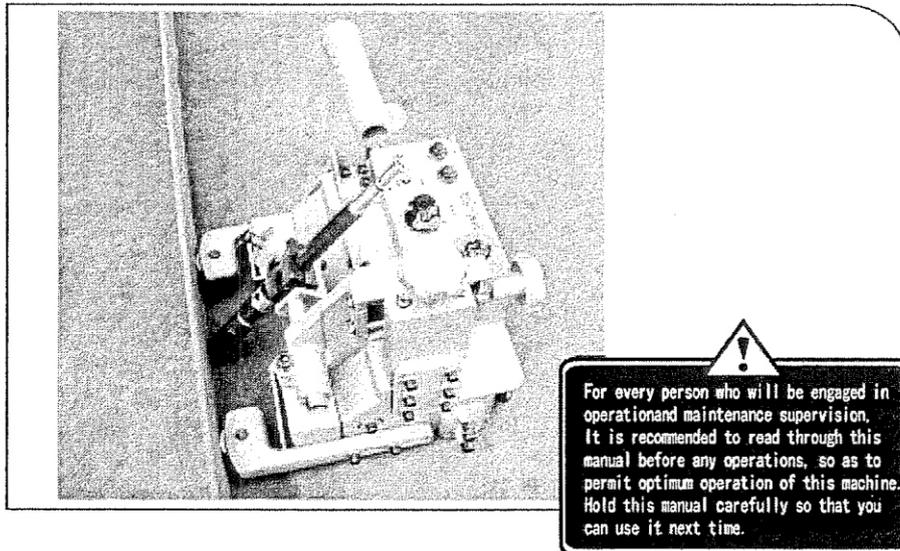


OPERATING INSTRUCTIONS



Autotrack 60 Standard Corner Welding Carriage
CO₂ gas shielded auto-welding trolley operation guide

Instruction

Thank you very much for purchasing this product. Read this instruction manual thoroughly to insure correct, safe and effective use of the machine. Read the manual first to understand how to operate and maintain the machine.

Make sure you read, understand and take all the necessary safety precautions.

Safety Precautions

This product is designed to be safe, but it can cause serious accidents if not operated correctly. Those who operate and repair this machine must read this manual thoroughly before operating, inspecting and maintaining the machine. Keep the manual near the machine so that anyone who operates the machine can refer to it if necessary.

- ★Do not use the machine carelessly without following the instructions in manual.
- ★Use the machine only after you completely understood the contents of the manual.
- ★For safety, it needs a qualified people to equip, check and repair the machine. The operation should be done by people, who understand the manual completely or has abundant experience.
- ★In order to do safety education, you should join a forum, which is organized by welding association and welding union or related association. You should take a welding engineer qualified exam.
- ★After reading the specification sheets, you should keep the manual near the machine so that anyone who operates the machine can refer to it if necessary.
- ★If an explanation in the manual is difficult to understand, contact our company of sales service office. The address and telephone number is on the back of the manual.
- ★If the manual become lost or damaged, place an order with our company or sales service office for a new one.
- ★When transferring the machine to a new owner, be sure to hand over this instruction manual as well.

Symbol	Title	Meaning
	General	General caution, warning and danger
	Be careful not to get your fingers caught.	Possible injury to fingers if caught in the insertion part.
	Caution: Electric shock!	Possible electric shock under special conditions.
	Ground this equipment.	Operators must ground the equipment using the safety grounding terminal.
	Pull out the power plug from the outlet.	Operators must unplug the power plug from the outlet when a failure occurs or when there is a danger of lightning.
	Caution against bursting	Possible bursting under certain conditions.
	General	General warning.
	Caution: Hot !	Possible injury due to high temperature under certain conditions.
	Caution: Ignition!	Possible ignition under certain conditions.
	Notice: magnet!	Magnet may generate magnetic field and magnetic wave.
	Please wear eye protector against light!	Must wear eye protector when observing welding arc.
	Please wear protective mask against dust.	Must wear protective mask when there is dust and fume in the production process.
	Don't elevate!	Don't elevate the machine in case of falling!

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1 Safety Instruction

Operation, inspection, and maintenance that disregard the basic safety rules cause many accidents. Carefully read, understand, and master the safety measures and precautions described in this instruction manual and on the machine before operating, inspecting, and maintaining the machine. The safety messages are classified as indicated on the machine safety labels:

- ★ Read this instruction manual before operating the machine.
- ★ When you equip the firing power, choose fixing position, store high-voltage gas, store productions and dispose abatement, you should do them according to laws and rules.
- ★ There are some precautions in the manual, which can prevent you and other people from damages.
- ★ If you operate the machine wrongly, it may lead to some damages. The damages can be divided into three types, which have individual signs and meanings. The signs and words are pasted on machine for warning.

sign	meaning	illustration
	Danger	It may lead to die or terrible damage.
	Caution	It may lead to die or terrible damage.
	Notice	It may lead to damage. In generally, it is dangerous operations.
	Precaution signs	Precaution signs are show to operator and maintenance person that it may lead the machine or external equipments to be damaged.

- Terrible damages are loss of sight, electric shock, burn, fracture, poisoning and so on, which may lead to sequelas or need be specially cured for a long time. The damage such as burn or electric shock need not be hospitalized cured. The actual damages are losses of assesses.

2 Safety precautions before operation



Precaution

Please obey the following precautions in case of some terrible damages.

- ◆ The welding machine is designed considering the safety factors. But, you must operate it according the precautions in case of the terrible accidents.
- ◆ Must make other people leave away the operating space and work area.
- ◆ The melting machine can create magnetic field, which may influent some sensing devices and clocks. Based on the same factor, people, who has electrical pacemaker in heart, can't be near of the operating machine.
- ◆ For safety, the equipment, maintenance, check, and repair should be done by people, who have been trained.
- ◆ Before operating the machine, you must understand the manual well.
- ◆ The machine must not be use to finish other works besides electric arc welding, which be illustrated in the manual.
- ◆ Don't modify the machine.
- ◆ Before operation, you should check whether it is safe in case of accidents.
- ◆ When you carry the machine, you must catch the handle and carry it smoothly.
- ◆ If you want to touch the machine in the process of welding or after welding, you must wear protective gloves. Don't touch it before the face cools.



Precaution

Please obey the following precautions in case of electric shock.

- ◆ Don't touch charged parts, else it can lead to terrible electric shock or burn. When the power is on, the circuit and inner has charge. The capacity is charged even the power is off. When the welding power put out, the electric pole, metal base and the connected parts are charged.
- ◆ Don't touch charged parts.
- ◆ According to rules to connect distribution box, metal base and other relate connection. All of this should be done by a qualified engineer.
- ◆ Before equipment, maintenance and check, you should cut off the power of carry-in terminal. When you cut off the power, capacity can't be uncharged immediately, so you must make sure there is no residual voltage, then you can do maintenance and check.
- ◆ Do maintenance and check periodically. Repair the broken parts before operating the machine.
- ◆ Don't use broken wire or under power wire.

- ◆ The connection of the wire should be firmed and insulated
- ◆ You should firm the welding wire on the position of metal base.
- ◆ Don't operate the welding machine under the condition of taking apart the frame or cover.
- ◆ Before you use the machine, you must cover the connector of power.
- ◆ Don't use broken or damp protective gloves and wear damp clothes.
- ◆ Don't operate the machine in outdoor after rain. Don't operate it on the damp floor.
- ◆ Must use life buoy if you operate it on eminence.
- ◆ Cut off all the power if you don't use it.
- ◆ Must equip fuse on the carry-in terminal of the power.
- ◆ Before use it, check the input voltage. The input voltage should be in the range of $\pm 10\%$ of the rated voltage. Don't use it if the voltage is beyond of the scope.
- ◆ There are screw chasers on the metal plug of the hard rubber jacket. You should screw them and make sure no external force pull the plug in the process of welding.
- ◆ Ground the hard rubber jacket wire!
- ◆ You should stop operating, cut off the power and invite professional engineer to repair it if the following cases occur.
 - ▼ The wire is broken.
 - ▼ It is damaged because of the leakage.
 - ▼ Although operating it correctly, some failures occur.
 - ▼ The machine occur failures.
 - ▼ The machine can't operate normally.



Precaution

Use some shields to protect you and other people from aureole, spatter, dross and noise.

- ◆ The aureole contents harmful ultraviolet ray and infrared ray, which may damage you eyes or burn them.
- ◆ The spatter and dross can damage you eyes.
- ◆ The noise can damage your aural comprehension.
- ◆ In the welding process, you should wear effective eye protector and protective gloves to protect you eyes.
- ◆ Set shields to protect others from damaging eyes.
- ◆ In the operating process, you should wear a complete set of shields. Such as leather protective gloves, leg encasing, leather protective skirt, helmet and safe shoes.
- ◆ You should wear safeguard to prevent noise when the noise is too high.



Precaution

Use shield to protect you and others from being damaged by fume in the welding process.

- ◀ There is fume in the process. These fumes can damage your health.
- ◀ If you operate in a small space, it may lead to apnea because of lack of oxygen.
- ◀ You should use antigas-helmet and waste disposal equipment according to the rules to prevent from intoxication and apnea.
- ◀ When the space is small, you should make the air draft well or wear antigas-helmet and ask an empirical person to monitor the welding process.
- ◆ If you weld on steel plate with zinc bed, it can lead to toxic gas. So, you should clear the zinc or wear antigas-helmet.



Precaution

- ◆ Please obey the following precautions in case of the gas bottle leaning or bursting.
- ◆ If the gas bottle leans, it may lead to some terrible accidents.
- ◆ There is high-voltage gas in the bottle. If you don't operate it in right way, the bottle may burst to lead to damages.
- ◆ Dispose the gas bottle according to the rules.
- ◆ Don't make the gas bottle in high temperature.
- ◆ Put the gas bottle on a special base in case of leaning.
- ◆ Don't create electric arc on the gas bottle. Don't put the torch on the bottle and make electric pole connect it.
- ◆ Don't make your head be near of the escape hole when open the bottle.
- ◆ Cover the bottle with shield when the bottle doesn't be used.
- ◆ Use the airmeter made by the same firm or recommended by the firm.
- ◆ Before use the airmeter, you should read the direction for use and operate it according to the rules.
- ◆ Don't use leaking or broken gas bottle
- ◆ The gas bottle only is used to special purpose.
- ◆ Don't smear oil or grease on the bottle.
- ◆ You should contact the distributor when gas bottle is difficult to open.



Precaution

Please obey the following precautions in case of damages by rotary parts.

- ◆ Don't make your hands, hair or clothes near of cooling fan of power or roller wheel of feeder, else you will be seized.
- ◆ Don't make your head near of the end of the torch when the welding wire is going, else the welding wire will damage your eyes.
- ◆ When the welding-wire reel releases, the welding wire may damage you.
- ◆ Don't take apart the frame or cover to use the machine.
- ◆ Let a professional people to take apart frame to do maintenance and check or repair. Set guard rail around the machine in case of other people being near of it.
- ◆ When you move or store welding-wire reel, you should make the welding wire stick to reel.
- ◆ When the welding wire goes into feeder, you should firm it in case of loose.



Precaution

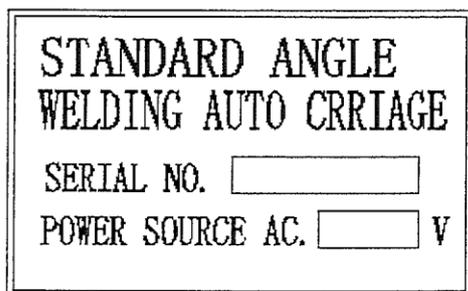
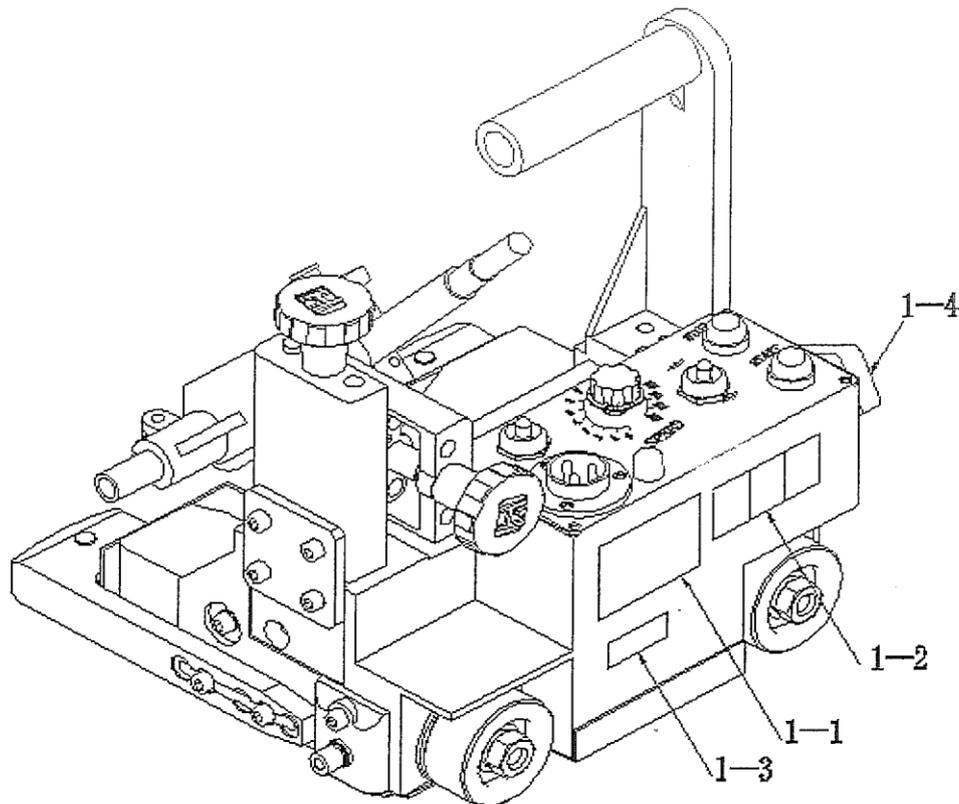
Please obey the following precautions in case of firing, burst or explode.

- ◆ The spatter and hot metal base may lead to fire.
- ◆ If the steel bar isn't connected to other parts well, it may lead to fire because the resistance is too hot.
- ◆ If you create electric on oil container, it may lead to explode.
- ◆ Welding on encapsulate container may lead to burst.
- ◆ Don't weld on the space on which the spatter can contact combustibles and don't weld near inflammable gas.
- ◆ Don't put the overheated metal base after welding near combustibles.
- ◆ Welding on floor, wall may lead to fire in room. Before welding, you should take away the combustibles form room.
- ◆ Firm the connecter of wire and connect welding conducting wire on the position of metal base.
- ◆ Don't weld bottle full of gas and encapsulated container.
- ◆ In the welding space, there must be annihilator in case of fire.
- ◆ In the welding process, you can't carry cigarette lighter, match and other combustibles.

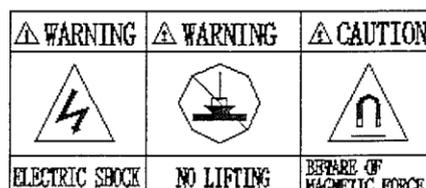
3 Location of safety labels

Safety labels and other labels for correct operation are affixed to the machine.

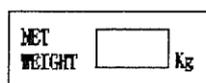
Carefully read the labels and follow the instructions on them when operating the machine. Never remove the labels. Keep them clean and legible at all times.



1 - 1



1 - 2



1 - 3



1 - 4

4 Characters and Specifications

4.1 Characters

Our company's multifunction angle weld trolley is wonderful. It has many functions. It can make the person, who isn't proficient, do angle weld easily. Chief characters are following:

- 1) Small capacity, low gravity center, lightweight, portable.
- 2) High magnetism magnet increases dependability of operating and draft load to assure the machine operates smoothly.
- 3) It can operate many machines on the base of increase dependability of operating and self-stop function.
- 4) The guide transfer switch can make it move toward right/left.
- 5) Guide equipment is screw lockage-on type. Guide wheel's height can be modified by three methods.
- 6) New spacing switch system increases the limited height of distance plate.
- 7) All of the top characters are wonderful on the aspect of "effective welding" and "operated by primary person".

4.2 Layout

- | | |
|----------------------------------|------------|
| 1) body | 1set |
| 2) control wire | 1set |
| 3) special torch(fitting parts) | (purchase) |
| 4) fuse(1A) | 1pc |
| 5) hexangular screw(M5/M6) | each 1set |
| 6) manual | 1pc |
| 7) certificate of qualification | 1pc |
| 8) maintenance bill | 1pc |

4.3 Specifications

1.Weight	6.9 Kg
2.Driving method	Four rubber rims driving
3.Hauling power	16 Kg
4.Running speed	150~~1500 (mm/min)
5.Tracking mode	Guide wheel type
6.Height of torch	Three chooses
7.Adjusting scope of torch	Horizontal angle: 40° ~ 55° Up /down moving: 45mm Front/rear moving: 45mm
8.Torch	Bended welding torch or straight welding torch
9.Locked equipment of torch	Suit for bended welding torch or straight welding torch
10.Needed welding length	Front-end:127mm; end:127mm
11.Self-stop function	By spacing parts of front-end and after end.
12.Size(length*width*height)	260x260x264

5 Operating method



Precaution

Please obey the following precautions in case of electric shock,

- ◆ Before checking, taking apart, repairing, you should turn off the control power. If it is necessary to check under the condition of the power being on, you must request engineer, who have knowledge of electricity and experience to do it in case of short circuit or electric shock.
- ◆ The plug of input power has earth wire, which connects with the trolley by control plate. If the plug has on earth wire, you must make the trolley grounded.
- ◆ The input power voltage should be in the range of $\pm 10\%$ of the rated voltage, else the circuit in printed panel may be damaged to lead to short circuit.
- ◆ Don't break the control conducting wire and torch conducting wire, else the insulation material in jacket may be damaged and lead to short circuit.
- ◆ You must make the operating speed of current flow and torch below the standard speed in case of damaging the insulation material because of overheat.
- ◆ Don't pull the control conducting wire and torch conducting wire, which may lead to damage fixed parts and connected parts.
- ◆ Don't make the trolley fall or lean, which may lead to damage insulation material.



Precaution

Make the welding power's retracting arc manner switch be on "No Self-Holding (or No Creater treatment)" position.

Make the retracting arc manner switch be on "No Self-Holding(or No Creater treatment)" position. Even you press down stop button, the welding don't stop.



Precaution

Please obey the following precautions in case of firing.

- ◆ Don't touch the torch, tip, nozzle, insulation cylinder and face of trolley after welding because the temperature is high. Don't make it be near of inflammable substance

5.1 Name and function of each section

5.1.1 The body of welding trolley

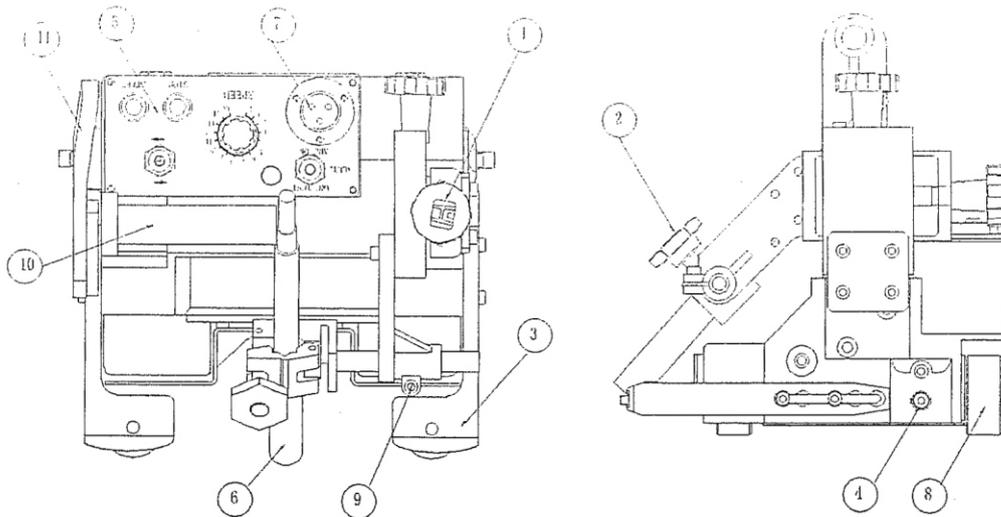


Diagram 1: Name of each section

1) Adjusting gliding block of torch: You can use this equipment to adjust arc starting point toward up/down, front/rear. Each distance of run is 45mm.



Precaution: Grip the insulation parts of torch when fixing it.

◆ It may lead short circuit or electric shock if grip the conduction of the torch.

2) Locking equipment of torch: You must make sure the torch is locked when you assemble it.

3) Control wheel and control wheel's arm.



Precaution

You must assemble the guide wheel correctly, else it may lead to failure of spacing switch.

The control wheel should stick to plate. There are three chooses (diagram 2).

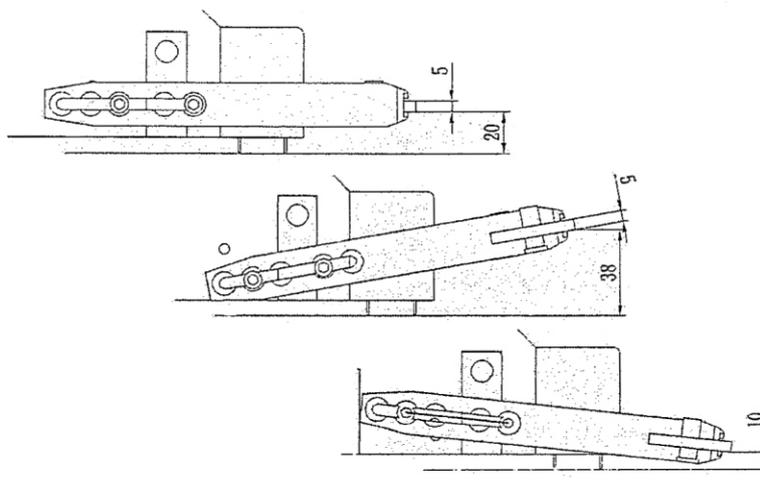


Diagram2: position of control wheel

4) Self-stop switch



Precaution: Don't put force of impact on self-stop switch.

- ◀ It can damage switch when put force of impact on it. If the switch is broken, the self-stop function vanishes, but the arc and the trolley don't stop.

There are spacing switches on each fringe of the machine (welding stop switch).

5) Operating panel(illustration in full in after chapters)

6) Torch

7) Metal plug: This plug is external plug. The cable is used to connect trolley with feeder and provide power for them.

(There are two branches, one connecting feeder and another connecting power.)



Precaution: You must ground the ground wire.

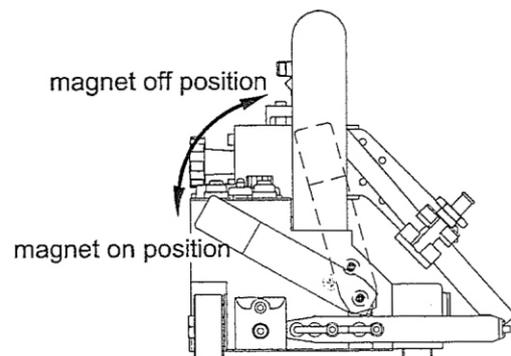
- ◆ Grounding the ground wire can prevent the machine from short circuit and electric shock.

8) Propelling wheel

9) Regulating spindle of the torch: Release the screw and you can adjust the angle of the welding torch. (40 ~ 55°).

10) Lifting hand grip

11) Magneton hand grip: The pick-up of magnet is controlled by this hand grip, such as diagram 3: up is declutching and down is combining.



Precaution

If the trolley is near by steel plate, it may auto-stick to steel plate. Don't put the hands and clothes into it.

- ◆When the trolley run away plate, the spanner can auto-reset. You should notice the position of the trolley to protect hands and clothes.

5. 1. 2 Operation panel (diagram 4)

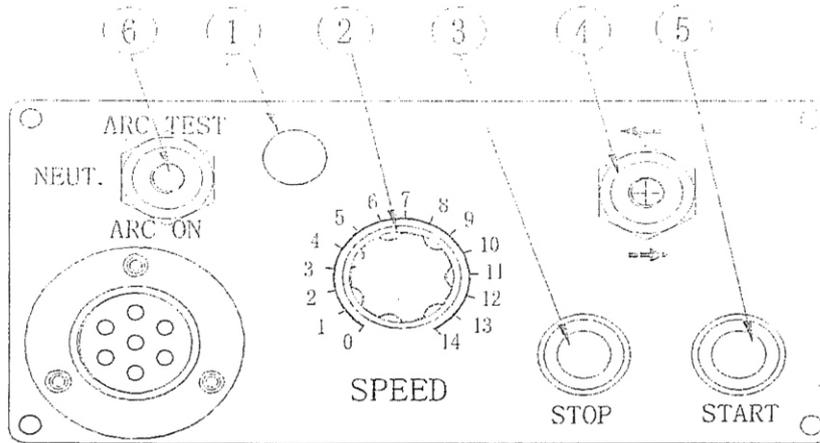


Diagram 4: Operation panel

- 1) Power indicated lamp: When the power is on, the lamp is light.
- 2) Speed control knob: Increase speed when you revolute clockwise, decrease speed when revolute anti-clockwise.
Speed scale matches following speed chart: Adjust the welding speed accordng to welding specifications.

scale	speed (mm/min)	scale	speed (mm/min)
3	200	9	970
4	330	10	1080
5	460	11	1180
6	590	12	1280
7	720	13	1380
8	850	14	1480

- 3) Stop button : Press down the button and the trolley stop walking. The selector switch can control whether the welding stops.
- 4) Walking guide and power switch: The switch is used to control welding guide and power.
- 5) Start button : Press down the button and the trolley begin to walk. The selector switch can control whether welding begins at the same time.
- 6) Model select switch---there are three positions. The individual function is :
TEST : On this position, the feeder works. You can control arc starting/ retracting arc by your hands, then reset after release.
ARC ON : On this position, the normal welding begins. If you press down firing switch, the trolley starts to walk at the time of arc starting.
NEUT : On this position, if you press down start button, the trolley walks but the welding doesn't start.



Precaution

Please obey the following precautions in case of electric shock.

- ◆ Before checking, taking apart, repairing, you should turn off the control power. If it is necessary to check under the condition of the power being on, you must request engineer, who have knowledge of electricity and experience to do it in case of short circuit or electric shock.
- ◆ The plug of input power has earth wire, which connects the trolley by control plate. If the plug has on earth wire, you must make the trolley grounded.
- ◆ The input power voltage should be in the range of $\pm 10\%$ of the rated voltage, else the circuit in printed panel may be damaged to lead to short circuit.
- ◆ Don't break the control conducting wire and torch conducting wire, else the insulation material in jacket may be damaged and lead to short circuit.
- ◆ You must make the operating speed of current flow and torch below the standard speed in case of damaging the insulation material because of overheat.
- ◆ Don't pull the control conducting wire and torch conducting wire, which may lead to damage fixed parts and connected parts.
- ◆ Don't make the trolley fall or lean, which may lead to damage insulation material.
- ◆ When put the plug into, you must clear face of plug, foot of plug, else may lead to short circuit because of dust and damp and lead to damage machine and person.

5.2 Welding preparation work and operation steps

Weld according to the following steps and refer to diagram 5.3 "connecting diagram of system" and chapter 5.1.



Precaution

Please obey the following precautions in case of electric shock.

- ◆ Turn off the control power and welding power , then do the following (1) ~ (4) steps.

(1) make the control wire connected to metal plug of control plate, noticing the clean of the plug.

(2) make the torch fixed to mount and bind the power wire with torch together to avoid damaging the plug.



Precaution

When fix the mount, you should use other tool and protect the torch's insulation

◊ Improper tools can lead to personal damages.

(3) Connect the torch with corresponded feeder.



Precaution

Make the welding power's retracting arc switch be on "No Self-Holding (or No Creatment)" position.

◊ Make the retracting arc switch be on "No Self-Holding(or No Creatment)" position. Even the operation is stopped the arc can't blank.

(4) Connect the control conducting wire's core2 metal plug with torch's metal base of the feeder and put the plug into AC220V three-dimensional plug (illustration) : the only signal, which connects welding power, is torch switch signal. It emerges from trolley.

(5) Turn the welding power switch on and put the welding wire into the torch.

(feed the welding wire by mode switch.)



Precaution

When you put the welding wire into the torch, you must not you're your eyes be near the welding wire, which overhangs from tip, else you eyes may be damaged.

(6) Make forming wheel stick to vertical steel plate and put the trolley on the welding position.

(7) Such as diagram 4: the leaning hand grip is to make magnet be on the steel plate to gain enough adsorption affinity.

(8) Revolute front/rear, up/down wheel of control parts to align the torch.

(9) Turn the control power of the control plate and set the welding speed.

(10) Set the beginning position.

(11) Set the welding power parameter according to welding condition.



Precaution: Precautions in the welding process

◊ please use lagging, welding face guard, or other guard to protect you from aureole, smoke dust and spatters.

(12) Press down the firing switch to begin to welding. (generate arc at the same time)

(13) Adjust the welding condition (current flow, voltage, speed and so on) well according to the actual requirement..

(14) Stop welding by stop-switch or self-stop switch. (The arc blanks when the trolley stops)

5.3 Connecting diagram of system

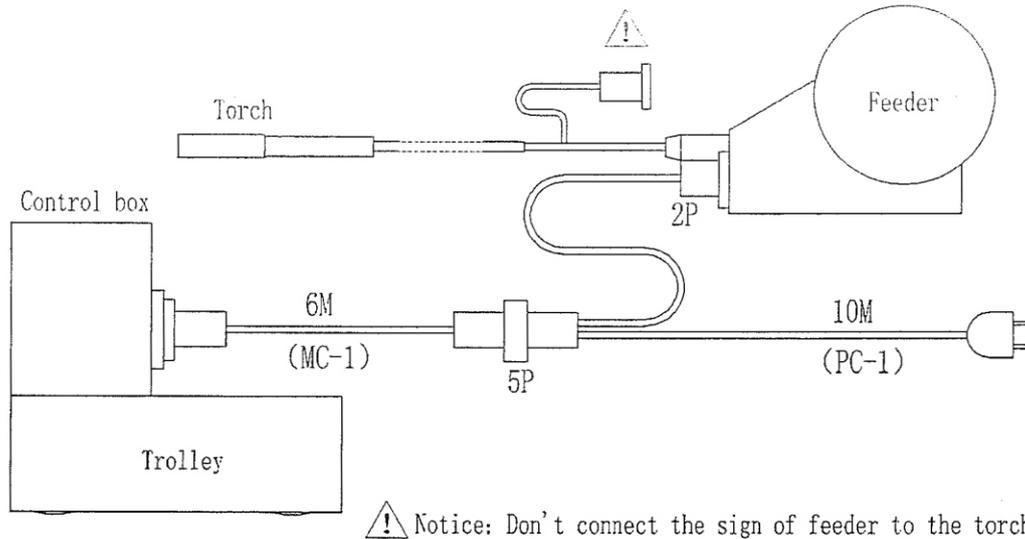


Diagram5: connecting diagram of system

5.4 Suitable welding machine and signal adapter

This welding trolley can be used with semiautomatic (CO₂/MAG) welding machine(power and feeder).

(Illustration : The only signal is welding torch switch signal, which make the trolley connected to welding machine. Because the signal, which the trolley supply to welding machine, is normal open signal and there must be stump in welding process. So you must make the retracting arc switch be on "No Self-Holding (or No Creatment)" position.

The model number of plug of signal wire is E"-25-2P. (It can connect feeders of Panasonic company or Osaka Company. If connect other feeder device, you may modify a little. You must make (1) welding conducting wire, (2) gas hosepipe, (3) torch connected to feeder device. According to brand of power, the plug may be different.

5.5 Precaution before operation

- 1) Make sure the voltage is correct. It may lead to failure if the voltage is beyond the standard voltage $\pm 10\%$.
- 2) Use power correctly and make sure ground the machine to erase induction voltage.
- 3) Clear the face to erase barrier, dross, spatter and so on before welding operation in case of pull-off in the process of welding.
- 4) When you need longer conducting wire, you should dispose the conducting wire by crane in case of jamming, enwinding.

6 Maintenance and Troubleshooting



In order to prolong the length of life, you must do current check besides using the machine correctly.

- a) Before checking, taking apart, repairing, you should turn off the control power. If it is necessary to check under the condition of the power being on, you must request engineer, who have knowledge of electricity and experience to do it in case of short circuit or electric shock.
- b) The plug of input power has earth wire, which connects the trolley by control plate. If the plug has on earth wire, you must make the trolley grounded.
- c) The input power voltage should be in the range of $\pm 10\%$ of the rated voltage, else the circuit in printed panel may be damaged to lead to short circuit.
- d) Don't break the control conducting wire and torch conducting wire, else the insulation material in jacket may be damaged and lead to short circuit.
- e) You must make the operating speed of current flow and torch below the standard speed in case of damaging the insulation material because of overheat.
- f) Don't pull the control conducting wire and torch conducting wire, which may lead to damage fixed parts and connected parts.
- g) Don't make the trolley fall or lean, which may lead to damage insulation material.

6.1 Maintenance and inspection

6.1.1 Current check

- (1) clear spout and check whether the spout is broken.
- (2) clear the spatters on the wheel
- (3) check whether the guide wheel revolute completely.
- (4) clear the spatters on the trolley.
- (5) clear mill dust and dross on the floor plate.

6.1.2 Check monthly

- (1) check whether screws on torch mount; follow-up arm; knob and floor plate rap.
- (2) check whether torch conducting wires and control conducting wires enwind and the jacket is broken.
- (3) check the switch on self-stop spacing.
- (4) check whether the control parts work smoothly by front/rear; up/down control hand wheel.
- (5) check whether the switch on control plate is broken or raps and whether the machine works well.
- (6) clear the bushing of the torch.

6.2 The wearing parts/reservation parts

- (1) insurance
- (2) rubber roller wheel
- (3) guide wheel
- (4) self-stop switch
- (5) printed panel

6.3 Troubleshooting

- (1) Guide operation is inactive.

Possible Cause	Correction
Guide wheel can't revolute.	Check guide wheel.
Cable conductors are jammed and can't operate.	Clear the cable conductors.
The face is rough and the wheel isn't stick to the face	Clear the barrier on the face and make the wheel is stick to the face.
The wheel raps	Adjust the wheel's tightness
There are spatters on wheel, which hind the wheel to operate.	Clear the spatters.

- (2) The self-stop switch is inactive. Welding operation can't be stopped.



Caution : Before you check the parts of connector with checkout machine, you must cut off power. Else, it may lead to short circuit or electric shock if the power is on.

Possible Cause	Correction
The self-stop switch isn't pressed down completely.	Press down the self-stop switch completely
The welding power control switch is set on (Self-Holding) position.	Set it on (No Self-Holding) position.
It can't connect between the self-stop switch's connectors.	Press down the switch; check that whether the click can be heard and check the conducting state.
If the self-stop switch is active, then the printed panel is broken.	Clear the fault or change the printed panel.

- (3) Can't make the control power be on. (The indicated lamp isn't light)



Caution

Please obey the following precautions in case of short circuit or electric shock.

- a) You must set the power switch on "OFF" position when use checkout machine to check the conducting state.

- b) When the power is on, the person, who check 2) and 3), must have knowledge of electricity and experience in case of short circuit or electric shock.

Possible Cause	Correction
Fuse is broken.	Change the fuse
No power in plug	Check the plug and conducting wire
Conducting wire is broken	Connect the conducting wire

(4) Trolley don't operate.

Possible Cause	Correction
The speed control is 0	Adjust the speed control >0
Fuse is burn out.	Change fuse.
The failure of firing switch or printed panel	Check or change firing switch or printed panel
Self-stop switch is pressed down	Release the self-stop switch state
Motor circuit is off or broken	Check motor circuit or change motor

(5) Can't change operating speed.



Caution

Please obey the following precautions in case of short circuit or electric shock.

- c) You must set the power switch on "OFF" position when use checkout machine to check the conducting state.
- d) When the power is on, the person, who check 2) and 3), must have knowledge of electricity and experience in case of short circuit or electric shock.

Possible Cause	Correction
The failure or broken of the variable resistance, which used to control speed.	Check the variable resistance with checkout machine or change variable resistance.
The failure of the motor.	Check or change motor.
The failure of the printed panel.	Check or change printed panel.

(6) The operating can't start even you press the firing switch.

Possible Cause	Correction
If the machine can't begin to operate, the self-stop switch is on or pressed down.	Release the self-stop switch's state.
If the machine can't operate, the welding power isn't on. The causes may be: 1) The welding torch switch metal plugs don't connect; 2) The metal plug's core 1 and core 2 have short circuit.	Connect the metal plug. Check the circuit. If short circuit, change metal plug; if no short circuit, check conducting wire or printed panel.

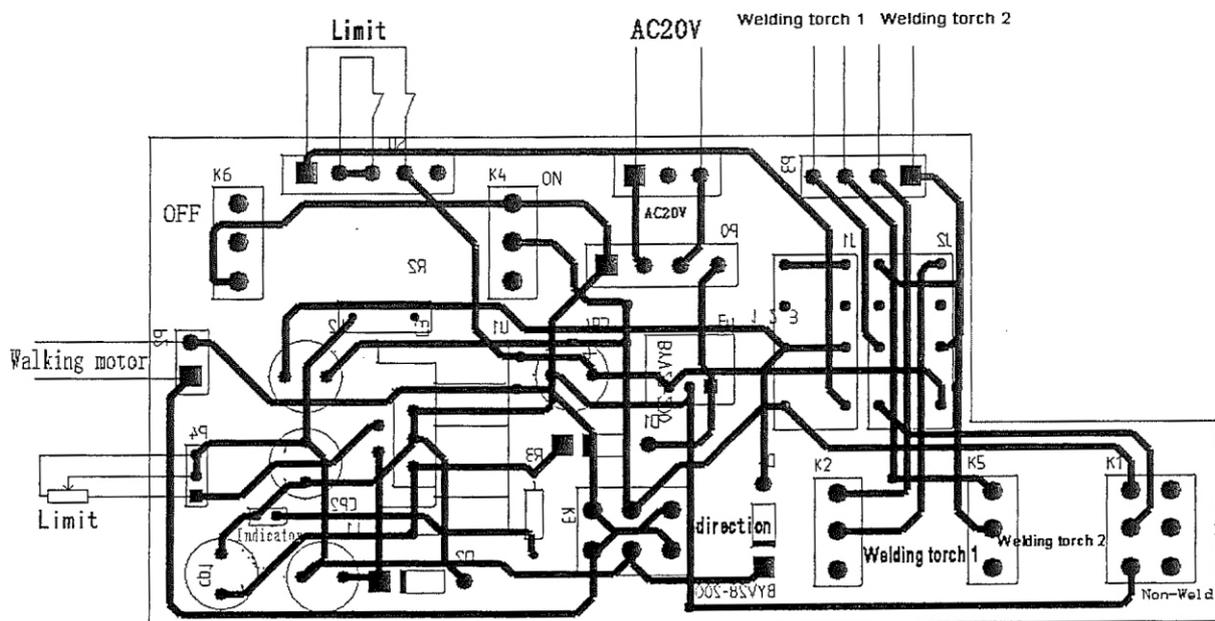
(7) The operating can't be stopped even you press the stop switch. (The machine stops operating)

Possible Cause	Correction
The control of welding power is set on "Self-Holding" position.	Set it on "No Self-Holding" position.
The failure of the printed panel.	Check or change printed panel.

(8) The adsorption affinity of magnet can't be weakened. (Even the hand grid leans)

Possible Cause	Correction
The rotary axle pin of the hand grid is worn or broken	Change axle pin

7 Wiring diagram



8 Maintenance illustration

If you operate the machine according to the operating manual and the machine generates occurs accidents because of the product quality, we guarantee to keep the machine in good repair free of charge in half year based on invoice from the day we sell. According to the rules, if the following cases occur, we can't keep the machine in good repair free of charge:

- 1) The damages are leaded because of incorrect carriage or improper keeping.
- 2) The damages are leaded because of operating not according to the instruction manual and beyond the specified range of voltage.
- 3) The machine don't have maintenance card and receipt invoice.
- 4) The maintenance card don't match the machine.

- 5) The damages are leaded by natural disasters or some irresistible incidents.
- 6) The damages are leaded because the machine is token apart by unprofessional person
- 7)The damages are leaded because of using the fitting parts and accessories, which don't belong to our company.

(Do not inform if the technical specifications of the welding machine and contents of the operating manual have been modified!)