

# G.I.KRAFT

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## Owner's Manual

# CE GI12111

The equipment is approved by following car manufacturers

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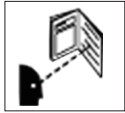
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# Safety Precautions Symbols



Protect yourself and others from injury, read and follow these precautions before installation and operation.



Read instructions.  
1. Read owner's Manual before using or servicing unit.  
2. Use only manufacturer's supplied replacement.



Electric shock can kill:  
1. Do not touch live electrical parts.  
2. Wear dry, hole-free insulating gloves and body protection.  
3. Do not wrap electrical cable around your body.  
4. Ground the workpiece with a good electrical ground.



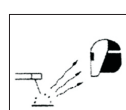
Exploding parts can injure. Always wear a face shield and long sleeves.



Fumes and gases can be hazardous welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.  
If inside, ventilate the area.  
Do not weld in a confined space only if it is well ventilated.



Static can damage PC boards  
1. Put on grounded wrist strap before handling boards or parts.  
2. Use proper static-proof bags and boxes to store, move or ship PC boards.



Eye protection for welding:  
Current level in amperage    Minimum shade  
Number  
30-150A----- #8  
150-300A----- #10  
300-500A----- #12



1. Wear approved face shield or safety goggles with side shields.  
2. Wear proper body protection to protect skin.



The heat from the workpiece can cause serious burns.



Flying metal can injure eyes.  
1)Wear safety glasses with side shields or face shield.



Remove all flammables of the welding area.



1. Magnetic fields can affect pacemakers. Pacemaker wearers keep away.  
2. Wearers should consult their doctor before going near plasma arc cutting operations.



Falling unit can cause injury.



Overuse can cause overheating  
Allow cooling period , follow rated duty cycle before starting to weld again.



Fire or explosion hazard.  
Do not locate unit on, over, or near combustibe surfaces. Do not install unit near flammables.



Do not weld in the height!



Never cut on pressurized cylinder.



Protect yourself



Warn others



OK



OK



Factory safety!

















Maintenance regularly!

# Symbols and Definitions

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## Definitions

<b>A</b> Amperes	<b>I<sub>1max</sub></b> Rated maximum supply current	<b>I</b> On	<b>%</b> Percent
<b>V</b> Volts	<b>I<sub>1eff</sub></b> Maximum effective supply current	<b>O</b> Off	 Increase
<b>I<sub>2</sub></b> Rated welding current	<b>IP</b> Degree of protection	 Protective earth (Ground)	 Line connection
<b>S<sub>1</sub></b> Power rating, product of voltage and current (KVA)	<b>1~</b> Single phase	 Do not do this	 Loose shield cup
<b>HZ</b> Hertz	<b>X</b> Duty cycle	 Suitable for some hazardous locations	 Adjust air/gas pressure
<b>U<sub>1</sub></b> Primary voltage	 Direct current	 Input	 Low air pressure light
<b>U<sub>0</sub></b> Rated no load voltage (Average)	 Constant current	 Voltage input	
<b>U<sub>2</sub></b> Conventional load voltage	 Temperature	 Power	

# Accessories And Spare parts

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## Accessories and Spare Parts List:

Welding Gun	Aluminium Two-stand Crossbar Lifter	Portable multi-hook puller	Hook Puller	Pneumatic Puller		
						
Hook	5mm Contact Tip	6mm Contact Tip	6mm Hook	4mm Hook	Tool Set	
						
5mm Stud	4mm Stud	5mm Pulling Screw	4mm Pulling Screw	4A Fuse	Caster	
						
5mm Nut	4mm Nut	12mm Washer	Axle	Pin	6mm Screw	Wheel
						
Tool Box	Earth Cable					
						

Remark:

- 1)、Optionnal orders for above accessories and components are available.
- 2)、Model and parts number required when ordering parts from your local distributor.

## Installation

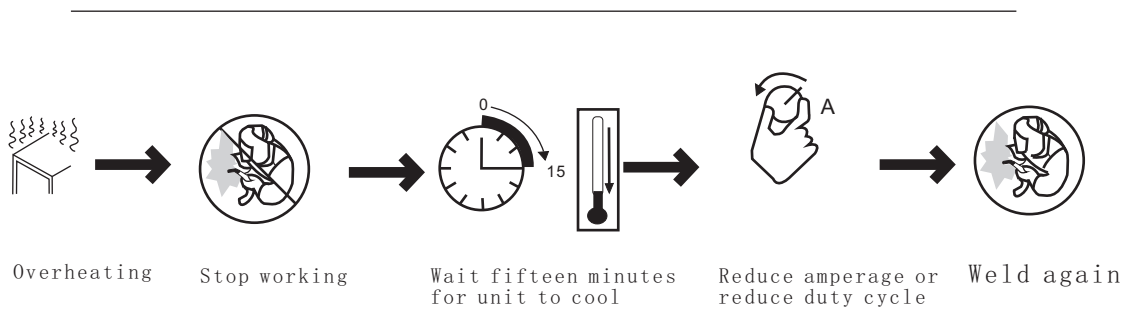
### 1、specifications

Parameters	Model	GI12111
Input voltage		AC 220V
Phases		Single-phase
Frequency		50/60Hz
Input Current		2.5A
Fuse		4A
Insulation grade		H grade
Capacitance		66000 UF
Charging voltage		50-200V
Stud diameter		$\Phi 4-\Phi 10\text{mm}$
Duty cycle		80%
Dimensions		720X600X1550mm
Weight		60kg

## 2. Duty Cycle and Overheating

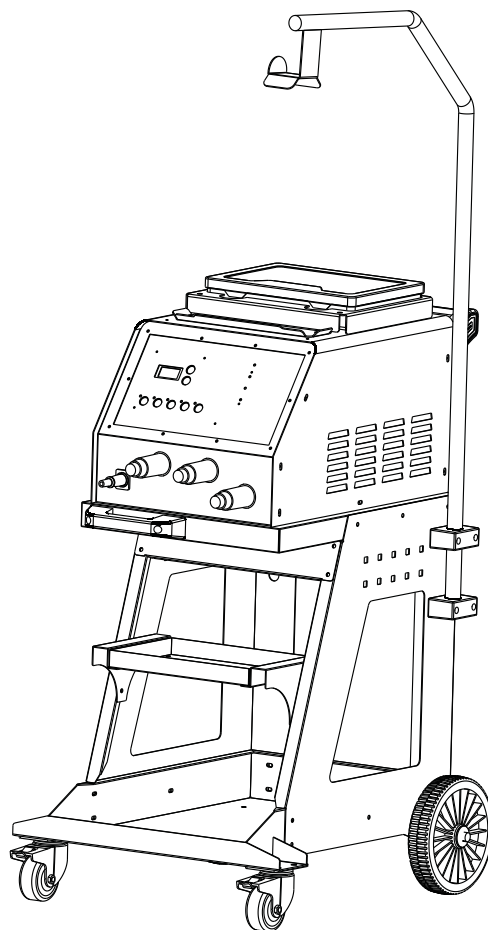
Duty cycle is percentage of 10 minutes that unit can weld at rated load without overheating.

If unit overheats, output stops, and cooling fan runs. Wait fifteen minutes for unit to cool. Reduce amperage or duty cycle before welding.



### 3. Machine Installation

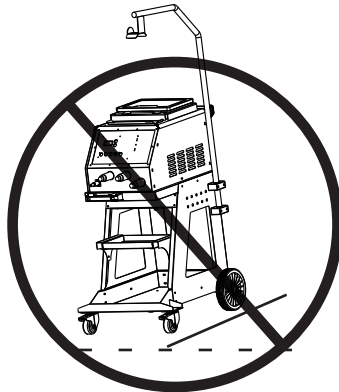
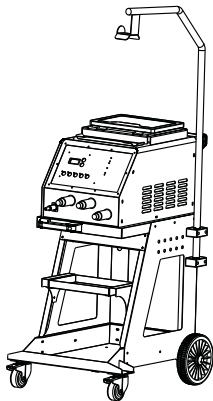
- 1) Open the package and find out the owner's manual.
- 2) Check the supplied accessories according to packing list that attached to this manual.
- 3) Properly install this equipment as following diagram. Inspect the unit for any problems. If so, contact your local distributor or service agency. To locate a distributor or service agency.



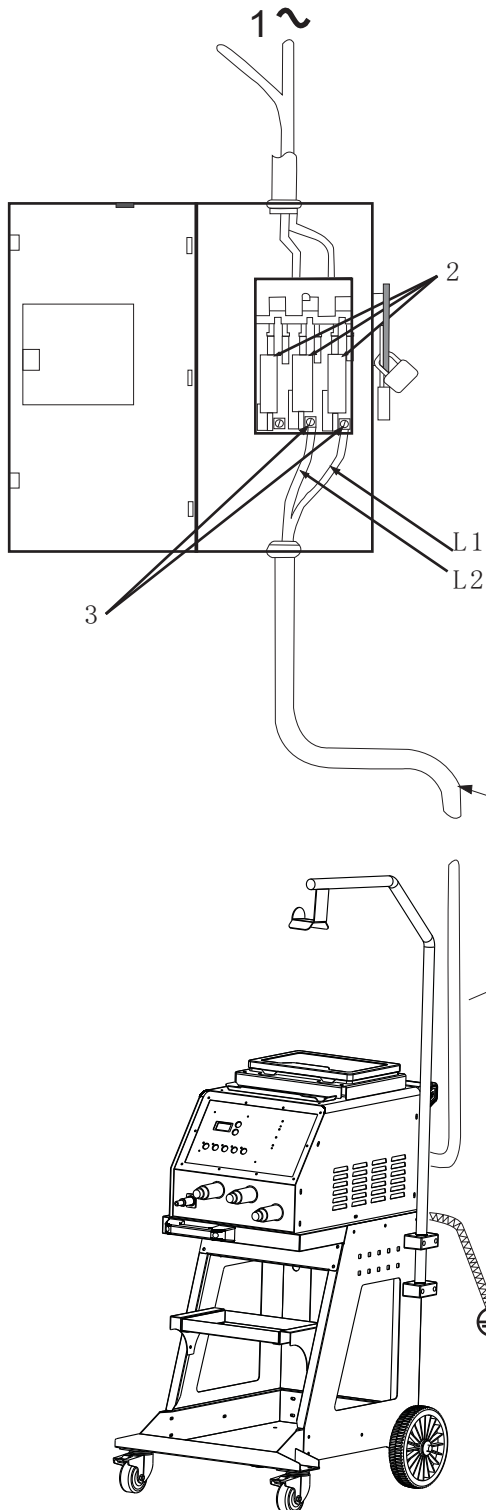


#### 4. Selecting a Location

- 1) Select a correct location to place the unit.
- 2) Determine input power cord length according to its actual operation requirement .Make sure that the supply cable is at least 6mm<sup>2</sup> in diameter
- 3) Do not move or operate unit where it could tip.
- 4) Use cart or unit handle to move unit .Do not pull the cords to move unit.



## 5、Connecting Input Power

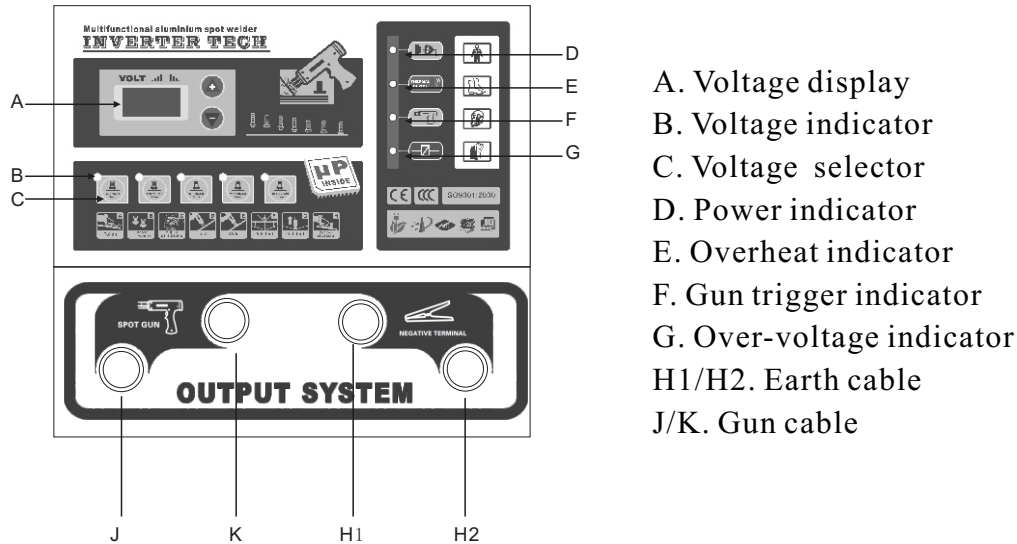


- 1、Input power cord (not less than 6mm<sup>2</sup> copper cord) .
- 2、Over-current protection.
- 3、Disconnect device line terminals.
- 4、Ground wire L1/L2 input conductors.

- Installation must meet all National and Local Codes---have only qualified persons make this installation.
- Disconnect and lockout/tagout input power before connecting input conductors from unit.
- Select type and size of over-current protection.
- Close and secure door on disconnect device . Remove lockout/tagout device, and place switch in the "on" position.

# Operation

## 1、Controls



It is easy and simple to operate the stud welder even though you have no relevant experience. Firstly, you could turn the main power switch to the “on” position and adjust the current according to relevant stud diameters. Put the chosen stud into the gun, then the welding process could be started. The greases of the workpiece surface should be cleared every time before welding to avoid poor contact. It has a little welding spatter, please wear glasses and gloves.

You could get the best result by connecting H1 and H2 with both edges of the workpiece surface for large area welding (you could choose either H1 or H2 for small area welding).

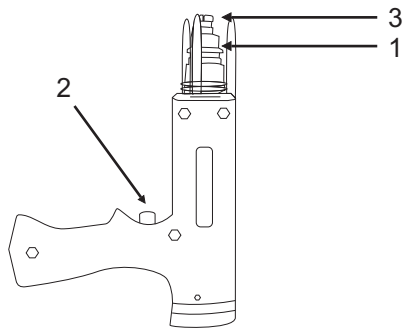
### **Weld metallic stud or post form components in sheet metal.**

The diameter of studs is 3mm-8mm. The welder is based on stud welding technology. It has advantages as high efficiency, low heat emission for workpiece surface, quality weld appearance, firm welded joint and low energy consumption. It could save your time and materials with excellent weld quality (great strength, no distortion, no leakage), easy and simple operation without complicated procedures such as drilling holes, riveting, welding and polishing... etc. The resistance heat is extensively used in welding field, suitable for welding of various metallic materials such as magnetism copper, stainless steel, copper, aluminum, aluminum alloy, etc.

Please read this instruction manual before use .

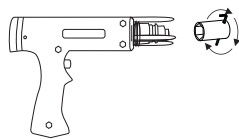
## 2、Weld gun application

### A、Weld gun

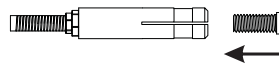


- 1、Ferrule
- 2、Trigger switch
- 3、Weld chuck

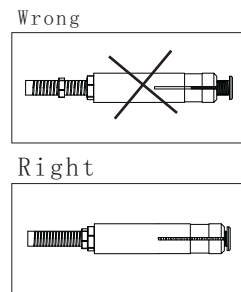
### B、Weld gun setup



(1)

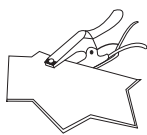


(2)

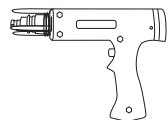


- 1.Insert a ferrule grip into the foot and tighten the ferrule
- 2.Insert a stud into the weld chuck.A different chuck is required for each different stud diameter(0.6mm chuck with 0.6mm stud,0.4mmchuck with 0.4mm stud)
- 3.Place the weld chuck into the chuck adapter.Make sure that the chuck is seated properly in the adapter.

### C、Weld gun application



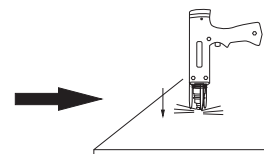
Connect ground cable to a clean, paintfree location on metal workpiece, as close to welding area as possible.



Weld gun with chuck and stud



Adjust current  
(See page 9)

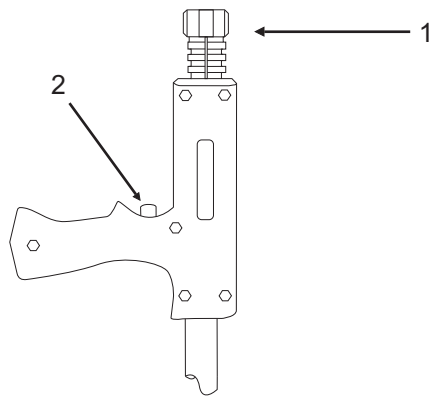


Place the weld gun perpendicular to the dent area on the workpiece. Apply pressure to the gun. Hold gun steady and push trigger to weld..

#### Remark :

- 1、 Setting amperage too high or time too long can cause workpiece surface (vehicle body) damage . Please weld other workpieces for practice before actual operations.
- 2、 Setting correct amperage and time according to the workpiece thickness.
- 3、 Continuing another operation is applicable after these procedures finished .If not, please shut off the main power supply and switch off the unit.

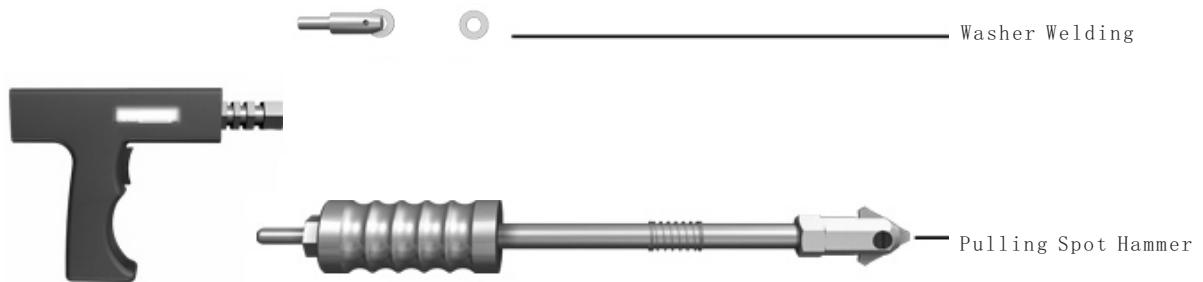
### 3. Steel Welding Gun and Adaptors



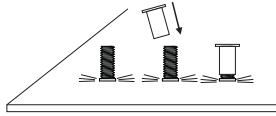
- 1, Electrode holder
- 2, Trigger

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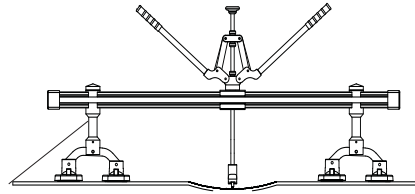
Single-Sided applications



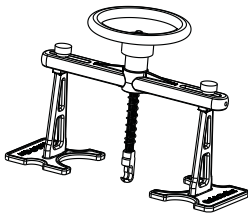
## D、 Cross-bar lifter application



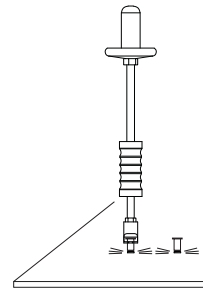
Weld the studs on the dent area of car body. Put the corresponding blind nuts on the studs and tighten up



For cross-bar lifter: Make sure the cross-bar lifter with pull-hook is fixed on the car body. Connect pull-hook to the blind nut. Adjust the set screw of the cross-bar lifter. Squeeze the lever to pull out the dent.

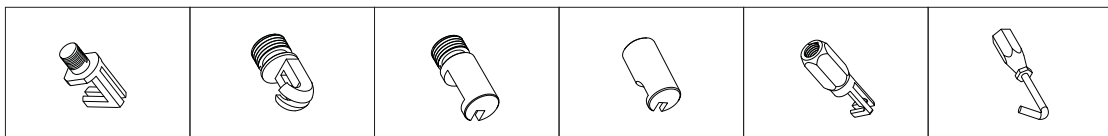


Choose quick puller: Make sure the quick puller with pulling hook is fixed on the car body. Connect the pulling hook to the pulling screw. Adjust the adjusting screw of the quick puller. Rotate the wheel to pull out the dent.



For hook puller: select relevant hook, connect the hook with the pulling screw, use hook puller to pull reversely to repair the dent.

A variety of pull-hooks is available to fit cross-bar lifter and pulling hammer.

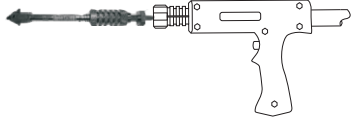


Remark :

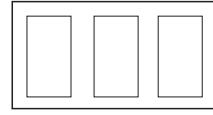
- 1、 Setting amperage too high or time too long can cause workpiece surface (vehicle body) damage . Please weld other workpieces for practice before actual operations.
- 2、 Setting correct amperage and time according to the workpiece thickness.
- 3、 According to actual conditions to select a suitable puller for repairing
- 4、 The nut of the puller is to adjust the up and down moving range of the main axle
- 5、 Continuing another operation is available after this procedure finished .If not ,please shut off the main power supply and switch off the unit.

## 5、 Operation

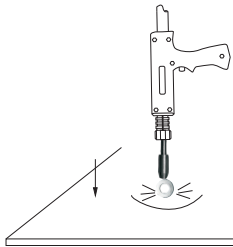
### Triangle Washer Welding



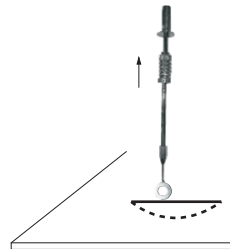
Connect washer adaptor with welding gun and tighten, Install washer.



Set correct voltage according to thickness of the panel



Approximately a 90° angle to the dent. Put on pressure and press trigger.

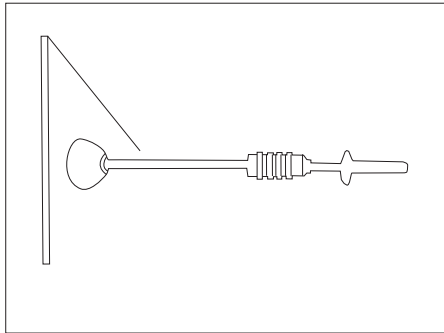


Remove welding gun. Hook the washer with pull hammer. Slide the hammer to opposite direction to pull out the dent.

#### Remark:

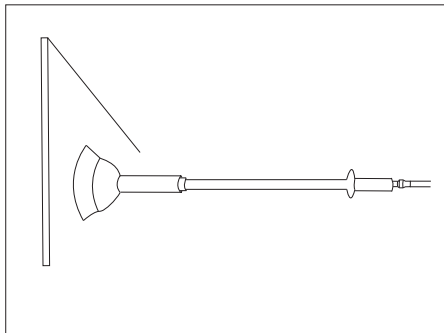
- 1、 Setting amperage too high or time too long can cause workpiece surface (vehicle body) damage . Please weld other workpieces for practice before actual operations.
- 2、 Setting correct amperage and time according to the workpiece thickness.
- 3、 Continuing another operation is applicable after these procedures finished . if not, please shut off the main power supply and switch off the unit.

## E、Cupules



### Manual operating cupule:

- 1、 Connect manual cupule with pull hammer.
- 2、 Push manual cupule in to lock the cupule on the dent.
- 3、 Slide the hammer to opposite direction to pull the dent out.



### Pneumatic vacuum cupule:

- 1、 Connect gas/air supply with the adaptor of cupule.
- 2、 Open the valve , sticking cupule to the dent.
- 3、 Slide the hammer to opposite direction pull the dent out.
- 4、 Cupule falls off when close the valve.



# Maintenance

## 1、Troubleshooting

Trouble	Reason	Remedy
No welding output	(1) Connected power supply incorrectly. (2) Power switch in "off" position	(1) Connect power supply according to manufacturer's instructions. (2) Place power switch in "on" position.
Trigger not working	(1) Trigger damaged. (2) Gun control wire broken. (3) Control wire plug loosen. (4) Mode switch in incorrect position.	(1) Replace trigger. (2) Connect again or replace if necessary. (3) Connect control wire plug again. (4) Place Mode switch in correct position.
Poor weld	(1) Amperage too low . (2) Weld time too short. (3) Input power cord did not meet the requirement. (4) Ground clamp bad contact.	(1) Increase amperage setting . (2) Increase time setting. (3) Replace input power cord. (4) Change ground clamp location.
Piercing workpiece	(1) Output amperage too high. (2) Weld time too long. (3) Bad contact of electrode tip or washer with workpiece.	(1) Reduce amperage setting. (2) Reduce weld time. (3) Remove coating from material reduce added pressure.
Carbon rod working unstable	(1) Carbon rod or workpiece is dirty (2) Incorrect amperage and time setting.	(1) Polish carbon rod and workpieces before welding (2) Set amperage and time according to workpiece thickness.
Welder stop working while operation	(1) Trigger plug loosen. (2) Gun control wire broken. (3) Over heating.	(1) Check gun control wire and trigger plug. (2) Wait for temperature cool down.

# Circuit Diagram

