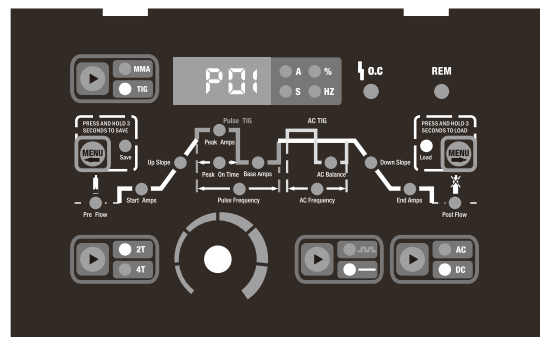
Picture 17

Press the left Menu button keep 3s, "Save" lamp is shine, the digital display shows "P01".To turn the knob can make the digital display to show from "P01" to "P10". It means that can store 10 sets parameters memory. Again press the left Menu button, "Save" lamp is off, it means that the parameters are stored successfully.



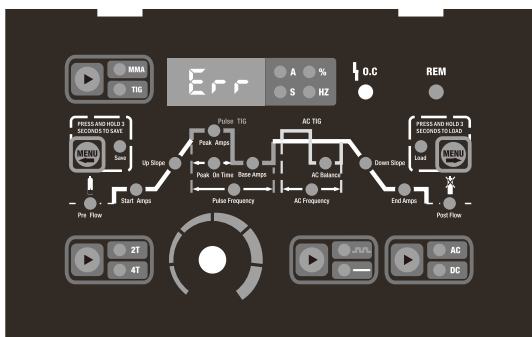
Picture 15

The picture15 shows when choose under MMA mode, adjust the parameter knob, the meter reads 20-220A adjustable, only AC/DC mode can be chosen, other buttons can't be used.



Picture 18

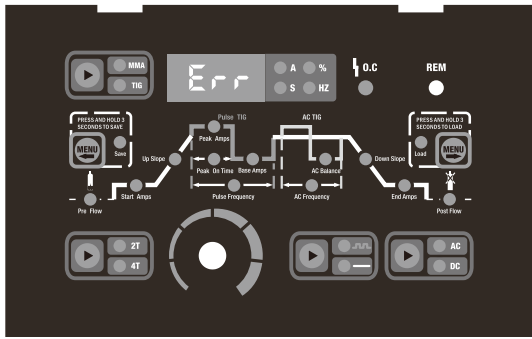
Press and hold the right Menu button 3s, "Load" lamp lights, the digital display shows "P01".To turn the knob can make the digital display to show from "P01" to "P10". This means that can load 10 pre-set parameters memory. Again press the right Menu button, "Load" lamp is off, it means that the parameters are loaded successfully.



Picture 16

The picture16 shows when the temperature is too high or abnormal the digital display show"Err",abnormal light O.C lights up, this time no output, will have to wait until

the temperature reducing or restart the machine to return to normal.



Picture 19

The picture 17 shows In TIG mode, when connecting the foot pedal to the machine, the REM indicator is on, the machine is converted to REM mode automatically. At this time: Start Amps, Peak Amps, End Amps these three current parameters are controlled by the foot pedal, other parameters are controlled by the knob on the front panel.

INSTRUCTION NOTES

1 Operation environment

- 1 Welding operation should be carried out in a relatively dry environment with air humidity usually less than 90%.
- 2 Ambient temperature should be kept between -10°C ~ 40°C .
- 3 Welding in the sun or rain should be avoided and water or rainwater should never be allowed into the welder interior.
- 4 Welding in the dusty area or under a corrosive gas environment should be avoided.
- 5 Gas protection welding operation in an environment with strong air flow should be avoided.

2 Safety

In this welder over-voltage, over-current and overheat protection circuits have been installed beforehand. When the grid voltage, output current and machine temperature surpass the set standards, the machine will stop automatically. But excessive use (for example, when the voltage is too high) can still lead to the breakdown of the welder. So you have to pay attention to the following items:

1) Good ventilation!

This machine is a small type welder. In operation a high working current flows in and natural ventilation is unable to meet the welder's requirement for cooling. So a fan is fitted to effectively cool the welder to keep it work smoothly. Operators should make sure that the vent is not covered or plugged, the distance of the welder from its surrounding objects is not less than 0.3 m and good ventilation is kept all the time. All these are very important for better operation of the welder and longer service life of the welder.

2) No overload!

Operators should bear in mind that maximum permissible load current (relative to the selected load duration factor) be observed at any time and welding current should never surpass the maximum permissible load current. Over-current will shorten the service life of the welder remarkably and even burn it down.

3) No over-voltage!

Power voltage is shown in the main performance parameter table. In general, the voltage auto-compensation circuit in the welder will ensure the welding current remain within the permissible range. If power voltage surpasses the permissible value, the welder will be broken down. Operators should fully know this and adopt corresponding preventive measures.

- 4) Behind each welder there is a grounding screw with the grounding mark. Before operation the shell of the welder should be grounded reliably by a cable wire with a sectional area bigger than 6mm^2 so as to release static electricity or prevent any accident due to leakage.
- 5) If the welding machine exceeds the standard load duration factor in operation, it may probably go into a protective state suddenly and stop work, which indicates it has exceeded the standard load duration factor. Excessive heating triggers the temperature control switch and makes the welding machine stop operation. Under such circumstances you needn't turn off the power so that the cooling fan may work continuously for cooling. When the temperature drops to the standard range, welding may be restarted.
- 6) When welding with AC Current the Weldpro TIG uses a percentage of reverse polarity for its AC balance setting. Keep the AC balance setting as close to 30 as possible. Weld clean Aluminum

MAINTENANCE AND CHECK TROUBLE

1 Maintenance

- 1 Dust should be removed with dry and clean compressed air regularly. If the welder is used in a heavily polluted environment with dense smoke and polluted air, dust must be removed from the welder each month.
- 2 The pressure of compressed air should be reasonable so that damage is not done to small elements in the welder.
- 3 Regularly check the connection of electric circuit in the welder and make sure circuit be connected properly and joint is secured (especially inserted joint or element). If the cases of rusting or loosening are found, the rust layer or oxidized film should be removed with abrasive paper and then the joint should be connected again and tightened firmly.
- 4 Entry of water or steam into the interior of the welder should be avoided. If this condition occurs, the welder should undergo drying treatment. Then the welder is measured for insulation by a megohm-meter (including the area between connecting points and the areas between the connecting points and shell). Welding can go on only when evidence shows no abnormality.
- 5 If the welder is not to be used for a long time, it should be replaced in the original package and kept in a dry environment.

2 Check Fault

Phenomena enumerated here may have something to do with the parts, gas, environmental factors and power supply you use and efforts should be made in improving the environment to avoid occurrence of such cases.

A Black welding spot:

——This shows the welding spot is oxidized without being protected effectively and you can make the following inspection: BE SURE YOUR GAS IS 100% ARGON AND NOT A MIX.

1. Make sure that the valve of argon cylinder has been opened with sufficient pressure. As a rule, if the pressure within the cylinder is lower than 0.5MPa, then it is necessary to refill the cylinder.
2. Check if the argon flow-meter is turned on with sufficient flow. You can select different flow rates in light of varying welding current, but too small flow may lead to inadequate gas stiffness and thus failure to cover all the welded spots. We suggest argon flow should never be lower than 3l/min no matter how weak the current will be.
3. The easiest way to check gas delivery is to touch the nozzle of welding torch to see whether the gas passage of the welding torch is blocked.
4. Poor sealing of gas passage or lower gas purity will also give rise to welding quality trouble.
5. Strong air flow in the environment may also lead to deterioration of welding quality.

B Difficulty in arc starting with easy arc breaking:

1. Make sure that the tungsten electrode in use is of good quality as discharge ability of inferior tungsten electrode may fail the requirement;
2. Tungsten electrode without sharpening treatment is also unable to start arc and leads to unstable arc. Improper gas will also cause unstable High Frequency arc Initiation.

C Output current can't reach the rated value:

Deviation of power voltage from the rated value will lead to unconformity of output current value with the set value. When power voltage is lower than the rated value, maximum output current of the welder may also be lower than the rated value.

D Unstable current in the operation of the welder :

This may be attributed to the following factors :

1. Change in grid voltage;
2. Interference from the power grid or other power equipments.

E Severely burn of the tungsten needle

The duty cycle is adjusted too large, causing emission from the workpiece to the tungsten electron for too long, resulting in severe heat of the tungsten needles. **AC BALANCE SETTING INCORRECT**

F The oxide film can't be torn when welding aluminum:

1. the welding gear is selected wrong.
2. The duty cycle is adjusted too small;
3. The secondary inverter has field pipe damage.

G The abnormal pilot lamp is on:

1. The light is on when the welder work abnormally, please turn off the power switch and then reboot the machine, it can continue to use if it return to normal,
2. If the light is on repeatedly, please refer to the professional or the manufacturer for repair.

TROUBLESHOOTING

Faults	Resolvable Methods
1 Power indicator is not lit, fan does not work and no welding output	<ol style="list-style-type: none"> 1 Power switch is out of work. 2 Check if electrify wire net (which is connected to input cable) is in work. 3 Check if input cable is out of circuit.
2 Ower indicator is lit, fan does not work or revolve several circles, no welding output	<ol style="list-style-type: none"> 1 Maybe connect wrong to 380V power cause machine is in protection circuit, connect to 400V power and operate machine again. 2 400V power is not stable, (input cable is too slender) or input cable is connected to electrify wire net cause machine is in protection circuit. Add the section of cable and tighten input connector firmly. Close achine 2-3 minutes then open it again. 3 Cable is loosed from switch to power panel ,tighten them again. 4 Open and close power switch constantly in short time cause machine is in protection circuit Close machine 2-3 minutes then open it again. 5 Main circuit 24V relay of power panel is not close or has damaged. Check 24V power source and relay. If relay has damaged replace it with same model.

<p>3 Fan is working, indicator is not lit and sound of HF arc-striking can not be heard, wiping welding can not strike arc.</p>	<ol style="list-style-type: none"> 1 Positive and negative electrodes of VH-07 insert component voltage should be about DC310V from power panel to MOS board. <ol style="list-style-type: none"> (1) If circuit is broken and silicon bridge is poor contact. (2) If some of four high electrolytic (about 470UF/450V) of power panel capacitor is leaking. 2 There is a green indicator in auxiliary power of MOS board, if it is not on, auxiliary power is out of work. Check fault spot and connect with seller. 3 Check if connectors is poor contact. 4 Check control circuit and find out reasons or connect with seller. 5 Check if control cable of torch is broken.
<p>4 Abnormal indicator is not on, sound of HF arc-striking can be heard, but there is no welding output.</p>	<ol style="list-style-type: none"> 1 Check if torch cable is broken. 2 Check if grounding cable is broken or not connected to welding piece. 3 Output terminal of positive electrode or torch electrify is loosed from inter-machine.
<p>5 Bnormal indicator is not lit, sound of hf arc-striking can not be heard, wiping welding can strike arc.</p>	<ol style="list-style-type: none"> 1 Primary cable of arc-striking transformer is not connected to power panel firmly, tighten it again. 2 Arc-striking tip is oxidized or too far, give a good polish to it or change it is about 1 mm between arc-striking tip. 3 Switch (sticking/argon-arc welding) is damaged, replace it. 4 Some of HF arc-striking circuit components is damage, find out andreplace it.
<p>6 Bnormal indicator is lit but there is no welding output.</p>	<ol style="list-style-type: none"> 1 Maybe it is overheated protection, please close machine first, then open the machine again after abnormal indicator is out. 2 Maybe it is overheated protection, wait for 2-3 minutes (argon-arc welding does not has overheated protection function.) 3 Maybe inverter circuit is in fault, please pull up the supply power plug of main transformer which is on MOS board (VH-07 insert which is near the fan) then open the machine again. <ol style="list-style-type: none"> (1) If abnormal indicator is still lit, close machine and pull up supply power plug of HF arc-striking power source (which is near the VN-07 insert of fan), then open machine: <ol style="list-style-type: none"> a. If abnormal indicator is still lit, some of fieldistor of MOS board is damaged, find out and replace it with same model. b. If abnormal indicator is not lit, rise transformer of HF arc-striking circuit is damaged, replace it. (2) If abnormal indicator is not lit <ol style="list-style-type: none"> a. Maybe transformer of middle board is damage, measure inductance volume and Q volume of main transformer by inductance bridge (L=0.9-1.6mH Q>35). If volume is too low, please replace it. b. Maybe secondary rectifier tube of transformer is damaged, find out faults and replace rectifier tube with same model. 4 Maybe feedback circuit is broken .
<p>7 When welding aluminum, can not break oxidized film.</p>	<ol style="list-style-type: none"> 1 Wrong welding value. 2 Pulse duty too low. 3 Twice inverter MOSFET broken.
<p>8 Stick is burnt out.</p>	<p>Pulse duty is too high, reduce it.</p>



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