



KING TONY

MULTIFUNCTIONAL IGBT INVERTER SPOT WELDING MACHINE



NO.9CCCF



WARNING

Read this manual and follow all the safety rules and operating instructions before using this product.



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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 owners 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



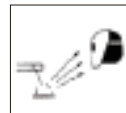
Exploding parts can injure Always wear a face shield and long sleeves



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



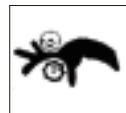
Static can damage PC boards
1. Put on grounded wrist strap before handling boards or parts
2. Use proper static-proof bags and boxes to store/move/ship PC boards



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



Moving parts can cause injury



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



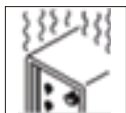
Keep away from moving parts such as fans



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



The heat from the workpiece can cause serious burns



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



Keep away from the torch tip



Cylinders can explode if damaged Gas cylinders contain gas under high pressure If damaged, a cylinder can explode Be sure to treat them carefully



Remove all flammables of the welding area



Do not weld in the height!



Falling unit can cause injury



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













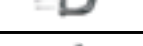








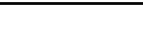
Never cut on pressurized cylinder



Symbols and Definitions

A	Amperes	I_{1max}	Rated maximum supply current	I	On	%	Percent
V	Volts	I_{1eff}	Maximum effective supply current	O	Off		Increase
I_2	Rated welding current	IP	Degree of protection		Protective earth (Ground)		Line connection
S_1	Power rating, product of voltage and current(KVA)	$1\sim$	Single phase		Do not do this		Loose shield cup
HZ	Hertz	X	Duty cycle		Suitable for some hazardous locations		Adjust air/gas pressure
U_1	Primary voltage		Direct current		Input		Automatic
U_0	Rated no load voltage(Average)		Constant current		Voltage input		Manual
U_2	Conventional load voltage		Temperature		Low air pressure light		

Accessories and Spare Parts List

KT NO.	Product	Description	9CCF31-1AA-B	9CCF41AA-B
KT001		Pneumatic vacuum cupule	X	X
KT002		Pull hammer	1 Set	1 Set
KT003		Dent pulling spot hammer	1 Set	X
KT006		Wavy wire	15 PCS	X
KT007		Carbon rod	3 PCS	3 PCS
KT008		Spot welding electrode tip	1 PCS	X
KT009		Carbon and connector	1 PCS	1 PCS
KT010		Wavy wire electrode tip	1 PCS	X
KT011		Washer connect	1 PCS	1 PCS
KT013		Triangle washer connect	X	1 PCS
KT014		Claw	1 PCS	1 PCS
KT015		Triangle washer	10 PCS	10 PCS
KT016		Stud	X	X
KT017		Ø12mm washer	15 PCS	15 PCS
KT017-1		Ø10mm washer	15 PCS	15 PCS
KT018		Earth clamp	1 PCS	1 PCS
KT019		Manual cupule	1 PCS	1 PCS
KT030		OT washer	X	X
KT033		Wrench	1 PCS	1 PCS
KT034		Stud connector	X	X

Installation

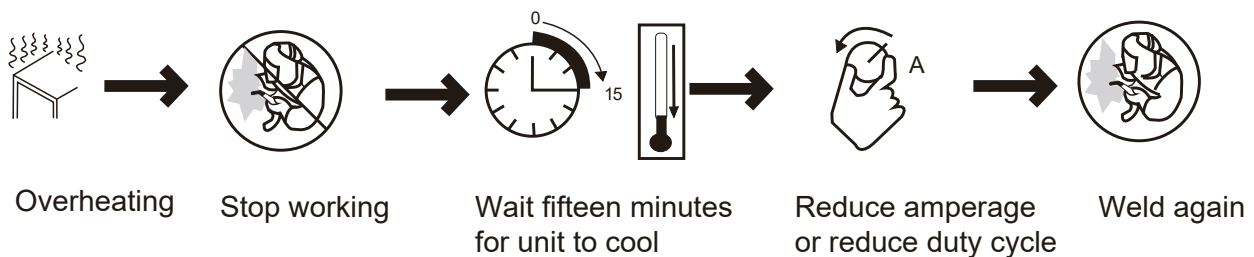
1. Specifications

Model	9CCF31-1AA-B	9CCF41AA-B
Input voltage	380V 50/60Hz	380V 50/60Hz
Input power	6.5 KVA	6.3 KVA
Input current	42A/14A	40A/12A
Max instant current	2600A	2500A
Output power	1-13V	1-13V
Operation way	Electronic timer continuously	Electronic timer continuously
Welding time	0-99s	0-99s
Dimensions	370x230x280 mm	370x230x280 mm
Weight	9.5 kg	9.0 kg

2. Duty Cycle and Overheating

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

If unit overheat, output stops, and cooling fan runs. Wait 15 minutes for unit to cool. Reduce amperage or duty cycle before welding.

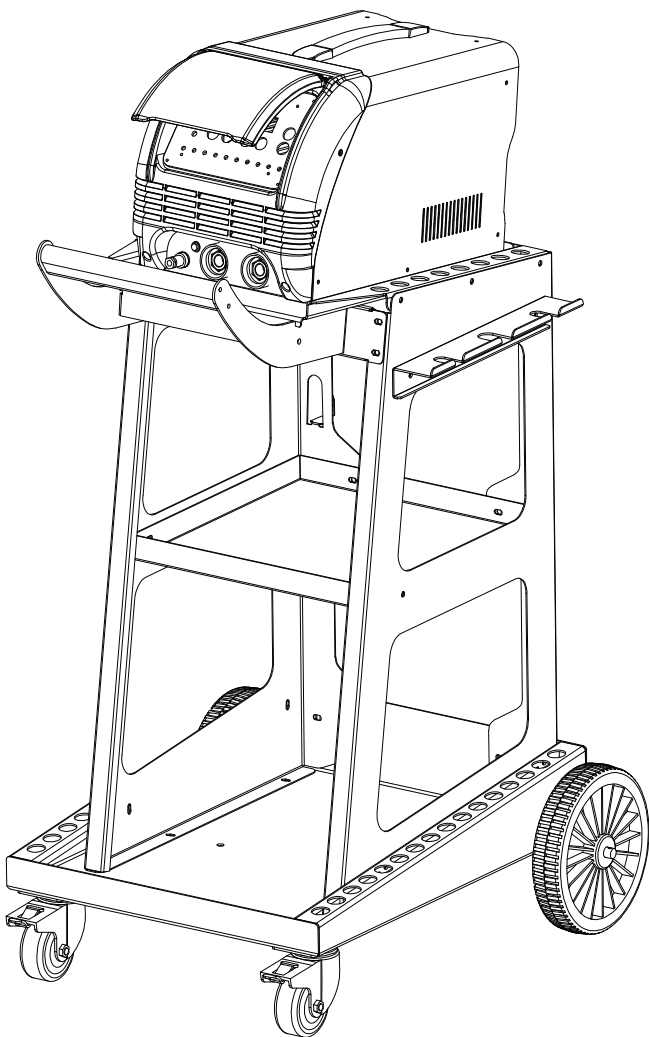


3. Machine Installation

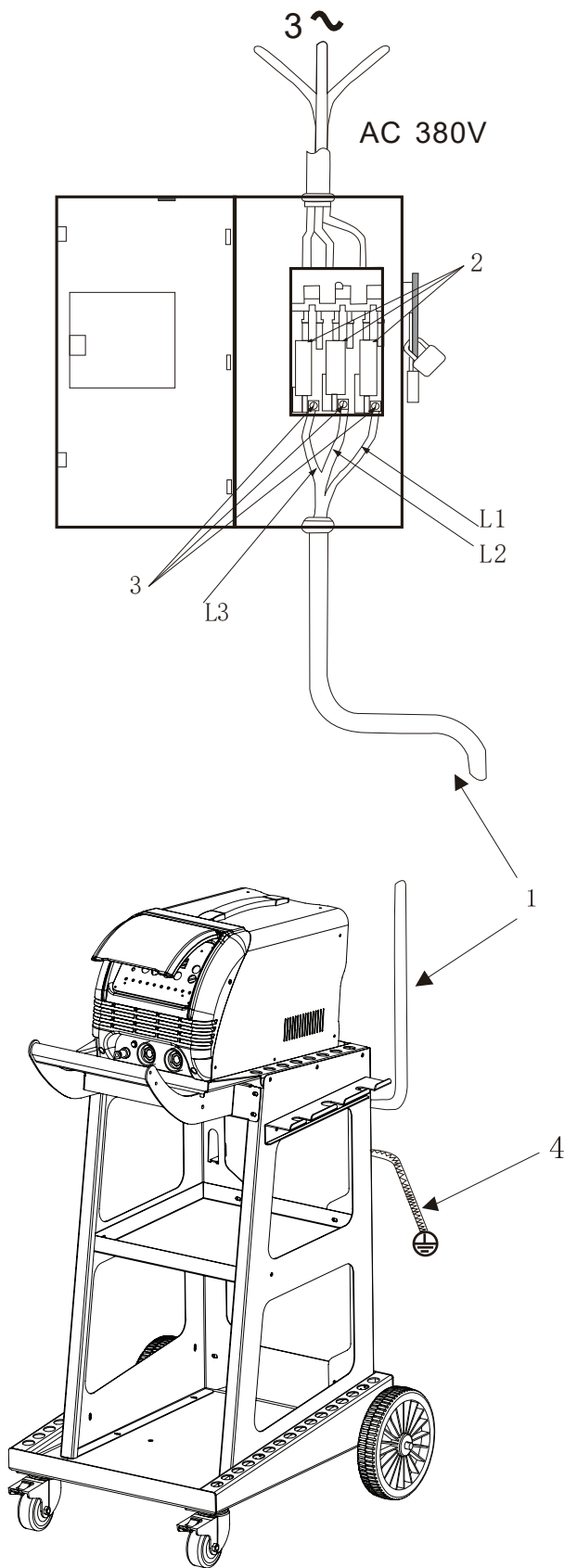
Open the package and check the details of supplied accessories than properly install this equipment as follow diagram.

4. Selecting a Location

- a. Select a correct location to place the unit.
- b. Determine input power cord length according to its actual operation requirement.
Input power cord must have a minimum inside diameter of 6mm² .
- c. Use cart or unit handle to move unit. Do not pull the cords to move or operate unit where it could tip.



5. Connecting Input Power

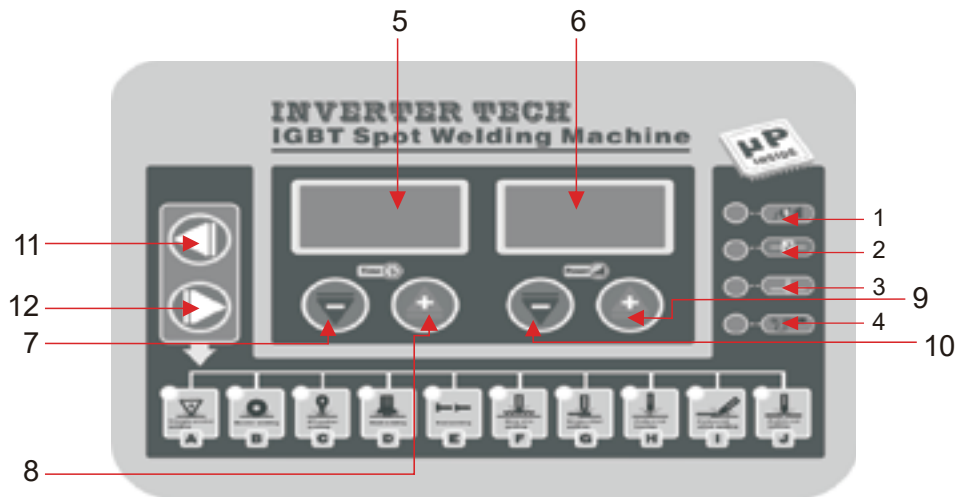


1. Input power cord. (not less than 6mm² copper cord)
2. Over-current protection.
3. Disconnect device line terminals.
4. Ground wire L1 / L2 input conductors.

- 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

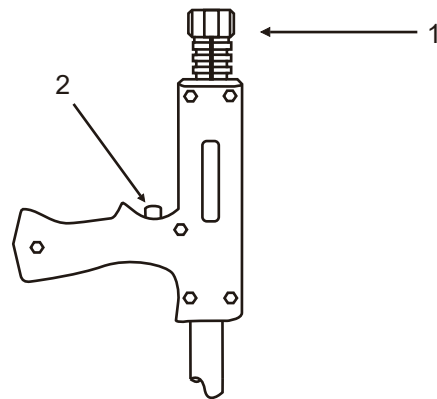


1. Power indicator
2. Error indicator
3. Overheat indicator
4. Gun trigger indicator
5. Spot welding time display
6. Power percentage display
- 7 / 8. Spot welding time adjustment
- 9 / 10. Power percentage adjustment

Instruction:

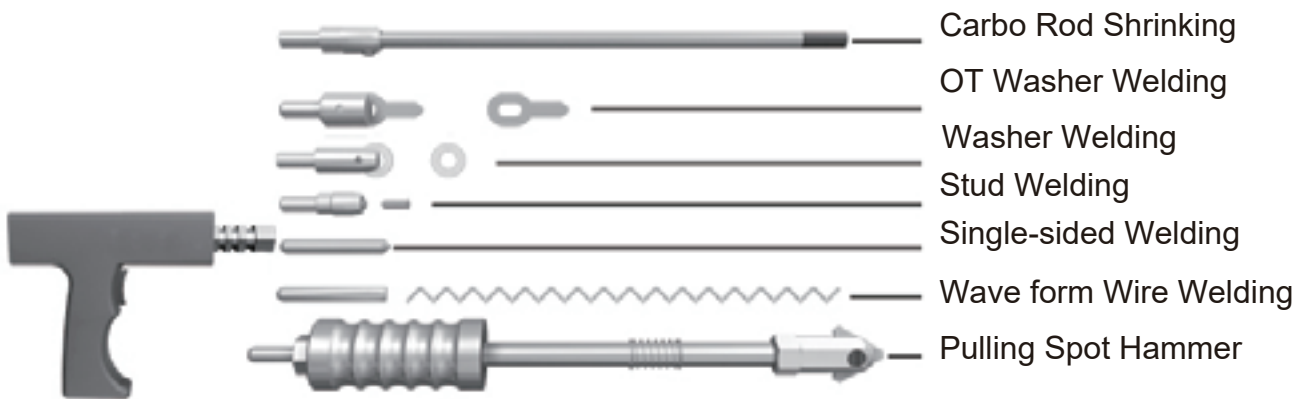
1. Connect input power properly and safely.
2. Turn on the power switch and selection buttons according to required working mode.
3. Appropriately adjust welding time and power according to actual situation.
4. After setting the parameters, the machine enters into standby mode and is ready to weld.
5. When the temperature exceeds normal working temperature, the indicator will light and overload protection will start. Wait few minutes until the light off, then use the machine again.
6. The error indicator will light when the machine goes wrong, and the machine enters into automatic protection mode. Cut off the power supply then check, use the machine again until the problems are solved.

2. Welding Gun and Adaptors



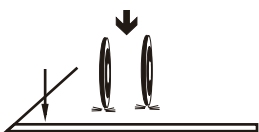
- 1. Electrode holder
- 2. Trigger

Single-Sided applications

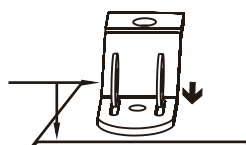


Connection of negative wire

1. Weld two washers onto the dented area that needs repairing.

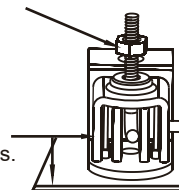


2. Put the ground cable onto the welded washers.



5. Tighten the screw to securely fix the clamp.

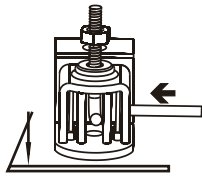
3. Place the earth clamp over the welded washers.



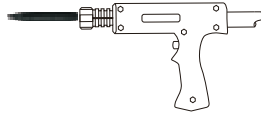
4. Insert the bolt through washers and clamp.

3. Operation

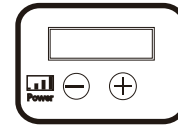
a. Spot Welding



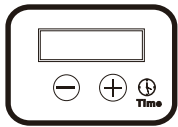
Connect negative outside wire to a clean paint free location on metal workpiece as close to welding area as possible



Connect spot welding electrode tip with welding gun and tighten



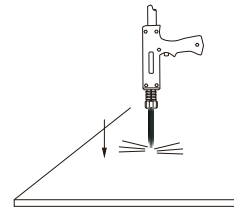
Set correct power
(Position C is recommend)



Set correct time.



Select welding function



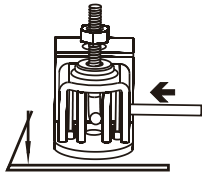
Approximately a 90° angle to the workpiece surface
Put on pressure and press trigger

Remark :

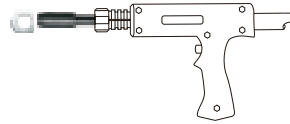
1. Setting amperage too high or time too long can cause workpiece surface damage.
2. Setting correct amperage and time according to the workpiece thickness.
3. Continuing another operation is applicable after these procedures finished.

If not, please shut the power off and switch off the unit.

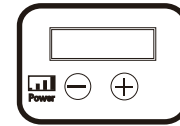
b. Washer Welding



Connect negative outside wire to a clean ,paint free location on metal workpiece as close to welding area as possible.

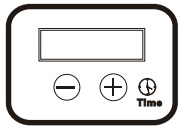


Connect washer adaptor with welding gun and tighten, Install washer.



Set correct power.

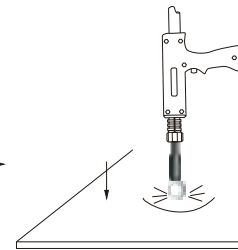
(Position A orB is recommend)



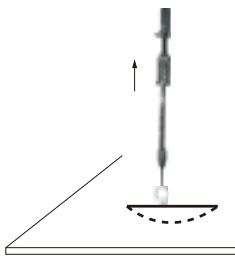
Set correct time.



Select welding function.



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



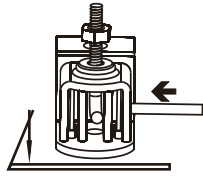
Remove welding gunHook the washer with pull hammer Slide the hammer to opposited irection to pull out the dent .

Remark :

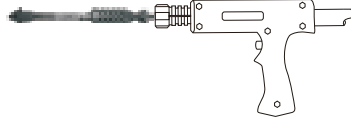
1. Setting amperage too high or time too long can cause workpiece surface damage.
2. Setting correct amperage and time according to the workpiece thickness.
3. Continuing another operation is applicable after these procedures finished.

If not, please shut the power off and switch off the unit.

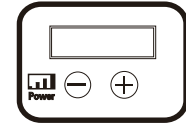
c. Triangle Washer Welding



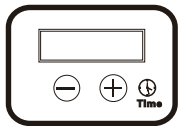
Connect negative outside wire to a clean paint free location on metal workpiece as close to welding area as possible.



Connect triangle washer pull hammer with welding gun.



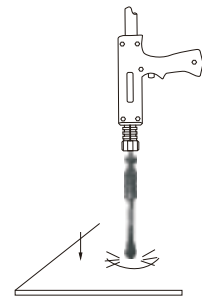
Set correct power
(Position A is recommend)



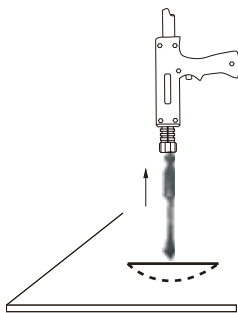
Set correct time.



Select welding function.



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

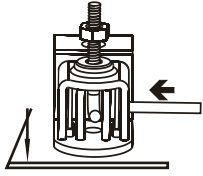


Slide the hammer to opposite direction to pull the dent.

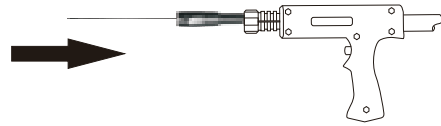
Remark :

1. Setting amperage too high or time too long can cause workpiece surface damage.
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 the power off and switch off the unit.
4. Triangle washer welding can replace washer welding. It can draw out the concavity directly after welded.

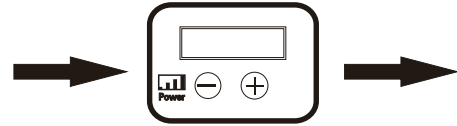
d. Carbon Rod Heating



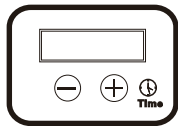
Connect negative outside wire to a clean paint free location on metal workpiece as close to welding area as possible.



Connect carbon rod and carbon rod adaptor with welding gun.



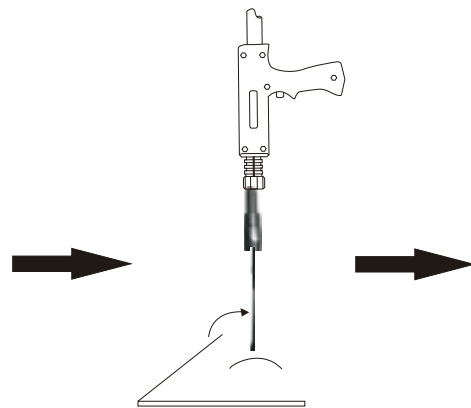
Set correct power
(Position A is recommend)



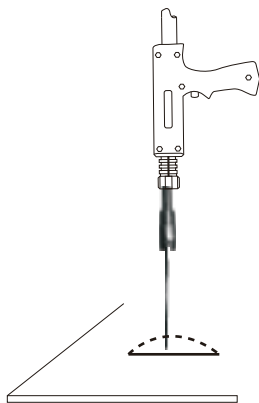
Set correct time.



Select welding function.



Turn carbon rod clockwise to heat up the entire convexity surface.



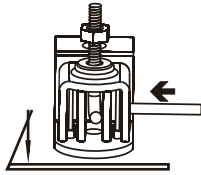
Cool the surface with a wet rag or compressed air.

Remark :

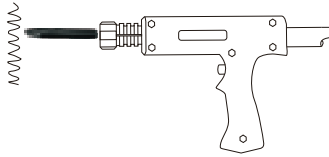
1. Setting amperage too high or time too long can cause workpiece surface damage.
2. Setting correct amperage and time according to the workpiece thickness.
3. Continuing another operation is applicable after these procedures finished.

If not, please shut the power off and switch off the unit.

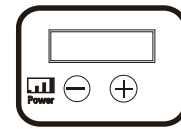
e. Wriggle Form Wire Welding



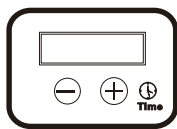
Connect negative outside wire to a clean paint free location on metal workpiece as close to welding area as possible.



Connect wave form wire electrode tip with welding gun.



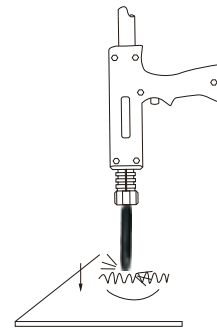
Set correct power
(Position A is recommend)



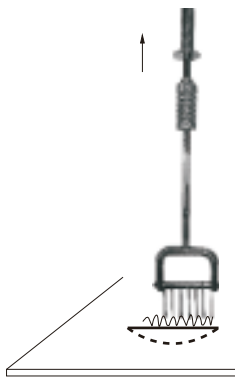
Set correct time.



Select welding function.



Place a wave form wire horizontally on the dent Approximately a 90° angle to wave form wire Put on pressure and press trigger.



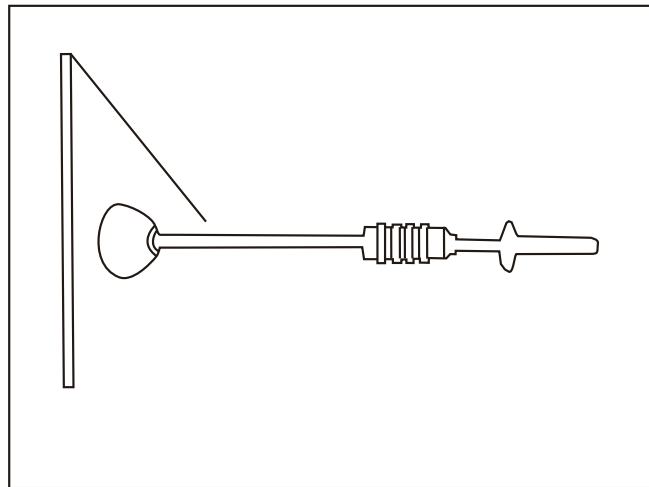
Connect hook puller with pull hammer
Hook wave form wire and slide the hammer to pull out the dent.

Remark :

1. Setting amperage too high or time too long can cause workpiece surface damage.
2. Setting correct amperage and time according to the workpiece thickness.
3. Continuing another operation is applicable after these procedures finished.

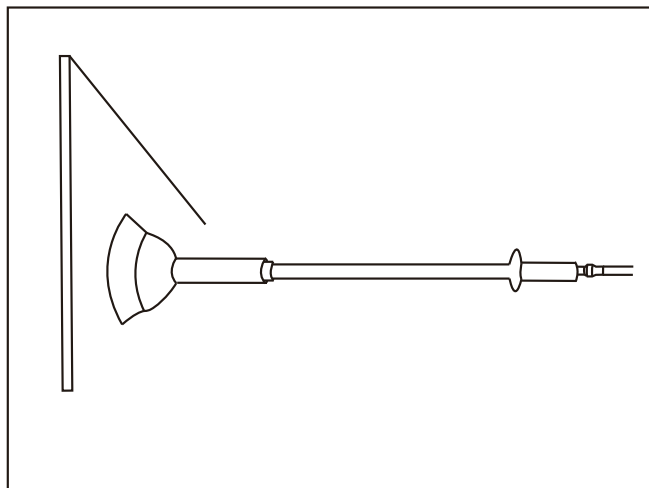
If not, please shut the power off and switch off the unit.

f. Cupules



Manual operating cupule

1. Connect manual operating cupule with pull hammer.
2. Push manual operating cupule in to lock the cupule on the concavity.
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 to draw the concavity out.
4. Cupule falls off when close the valve.

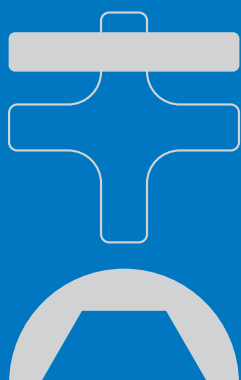
Maintenance

1. Troubleshooting

Problems	Causes	Solutions
No weld output	<ol style="list-style-type: none"> 1. Connected power supply incorrectly 2. Power switch in off position 	<ol style="list-style-type: none"> 1. Connect power supply according to manufacturer's instructions 2. Place power switch in "on"
Trigger not working	<ol style="list-style-type: none"> 1. Trigger damaged 2. Gun control wire broken 3. Control wire plug loosen 4. Mode switch in incorrect position 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Amperage too low 2. Weld time too short 3. Input power cord did not meet the requirement 4. Ground clamp bad contact 	<ol style="list-style-type: none"> 1. Increase amperage setting 2. Increase time setting 3. Replace input power cord 4. Change ground clamp location
Piercing workpiece	<ol style="list-style-type: none"> 1. Output amperage too high 2. Weld time too long 3. Bad contact of electrode tip or washer with workpiece 	<ol style="list-style-type: none"> 1. Reduce amperage setting 2. Reduce weld time 3. Remove coating from material reduce added pressure
Kriptol working unstable	<ol style="list-style-type: none"> 1. Kriptol did not polish, workpieces did not polish 2. Incorrect amperage and time setting 	<ol style="list-style-type: none"> 1. Polish kriptol and workpieces 2. Set amperage and time according to workpiece thickness
Unit stop working while operation	<ol style="list-style-type: none"> 1. Trigger plug loosen 2. Gun control wire broken 3. Over heating 	<ol style="list-style-type: none"> 1. Check gun control wire and trigger plug 2. Wait for temperature cool down



KING TONY



Please wear proper safety gear while working.

