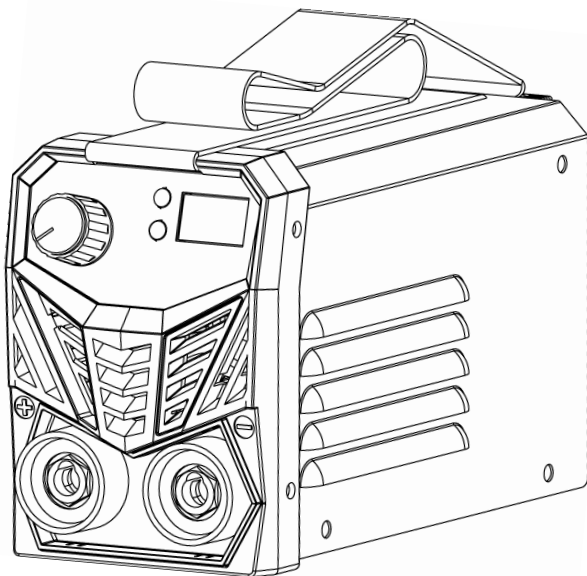




OWNER'S MANUAL

ARC-130

Welding Machine - STICK



Please read instruction manual carefully and retain for future reference

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Safety Warning









IMPORTANT: BEFORE INSTALLING, OPERATING OR CARRYING OUT MAINTENANCE ON THE STICK WELDER, READ THE CONTENTS OF THIS MANUAL CAREFULLY, WHICH MUST BE STORED IN A PLACE FAMILIAR TO ALL USERS FOR THE ENTIRE OPERATIVE LIFE-SPAN OF THE MACHINE. PAY PARTICULAR ATTENTION TO THE SAFETY RULES. THIS EQUIPMENT MUST BE USED SOLELY FOR STICK WELDER.






MACHINE OPERATING

Equipment can be dangerous to both the operator and people in or near the surrounding working area, if the equipment is not correctly operated. Equipment must only be used under the strict and comprehensive observance of all relevant safety regulations. Read and understand this instruction manual carefully before the installation and operation of this equipment.



⚠ WARNING

	WARNING: This symbol indicates that instructions must be followed to avoid serious personal injury, loss of life, or damage to this equipment. Protect yourself and others from possible serious injury or death.
	READ AND UNDERSTAND INSTRUCTIONS: Read and understand this manual before operating this equipment. Arc welding can be hazardous. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or damage to this equipment.
	ELECTRIC SHOCK CAN KILL: Welding equipment generates high voltages. Do not touch the electrode, work clamp, or connected work pieces when this equipment is on. Insulate yourself from the electrode, work clamp, and connected work pieces.
	ELECTRICALLY POWERED EQUIPMENT: Turn off input power using the disconnect switch at the fuse box before working on this equipment. Ground this equipment in accordance with local electrical regulations.
	ELECTRICALLY POWERED EQUIPMENT: Regularly inspect the input, electrode, and work clamp cables. If any insulation damage exists replace the cable immediately. Do not place the electrode holder directly on the welding table or any other surface in contact with the work clamp to avoid the risk of accidental arc ignition.
	ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS: Electric current flowing through any conductor creates electric and magnetic fields (EMF). EMF fields may interfere with some pacemakers, and welders having a pacemaker shall consult their physician before operating this equipment.

	CE COMPLIANCE: This equipment complies with the European Community Directives.
	ARTIFICIAL OPTICAL RADIATION: According with the requirements in 2006/25/EC Directive and EN 12198 Standard, the equipment is a category 2. It makes mandatory the adoption of Personal Protective Equipments (PPE) having filter with a protection degree up to a maximum of 15, as required by EN169 Standard.
	FUMES AND GASES CAN BE DANGEROUS: Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. To avoid these dangers the operator must use enough ventilation or exhaust to keep fumes and gases away from the breathing zone.
	ARC RAYS CAN BURN: Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers. Protect other nearby personnel with suitable, non-flammable screening and warn them not to watch the arc nor expose themselves to the arc.
	WELDING SPARKS CAN CAUSE FIRE OR EXPLOSION: Remove fire hazards from the welding area and have a fire extinguisher readily available. Welding sparks and hot materials from the welding process can easily go through small cracks and openings to adjacent areas. Do not weld on any tanks, drums, containers, or material until the proper steps have been taken to insure that no flammable or toxic vapors will be present. Never operate this equipment when flammable gases, vapors or liquid combustibles are present.
	WELDED MATERIALS CAN BURN: Welding generates a large amount of heat. Hot surfaces and materials in work area can cause serious burns. Use gloves and pliers when touching or moving materials in the work area.

Introduction And Specifications

General overview: ARC-130 from GUOZHI is a DC stick purpose unit, designed for portable repair work and small project use. It is ideal for the welding enthusiast or hobbyist with basic nonaluminum repair needs and general light welding requirements. The ARC-130 features a lightweight IGBT inverter design and can provide capable service for small projects and repairs. **NOTE: This unit is not suitable for welding aluminum.**

General Use and Care: Care should be taken to keep the unit out of direct contact with water spray. The unit is rated IP21S, which rates it for light contact with dripping water but should never be used in the presence of water for safety. It is a good idea to remove the welder from the vicinity of any water or moisture source to reduce the possibility of electrocution or shock. Never operate in standing water.

Every 1-2 months, depending upon use, the welder should be unplugged, opened up and carefully cleaned with compressed air. Regular maintenance will extend the life of the unit.

IMPORTANT: Before opening the unit's case for any reason, make sure the unit has been unplugged for at least 10 minutes to allow time for the capacitors to fully discharge. Severe shock and/or death could occur.

Do not restrict air flow or movement of air around the welder. Allow a buffer distance of 2 ft from all sides if possible, with a minimum distance of at least 18" clearance. Do not operate the welder immediately in the weld area or the force of the fan will cause welding issues such as unstable arc, or porosity.

Do not mount in areas that are prone to severe shock or vibration. Lift and carry the welder by the shoulder strap.

Do not direct metallic dust or any dirt intentionally toward the machine, particularly in grinding and welding operations. Make sure the panel is protected from damage during welding operations.



Duty Cycle. This unit can be described as a general purpose, do it yourself type of multi process unit and is intended for hobby use and general small repair and build activities. Care should be taken not to exceed the duty cycle limit of the ARC-130 for maximum servelife.

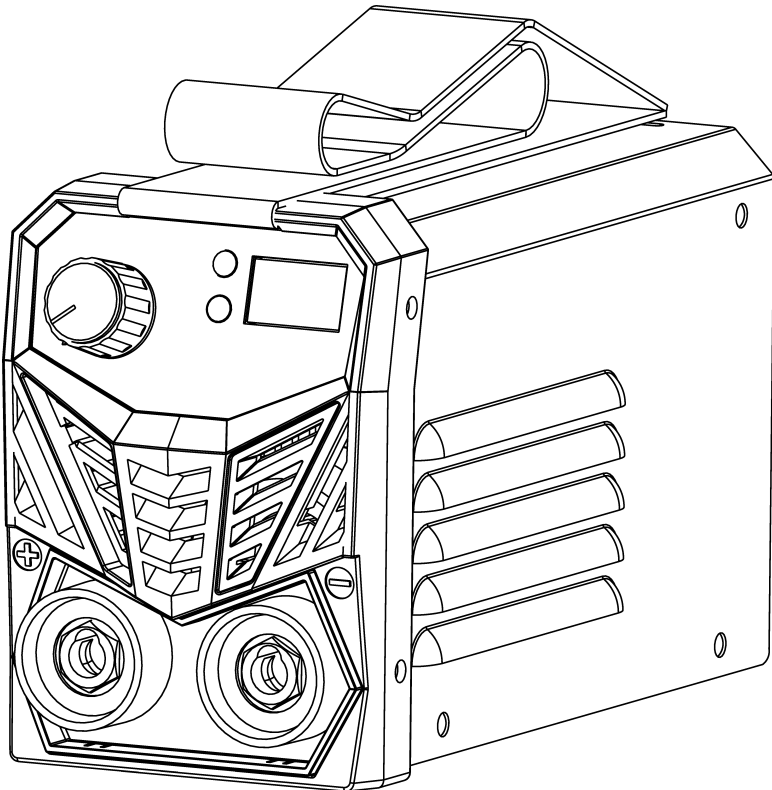
Once the duty cycle has been exceeded, heat may continue to build in the electronics. The duty cycle is based off a 10 minute duty cycle rating at 40° C. This means that the unit is capable of being operated at the maximum amps for the stated percent of time out of 10 minutes without a cool down break. For the balance of the 10 minute time period, the welder should rest without welding for maximum service life. The temperature light will come on and the welder will automatically stop welding when an overheat condition has occurred. If this occurs, stop and allow the unit to cool while switched on. Heat will continue to be generated by and transferred to the electronics after welding has ceased. Welding in humid, or hot conditions can affect duty cycle as well. Do not turn off the overheated welder until it has safely cooled for at least 15 minutes. Once the overheated condition has had time to clear, cycle the power switch off and back on to reset the unit. Do not operate the welder with the covers removed. The duty cycles are rated at maximum amps and are as follows:

115V:Stick @ 60%

Over Current. Over currents can occur if there is a fault in the power supply system or inside the unit. If this occurs, and the LED lights up, turn the unit off, check for external causes and remedy the problem. If none is found, cycle the power switch off and then back on.

This manual has been compiled to give an overview of operation and is designed to offer information centered around safe, practical use of the welder. Welding is inherently dangerous. Only the operator of this welder, can ensure that safe operating practices are followed, through the exercise of common sense practices and training. Do not operate this machine until you have fully read the manual, including the safety section.

***Thank you for purchasing our product.
ARC-130 is an inverter machine
manufactured to the highest standard.***



Technical Specification

ARC-130

Welding current Range(A)	STICK	115V	20-120A
Nominal DC Open Circuit Voltage (OCV)			62V
Welding output(115V)		STICK	120A/24.8V
Rated Input Current(A)	STICK	115V	42A
Duty Cycle (%)	STICK	60%@120A	100%@93A
Efficiency		85%	
Power factor		0.73	
Welder Type		STICK WELDER	
Output Terminal Type		Direct Wire	
Number of phases		Single Phase	
Nominal supply Voltage		115V	
Nominal Supply Frequency		50/60HZ	
Cooling Method		Fan Cooled	
Net Weight		4.4lbs	
Dimensions (Height*Width*Depth)		7.8x3.36x4.68 inch	

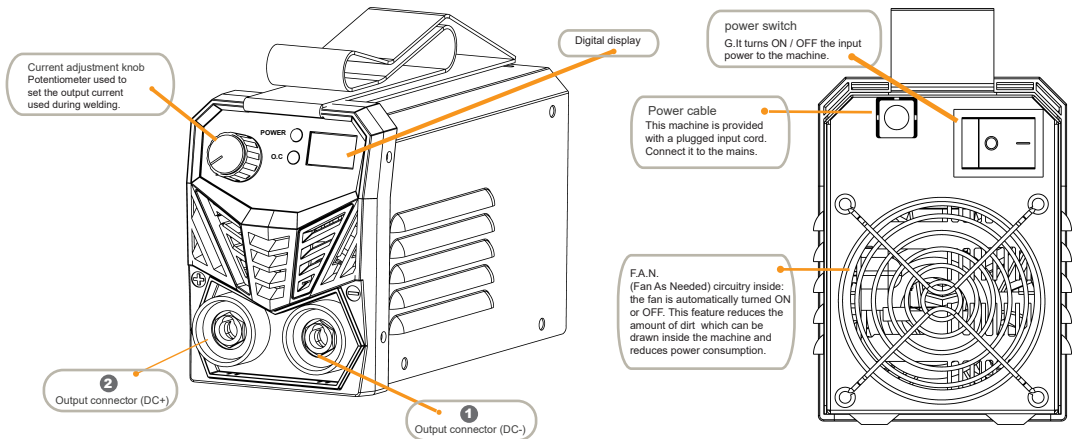
PACKING LIST

- ARC-130 Welding Machine.
- 10 Feet Electrode Holder with Cable.
- 10 Feet Work Clamp with Cable.
- Owner's Manual.
- Adjustable shoulder strap

Quick Setup And Use Guide

Stick Welding (ARC)

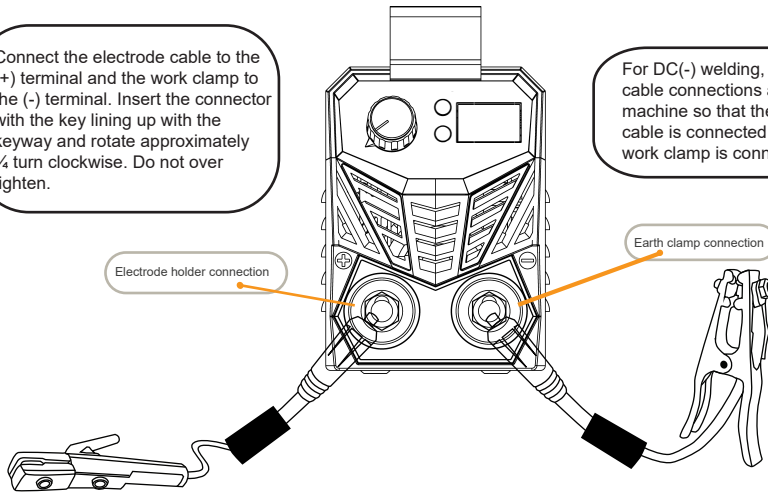
First determine the proper electrode polarity for the electrode to be used. Consult the electrode data for this information. Then connect the output cables to the output terminals of the machine for the selected polarity. Shown here is the connection method for DC(+) welding.



START STICK OPERATION

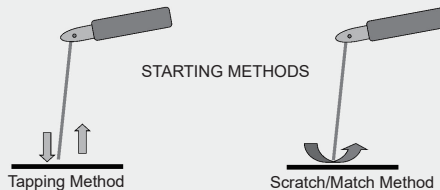
Connect the electrode cable to the (+) terminal and the work clamp to the (-) terminal. Insert the connector with the key lining up with the keyway and rotate approximately ¼ turn clockwise. Do not over tighten.

For DC(-) welding, switch the cable connections at the machine so that the electrode cable is connected to (-) and the work clamp is connected to (+).



STICK OPERATION

STARTING METHODS



1. Turn on the power switch on the rear of the unit. Allow unit to cycle through its start up program.
2. Select the Stick mode with the Stick selector switch.
3. Make sure electrode holder is connected to the positive connector and the work clamp is connected to the negative connector.
4. Select the desired amperage. Use the electrode diameter selection chart in this manual to determine the approximate range of amps suitable for the rod size selected. Consult the welding electrode manufacturer's recommendation for proper amperage range. Each manufacturer has specific recommendations for its electrodes. Ultimately Amperage is determined by the electrode thickness and the thickness of the metal.
5. Strike the arc with either the tapping method or the match strike method. Beginners usually find that the match strike method yields best results. Professionals tend to gravitate toward the tapping method because of its placement accuracy which helps prevent arc striking outside of the weld zone.

IMPORTANT: Do not weld in the stick electrode holder still attached.

Trouble Shooting

<i>Stick Trouble shooting:</i>	<i>CAUSE/SOLUTION</i>
Machine will not turn on.	Check cords and wiring in the plug. Check circuit breaker.
Machine runs, but will not weld in either mode.	Check for sound work clamp and cable connections. Make sure work cable are securely fastened to the Dinse style connector. Reset main power switch if overcurrent light is on. Contact Technical Support.
Arc will not start unless lift started.	See addendum or contact Technical Support.
Weld quality is poor. Weld is dirty/oxidized.	Eliminate drafts.
Over current/Duty cycle LED illuminates. Machine runs, but no output.	Duty cycle exceeded or Over current. Allow machine to cool. Reset main power switch after full cool down period. Make sure fan is not blocked. Check wiring.
Other issues.	Contact GUOZHIWELDER@163.com support.

Operating Precautions

A. Operating Environment

1. The machine can perform in environments where conditions are dry with a max humidity of 60%.
2. Ambient temperature should be between -10 to +40 degrees centigrade.
3. Avoid operating machine in direct sunshine, rain, or snow.
4. Avoid operating the machine in environments where there is pollution or high concentrations of dust or corrosiveness gas in the air.

B. Proper Ventilation

All users must ensure proper ventilation of the machine. The machine is powerful and compact which generates high currents and heat. Wind alone cannot ensure proper cooling so it is advisable to place a fan to cool down the machine during hot weather or continuous usage in order to keep the components working for a long shelf life. Make sure the machines vents or built machine at a minimum of 30cm from any objects to ensure proper ventilation.

C. Avoid Overvoltage

The specific power voltage can be found in the main technical specification chart listed above or on the rear plate of the machine. The automatic voltage compensation circuit will ensure that the current is functioning in the correct range. If the power voltage is exceeded from the max allowed value it will damage the components of the machine.

D. Avoid Overloading

Limit the current strictly to the max allowable duty cycle. Do not exceed the max load because overloading can damage and burn up the machine.

E. Duty Cycle

Duty cycle refers to the percentage of the working time against a 10-minute work cycle. For example, if the machine has a 60% duty cycle at 40A this means you can run the machine at 40A for 6 min in a 10 min work cycle. The remaining 4 minutes will be needed to let the machine cool down. If the current decreases, the duty cycle will increase and vice versa.

Do not operate over the recommended duty cycle of the machines or damage will occur to the machine that is irreversible. When output exceeds the duty cycle limit, the temperature within the machine will rise and the protective circuit will cut off the power source output. The power output will then resume operation only when the equipment has cooled down to normal temperature.

Note: Continuous overload operation will damage the power source. In these cases, the damage is not covered by warranty repair.

25 C	STICK
115V	60%

WARNING!

This machine could produce an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this machine.

Maintenance



WARNING!

Before maintenance and checking, power must be turned off, Before opening the cover disconnect the machine from electricity!

DO NOT REPAIR OR MODIFY MACHINE IF STILL UNDER WARRANTY!

1. Remove dust with dry, machine is operated in an area where the air is polluted with smoke and dust, the machine needs to be cleaned regularly, remove dust monthly.
2. Check inside the machine regularly and make sure the output terminals are connected tightly and connectors are not damaged. If burnt, loose or damaged please tighten or replace if necessary. Beware of moving parts.
3. Avoid water and steam entering into the machine, if the machine dose get wet please dry inside the machine and check the insulation of machine.
4. If the machine will not be operated for long periods it should be put into a box or covered and stored in a cool dry area.
5. If the radiator is covered with dust, it will affect the heat dissipation, the semiconductor power devices will have a negative impact. In addition, the accumulation of dust between the transformer coil will lead to decreased insulation performance. So at least once every 6 months, remove the side of the welder, with dry compressed air to clean the various parts of the internal cleaning.



If the welding machine just shut down, can not immediately repair its internal, should be in the distribution box switch and power off off at least 5 minutes after the implementation of the welding machine to allow the full discharge of the capacitor.