

RCH-1 Control Box

For use with machines having Codes Numbers:

Pay attention to your safety

Lincoln arc welding and cutting equipment is designed and manufactured based on the criterion of safety first. However, correct installation and operation are more conducive to protecting your personal safety. **Please install, operate or repair the equipment after reading this manual and the safety matters.** What is more important is to look before you leap and operate carefully.



OPERATOR'S MANUAL



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•World's Leader in welding and cutting products •
Shanghai Lincoln Electric Co., Ltd.

No.195, Lane 5008, Hutai Highway, Baoshan District, Shanghai, China; postcode: 201907

www.lincolnelectric.com.cn

RCH-1 Control Box



Thanks for selecting the high-quality products of Lincoln Electric.

- Please check whether the package and equipment are destroyed. In case of material damage in shipment, immediately notify the authorized dealer from whom you purchases the machine.
- To receive after-sales service, please fill the identification information of machine in the table below. The model, code, and serial number of machine can be inquired in the nameplate.

Product model	
RCH-1 SAW control box	
Code and serial number	
K60068-3	
Date and place of purchase	
Seal of authorized dealer	

Qualification statement

Shanghai Lincoln Electric Co., Ltd.

Shanghai Lincoln Electric Co., Ltd.
No.195, Lane 5008, Hutai Highway, Baoshan District, Shanghai City; postcode: 201907

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⚠ Warning

Arc welding may be dangerous. Please protect yourself and others from injury and death. Do not take children to the job site. People with cardiac pacemaker can operate the machine only after the agreement of doctor.

Ensure that all processes of installation, operation, maintenance, and repair are conducted by qualified personnel.



EMF may be dangerous

- 1.a The current passing through any conductor produces EMF (electromagnetic field), and welding current produces EMF around welding cable and welding machine.
- 1.b Cardiac pacemaker is disturbed in EMF, and the welder with a cardiac pacemaker should consult a doctor before welding.
- 1.c All welders should follow the steps below to reduce the exposure of welding circuit EMF:
 - 1.c.1. Put welding wire and work piece cable together – bind them together with an adhesive tape if possible.
 - 1.c.2 Welding cable winding around body is prohibited.
 - 1.c.3 Do not stand between welding wire and work piece cable. If the welding wire cable is on your right, then work piece cable should also be on your right.
 - 1.c.4 Work piece cable and work piece should be connected near the welding area as much as possible.



Arc beam may lead to burn

- 2.a When welding or observing arc, use the mask with black glass and cover plate to prevent your eyes from being burned by spark or welding flash. (Mask and filter lens should comply with the standard of AN SI Z87.1)
- 2.b Select the clothes made from durable flameresistant material to protect your assistant's skin and yours from being injured by arc beam.
- 2.c Adopt proper and non-flammable protection screen to protect other personnel near the welding area and warn them not to observe arc or be exposed to arc beam or touch burning splash or metal piece.



Guard against electric shock

- 3.a When welding machine switches on, welding wire and working (earthed) circuit are electrified, so naked skin or wet clothes should not touch these electrified parts and components. Wearing dry gloves without holes can make your hands insulated.
- 3.b Adopt dry insulated objects to make you insulate from work piece and ground. Ensure the insulating part can cover all the areas completely where you touch workpiece, and ground.

Besides complying with general safety precautions, we need to state that the following equipment should be used if welding is conducted under electric condition (in wet places or wearing wet clothes; at metal structure on ground, grille or scaffold; in the posture of sitting, kneeling or lying; with the danger of touching work piece or ground inevitably or by accident):

 - Semi-automatic DC constant-voltage (wire-feed) welding machine
 - Manual DC SMAW machine
 - AC welding machine with variable voltage control
- 3.c When semi-automatic or automatic welding wire is welded, welding wire, wire reel, welding head, contact tube, or semi-automatic welding gun are all electrified.
- 3.d Ensure that working cable is well connected to the metal to be welded. The connection should be close to the welding area as much as possible.
- 3.e Make work piece or the metal to be welded to be electrically grounded to ground well.
- 3.f Keep welding wire bracket, work clamp, welding cable, and welding equipment complete and safe. Replace the destroyed insulator.
- 3.g Do not cool welding wire in water.
- 3.h Do not touch the electric parts respectively connected to two welding wire brackets at the same time, because their voltage may be the sum of two welding machines' open-circuit voltage.

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Guard against welding fume

- 4.a Welding may produce harmful smoke and gas, so you should avoid inhaling them. When conducting welding, keep your head away from the smoke. Adopt ventilated and (or) exhaust facilities to keep the smoke and gas away from the breathing area. **When using the electrode with high requirements for ventilation (for the electrode containing stainless steel or overlaying wear-resisting layer material, its contents are indicated on the packing container or MSDS [Material Safety Data Sheet]), or welding the material containing lead or cadmium or other metal material or coating producing highly toxic smoke, take partial exhaust or mechanical ventilation measures to reduce the smoke due to the exposure during welding process, and keep it below the TLV. Respirator may be required in some enclosed spaces or outdoor environment. When welding galvanized iron, you should pay attention to some matters.**
- 4.b Do not conduct welding near the place with chlorinated hydrocarbon vapors caused by lubrication, cleaning or spraying, because the heat and beam of arc may react with the vapor with dissolving capacity and thus form carbonyl chloride (a highly toxic gas) and other irritant products.
- 4.c The protective air used for arc welding may empty the air and cause personal injury or suffocation. In order to ensure the safe air inhaled, adequate ventilation facilities should be adopted, particularly in a closed area.
- 4.d Read and understand the instruction for the equipment and welding consumables provided by the manufacturer, including MSDS, and comply with the employer's safety regulations. MSDS can be obtained from the welding equipment distributor or manufacturer.



Electric driving equipment

- 5.a The equipment can be operated only after using the disconnecting switch at fuse box to turn off the power source.
- 5.b The equipment should be installed in accordance with American national electric specification, all local specifications, and the manufacturer's suggestions.
- 5.c The ground connection of equipment should be based on American national electric specification and the manufacturer's suggestions,



Welding spark may cause a fire or blast

- 6.a Eliminate fire hazards in the welding area. If failed, cover to prevent spark from causing a fire. Remember that the welding spark and scorching material may be easily extended to the area nearby through small crack and opening. Avoid the welding at the place of hydraulic pressure pipeline, and make fire extinguisher accessible.
- 6.b Ensure that no elements in weld wire circuit is connected to work piece or ground when welding is not conducted. The contact by accident may also lead to overheating and cause a fire.
- 6.c Before proper measures are taken and flammable and poisonous gases are not confirmed to produce, it is prohibited to heat, cut or weld fuel tank, bucket or other containers. Blast will be caused even though cleaning has been done.
- 6.d Spark and splash will be produced in welding arc. Wear oilless protective clothes, such as leather gloves, thick shirt, trousers with no leg opening, ankle boots, and hat.



Damage of gas cylinder may cause a blast

- 7.a Users can only use the compressed gas cylinder containing proper protective gas suitable for the welding process, as well as the regulator for gas and pressure. All flexible pipes, connectors, etc. should be suitable for the occasion and maintain the good service state.
- 7.b Place the gas cylinder at the vertical position, and connect it firmly to the welding tractor or a fixed support.
- 7.c Gas cylinder should keep:
- Away from the area where the gas cylinder may be crashed or suffer from mechanical failure.
 - A certain distance away from arc welding or cutting, and any other heat source, spark, or flame.
- 7.d Do not make welding wire, welding wire bracket or other electric parts contact the gas cylinder.
- 7.e When opening cylinder valve, keep your head and face away from the opening of the cylinder valve.
- 7.f Except that the gas cylinder is being used or will be used after connection, the valve protection cover should be at the right position and appropriately tight, namely, it can be opened with hand when necessary.

Technical specification – RCH-1 SAW Tractor

Input value	
RCH-1 SAW control box	<p><u>Standard voltage/ phase/ frequency</u></p> <p>110V AC ($\pm 10\%$)/1/50 or 60 Hz</p> <p><u>Rated input current</u></p> <p>2.6 A</p>
Rated output	
RCH-1 SAW control box	<p><u>Duty cycle</u></p> <p>60% 100%</p> <p><u>Current</u></p> <p>1,200 A 1,000 A</p>
Rated value	
<u>Diameter of welding wire</u>	<u>Wire feed speed</u>
2.4 ~ 4.8 mm	15 ~ 150 m/h

Overall dimension				
RCH-1 SAW control box	<u>Length</u> 391MM	<u>Width</u> 345MM	<u>Height</u> 255MM	<u>Weight</u> 12 KG

Mounting dimension	
<u>Mounting screw</u>	<u>Mounting hole distance</u>
4*M8	300MM*180MM

Range of temperature	
<u>Range of working temperature</u>	<u>Range of storage temperature</u>
-40°C ~ +40°C	-40°C ~ +55°C

In case the equipment needs maintaining and repairing, it is suggested that users should contact the nearest technical center, or directly consult Shanghai Lincoln Electric Co., Ltd. If users deliver the equipment to the unauthorized service center for maintenance or repair, then they will not enjoy the warranty conditions provided by the manufacturer any more.

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Safety precautions

Operators can install the equipment only after reading this installation instruction.



Warning

- Electric Shock may cause death
- Only qualified personnel can install the equipment.
- The input source must

be disconnected before equipment installation, debugging and maintenance.

- Do not touch energized electric parts and components.

Select a proper installation position

The equipment cannot be caught in the rain for a long time, and any of its parts cannot be immersed in water, either. Otherwise, the equipment may not work well and result in hidden danger. It is suggested that the equipment should be placed at a dry place with a ceiling.

Attention

The equipment must be placed on a flat, safe, and fixed surface, or it may fall over.

If the equipment is put at the place with free circulation of clean and cool air, the dust, dirt, moisture, or other matters that may be absorbed by the equipment should be

minimized. Otherwise, high operating temperature and stop interference may be caused.

When the equipment is placed in RCH-1 SAW tractor, it should keep away from the radio control device. Normal operation of the equipment will exert bad influence on the radio control device, and thus result in personal injury or equipment damage.

Connection of welding cable and control cable

Warning

Only qualified electricians can connect the input wire to RCH-1 submergd-arc welding tractor. Please use the high-quality control cable produced by Shanghai Lincoln Electric Co., Ltd. to connect welding source and RCH-1 SAW control box.

Using the product not in compliance with the standard of Shanghai Lincoln Electric Co., Ltd. will not only affect product performance, but also lead to personal injury and even death.

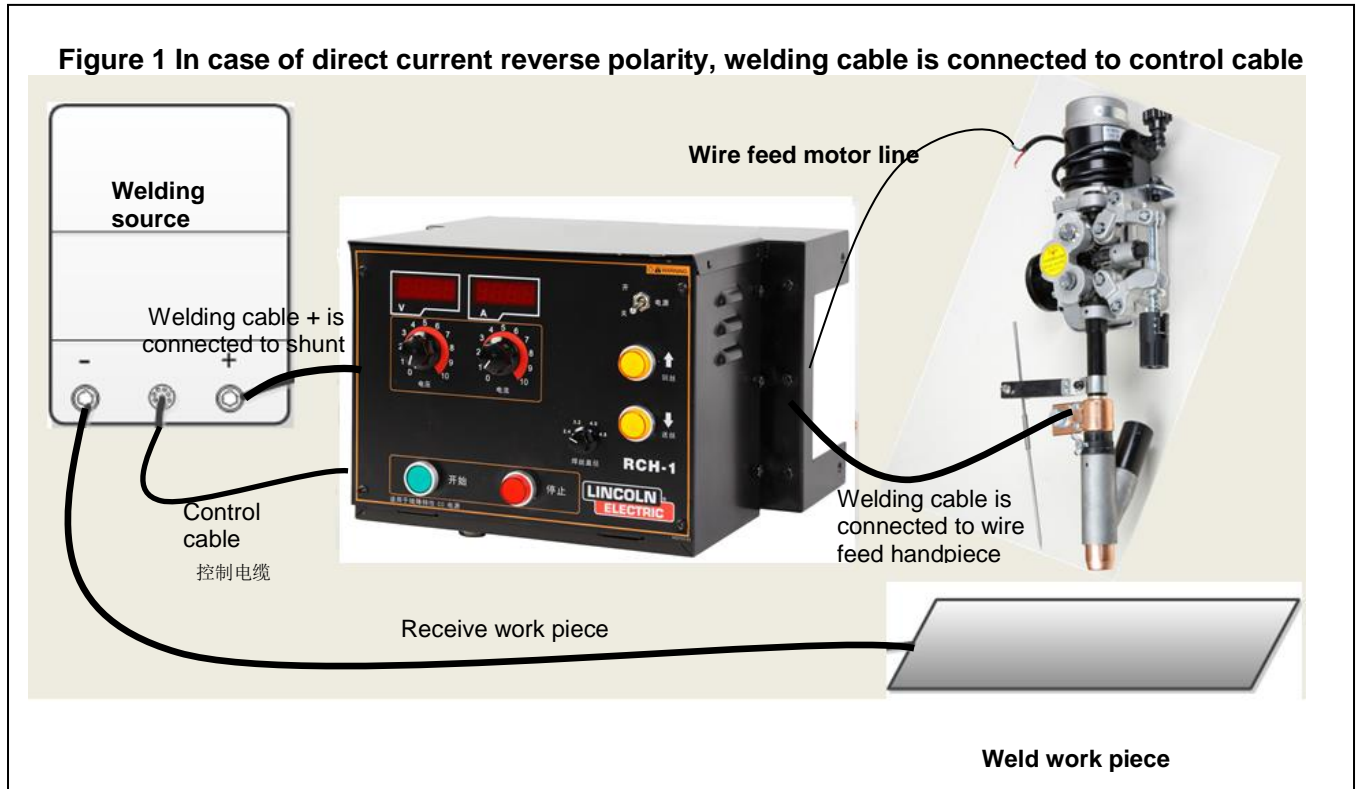
Confirmation of package content

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- The SAW wire feed control box is packaged with carton. Please check whether the package and equipment are destroyed immediately after the product is arrived.

Connection of SAW control box

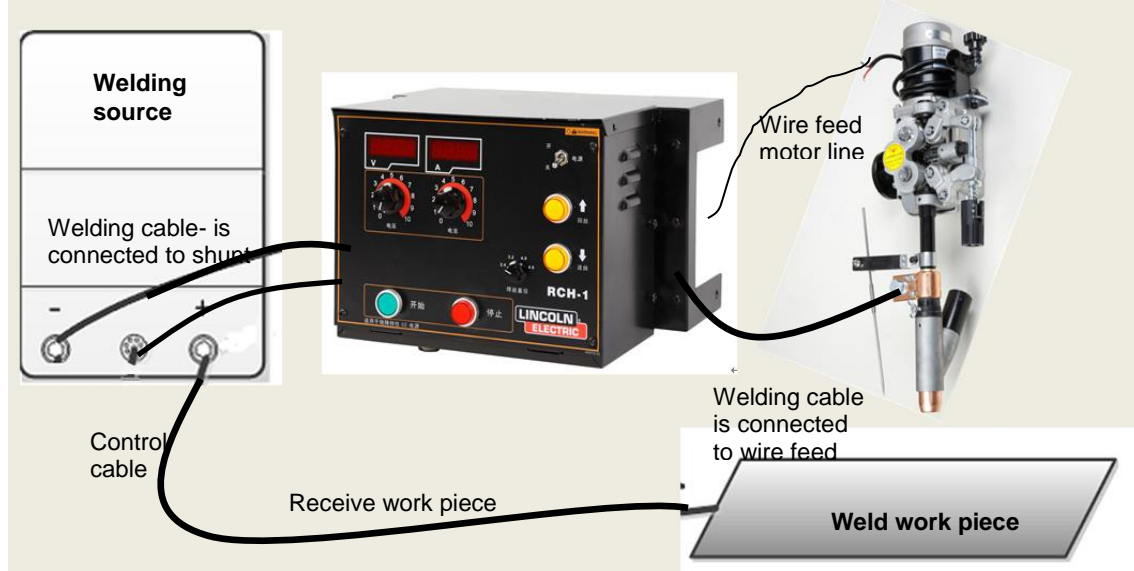


- Turn off the source of RCH-1 SAW control box and submerged arc welding machine.
- When connecting wire feed motor line, red line should be connected to red line, and gray line should be connected to black line.
- As shown in Figure 1, connect the welding cable and control cable. The control cable connector of RCH-1 SAW control box is the standard 9-core cable connector produced by Lincoln Electric Co., Ltd., and is compatible with the connector connecting LT-7™ SAW tractor.
- Please select the welding cable with suitable diameter based on the operating specification. The welding cable not in compliance with the specification will affect the welding quality. And superfine welding cable may cause a fire.
- To realize the safe and reliable electric connection, the screw connecting output terminal and cable must be tightened up; otherwise, it may result in damage of output binding post or affect welding performance.

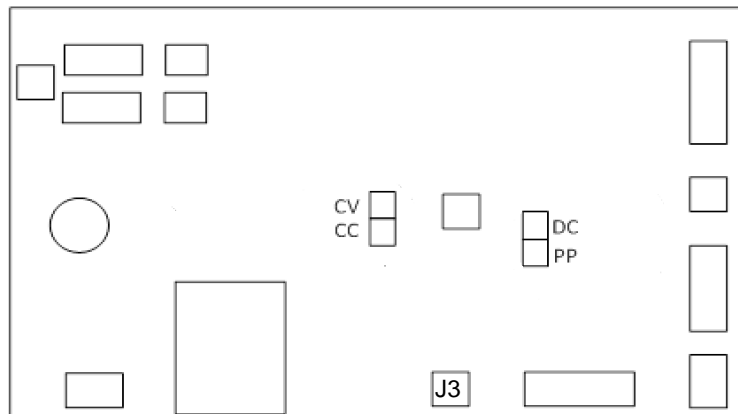
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Figure 2 In case of straight polarity direct current, welding cable should be connected to control cable

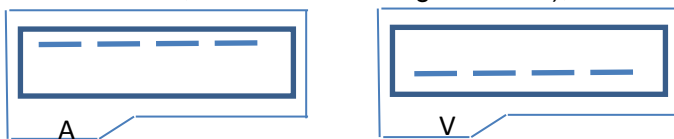


- Turn off the power source of RCH-1 SAW tractor and SAW.
- As shown in Figure 2, connect the welding cable to control cable. Move the polarity option switch of power to “-”.
- When connecting wire feed motor line, red line should be connected to red line and gray line should be connected to black line.
- Open the panel of control box, pull out the plug (white line) at J3 of control panel and use another plug (red line).



Note: When the above two steps are recovered to direct current reverse polarity, the original mode of connection should be adopted, or the machine cannot work properly.

- Press wire feed and stop button to open power switch, and successively press the wire withdrawal and wire feed buttons for four times, (making the cursor of left-hand window above, the cursor of middle window below, as shown in the figure below), to enter welding polarity selection mode.



- Press stop button, make right window display E, to enter the edit state. Finally, press wire feed key to select welded condition and then switch it off and restart.

- Select the welding cable with appropriate wire diameter according to operating specification requirement. The welding cable that does not accord with the specification will affect the welding quality. Too thinner welding cable has the risk of fire.
- To achieve the safe reliability of electrical connection, the bolt that connects output terminal and cable shall be tightened up, or it will cause damage to output terminal or affect the welding performance.

Welding preparation

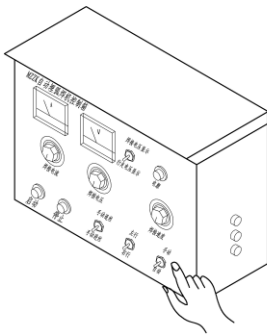
■ **Control box and welding head should be carefully checked after connected to welding power source, so as to ensure correct and reliable connection of various parts, as well as operation as follows:**

- Clean welding area, and clear away rubbish, greasy dirt and other sundries;
- Welding rail should be parallel to the work piece;
- Please carefully check whether the specification of wire feed rolls is consistent with that of weld

wire used for welding.

Start-up welding

▲ **Press “start” and start to weld after arcing.**



Notice!

During welding, pay attention to the accuracy of alignment of pointers and welding seam, and timely correct it in case of derivation.

▲ **Power it off after welding is completed**

- When it reaches to welding seam, press “stop” button, welding ends, and then power it off.

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Description on motor and current acquisition port

Please see **Figure 3** and **Figure 4** for details of six-pin interface.

Note: The outgoing product of walking signal are not wired, please properly bring it out as required by client. This signal is 110VDC signal.

Description on nine-pin control cable port

Please see **Figure 5** and **Table A.1** for more detailed information.

DC1000 terminal strip

See **Figure 6** for wiring position of DC1000 terminal strip.

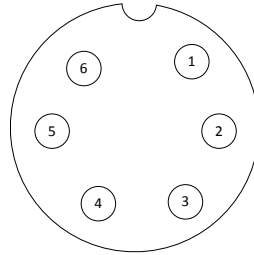


Figure 3 Motor and current acquisition socket (bottom of control box)

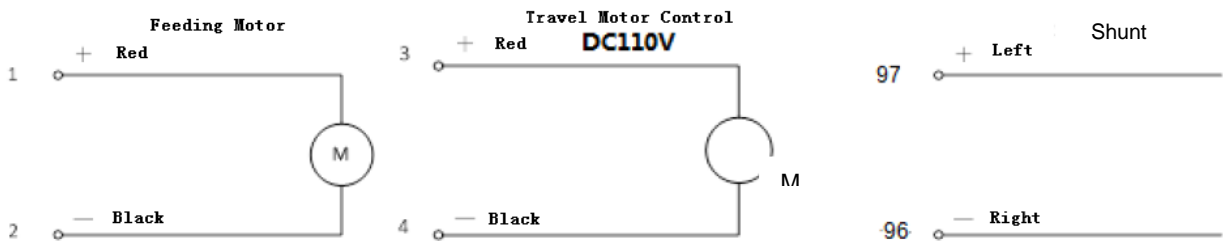


Figure 4 Electrical connection

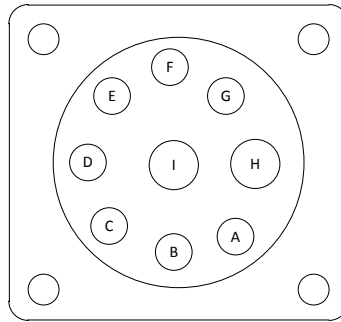


Figure 5 9-pin plug of control box (left side of control cabinet)

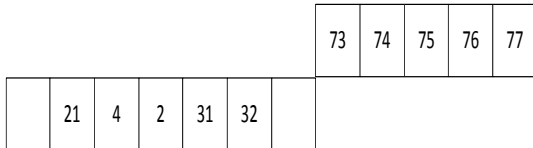


Figure 6 DC1000 terminal strip

Table A.1 Distribution of 9-pin control cable terminals

Welding tractor			DC1000	Welding source		
Pin	Function	Wire #	Terminal No.	Pin	Function	Wire #
B	Start/stop signal (Power on when closed)	White 1	4	D	Start/stop signal (Power on when closed)	White 1
A		White 2	2	C		White 2
D	110V AC	Black 1	32	A	110V AC	Black 1
C	110V AC	Black 2	31	J	110V AC	Black 2
I	GND	White 3	GND	B	GND	White 3
E	Work piece	White 4	21	H	Work piece	White 4
F	Output control (minimum)	White 5	75	G	Output control (minimum)	White 5
G	Output control (tap)	White 6	76	F	Output control (tap)	White 6
H	Output control (maximum)	White 7	77	E	Output control (maximum)	White 7

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Control function

Front panel (See Figure B.1)

1. Power switch

Control the status of power supply.

On

Welding is power-on.

Off

Welding is power-off.

2. LED display

Display preset and actual welding parameters.

Set as CC mode

Under the set mode, displayed as
preset welding voltage

Under welding mode, displayed as
actual welding voltage

Set as CV mode

Under the set mode, displayed as
preset welding current

Under welding mode, displayed as
actual welding current

3. LED display

Display preset and actual welding parameters.

Set as CC mode

Under the set mode, displayed as
preset welding current

Under welding mode, displayed as
actual welding current

Set as CV mode

Under the set mode, displayed as
preset welding voltage

Under welding mode, displayed as
actual welding voltage

Note: Under different extensions, there may be
deviation.

5. Adjusting knob

Set as CC mode

Under the set mode, adjust preset
welding voltage

Under welding mode, adjust actual
welding voltage

Set as CV mode

Under the set mode, adjust preset
welding current

Under welding mode, adjust actual
welding current

6. Adjusting knob

Set as CC mode

Under the set mode, adjust preset

welding current

Under welding mode, adjust actual
welding current

Set as CV mode

Under the set mode, adjust preset wire
feed rate

Note: By pressing the wire feed and wire
withdrawal button at the same time, current
preset voltage is displayed.

Under welding mode, adjust actual
welding voltage

10. Start button

Press by jog, tractor starts welding power
output, and wire feed motor starts wire feed.
The wire feed rate is controlled by output
settings.

Walking mode of tractor is set by the **switch of
walking mode**.

11. Stop button

Press by jog, and then enter into arc
suppression mode. After that, there is no power
output for welding, and wire feed is stopped by
wire feed motor.

12. Wire withdrawal button

Withdraw wires after pressing. Release the
button and then wire withdrawal stops.
Operation is invalid under welding mode.

13. Wire feed button

Feed wires after pressing. Release the button
and then wire feed stops. Operation is invalid
under welding mode.

14. Wire diameter knob

Rotate to set the wire diameter, and four
options of 2.4mm, 3.2mm, 4.0mm and 4.8mm
are provided.

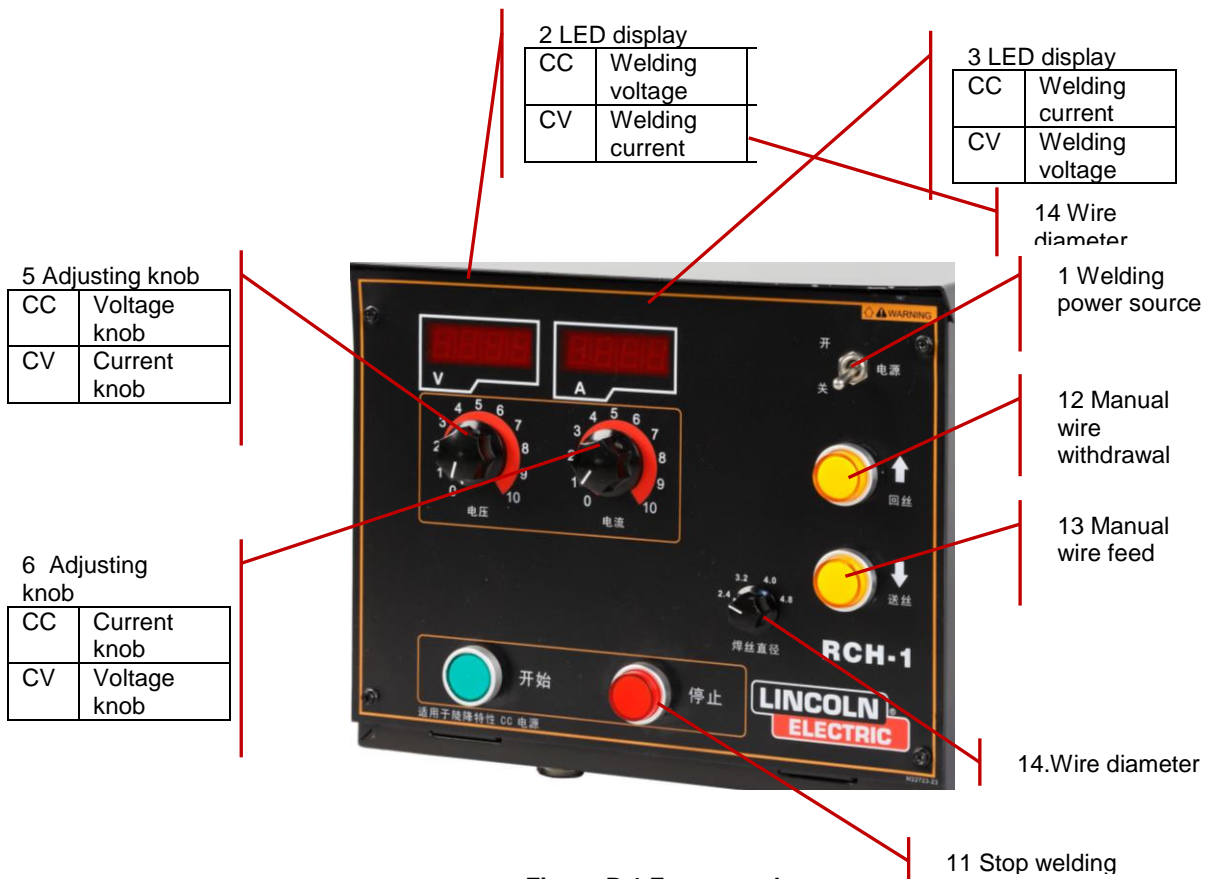


Figure B.1 Front panel

Parameter presetting function

When the welding is used with POWERPLUS 1000HD power source, it has parameter presetting function.

After power on, welding voltage, welding current, walking speed of welding welding tractor and other parameters can be preset.

Wire diameter selection function

The welding has wire diameter selection function.

Wire diameter can be set by rotating wire diameter selection button. Four options of 2.4mm, 3.2mm, 4.0mm and 4.8mm are provided. After the wire diameter is selected, welding control procedure will call the corresponding welding parameters. Different wire diameter options correspond to different welding control parameters. Correct selection of wire diameter can ensure welding performance.

Touch and stop function

The welding tractor has the “touch and stop”

function.

Press “wire feed” button for manual downward wire feed, and the wire feed will stop once the weldment touches the metal surface of work piece.

Arcing at fixed point

The welding tractor has the function of “arcing at fixed point”.

Only when the welding tractor control system detects the stable burning of arc, welding tractor can start and travel. The function can facilitate operator’s accurate positioning of the weld pass.

Welding power source matching function

The welding tractor can match up with DC series and PowerPlus 1000HD submerged arc welding power source of Lincoln Electric. The toggle switch S2 that welding power source is matched up with is on the circuit board within the control box. See the dotted line circle on the right side in Figure 6 for the specific position. As shown in the figure, slide the switch upward to DC, and select DC1000 submerged arc welding power source; and slide the switch downward to PP to select PowerPlus 1000HD

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submerged arc welding power source. Please make sure to remove the control panel and conduct function setup after power outage. Please correctly select welding power source

according to actual connection of submerged arc welding power source. The selection by error will affect the welding performance.

Welding mode selection function

Two welding modes of CC (constant current) and CV (constant voltage) are available for the welding tractor.

- The toggle switch S1 of welding mode is on the circuit board within control box. See the dotted line circle on the left side in Figure 6 for specific position. As shown in the figure, selection can be made as required. (Note: In

case CV mode is chosen, CV panel stickers in the attachment shall be replaced, and then fixed with four screws on the fixed panel)

Please make sure to remove the control panel and conduct function setup after power outage. Please correctly select welding mode according to welding technology requirements. The welding mode of welding tractor shall be well-matched with that of welding power source. The selection by error will affect the welding performance.

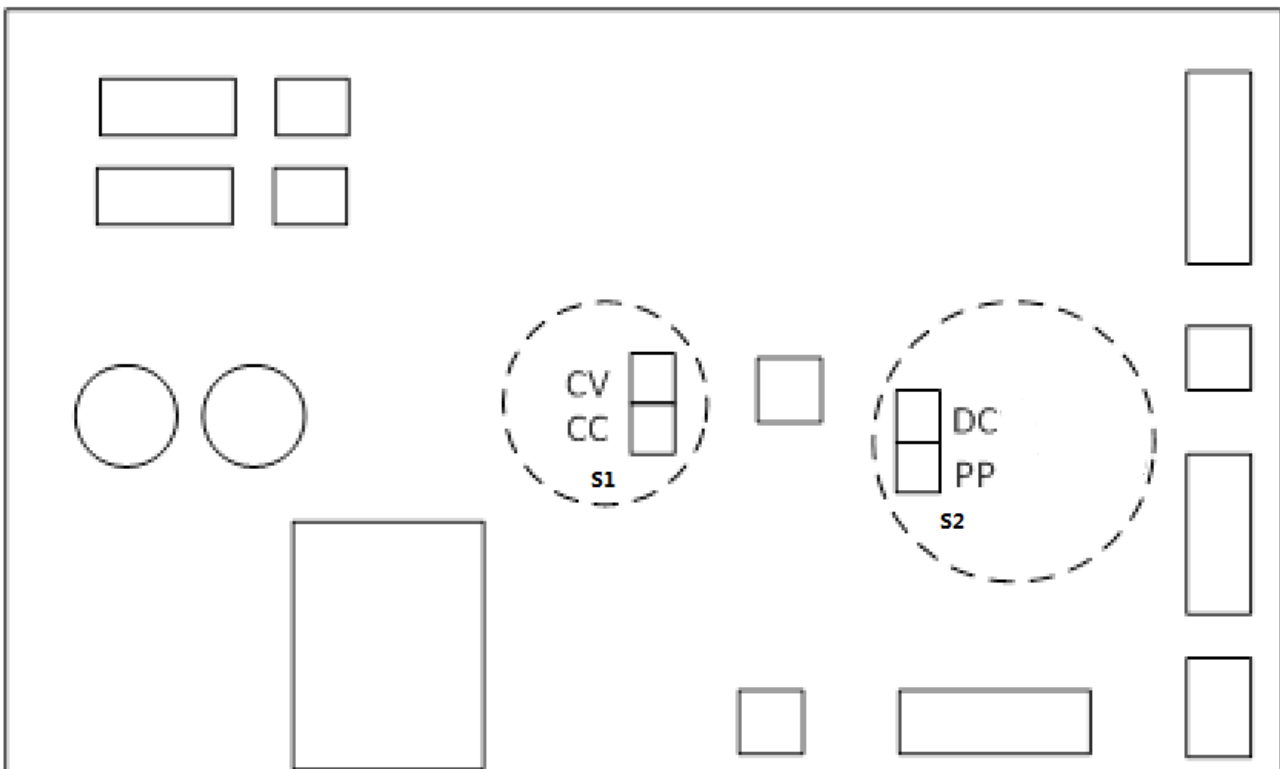


Figure 2 Setting of welding power source and welding mode

Fault detection

Notice	In case you fail to understand the testing process or conduct testing and maintenance for some reasons, please contact the local service personnel authorized by Lincoln Electric for technical assistance.
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Please carefully read and also comply with the safety guideline s of this manual

Problem (symptom)	Possible cause	Suggested operation process
Problem		
After the package is opened, the control box has obvious breakage of appearance and components.	Collision and damage during transport.	Please contact the local service personnel authorized by Lincoln Electric for technical assistance.
No power supply of control box (No display of LED after power-on)	<ol style="list-style-type: none"> 1. Welding power source is not normal, or the relevant fuse of welding power source disconnects. 2. Control cable is not tightly connected. 3. LED plug inside the control box becomes loose. 4. There is failure in circuit board. 	<ol style="list-style-type: none"> 1. After no power, check the wiring and fuse status of welding power source. 2. Check the connection of control cable. 3. In case it still fails, please contact the local service personnel authorized by Lincoln Electric for technical assistance.
Control box has power supply (there is LED display after power-on), but motor still does not run, and LED has normal display. (No display of fault code)	<ol style="list-style-type: none"> 1. 4A fuse on the left side of welding tractor is blown out. 2. Motor driver chip fails. 3. The motor and current detection plug is loose or the internal wiring disconnects. 	<ol style="list-style-type: none"> 1. Change the fuse of the same specification after no power. 2. Check motor and current detection plug and wiring. 3. In case it still fails, please contact the local service personnel authorized by Lincoln Electric for technical assistance.
Welding tractor fails to control floating voltage of welding power output	<ol style="list-style-type: none"> 1. The control cable is not tightly connected. 2. Failure in welding power source. 3. Setup error of welding power source. 4. Failure in circuit board of welding tractor. 	<ol style="list-style-type: none"> 1. Check the connection of control cable. 2. Repair welding power source. 3. Ensure the welding power source is set as "Remote" status. 4. In case it still fails, please contact the local service personnel authorized by Lincoln Electric for technical assistance.
Input fuse failure	<ol style="list-style-type: none"> 1. The fuse specification does not meet the requirement. Please make it meet the requirements. 2. Poor wire feed. The wire pipe is blocked by dirt or the wire mismatches with contact tube. 3. There is internal damage of control board. 	<ol style="list-style-type: none"> 1. Change the fuse of the same specification after no power. 2. In case the failure repeats, please contact the local Maintenance Department authorized by Lincoln Electric for technical assistance.
During manual wire feed, wire feed continues after wire contacts the work piece (touch and stop function fails)	<p>The contact surface of wire and work piece has welding slag, greasy dirt, rust, flux and other dirt.</p> <ol style="list-style-type: none"> 1. Wire ends are not clipped after welding ends. 2. Welding seam is not clear, with greasy dirt, welding slag and dirt. 3. The welding cable is loose or disconnected. 	<ol style="list-style-type: none"> 1. Wire molten ball is cut off after welding is completed. 2. Clear away weld pass, and ensure the good contact between wire and work piece. 3. Check the connection of welding cable.
Date display instrument displays error code ERR 0082	<p>Overcurrent fault of wire feed motor</p> <ol style="list-style-type: none"> 1. Circuit breakage and short circuit of wire feed motor 2. Internal damage of control 	<ol style="list-style-type: none"> 1. Check and repair wire feed motor circuit. 2. In case the failure repeats, please contact the local Maintenance Department

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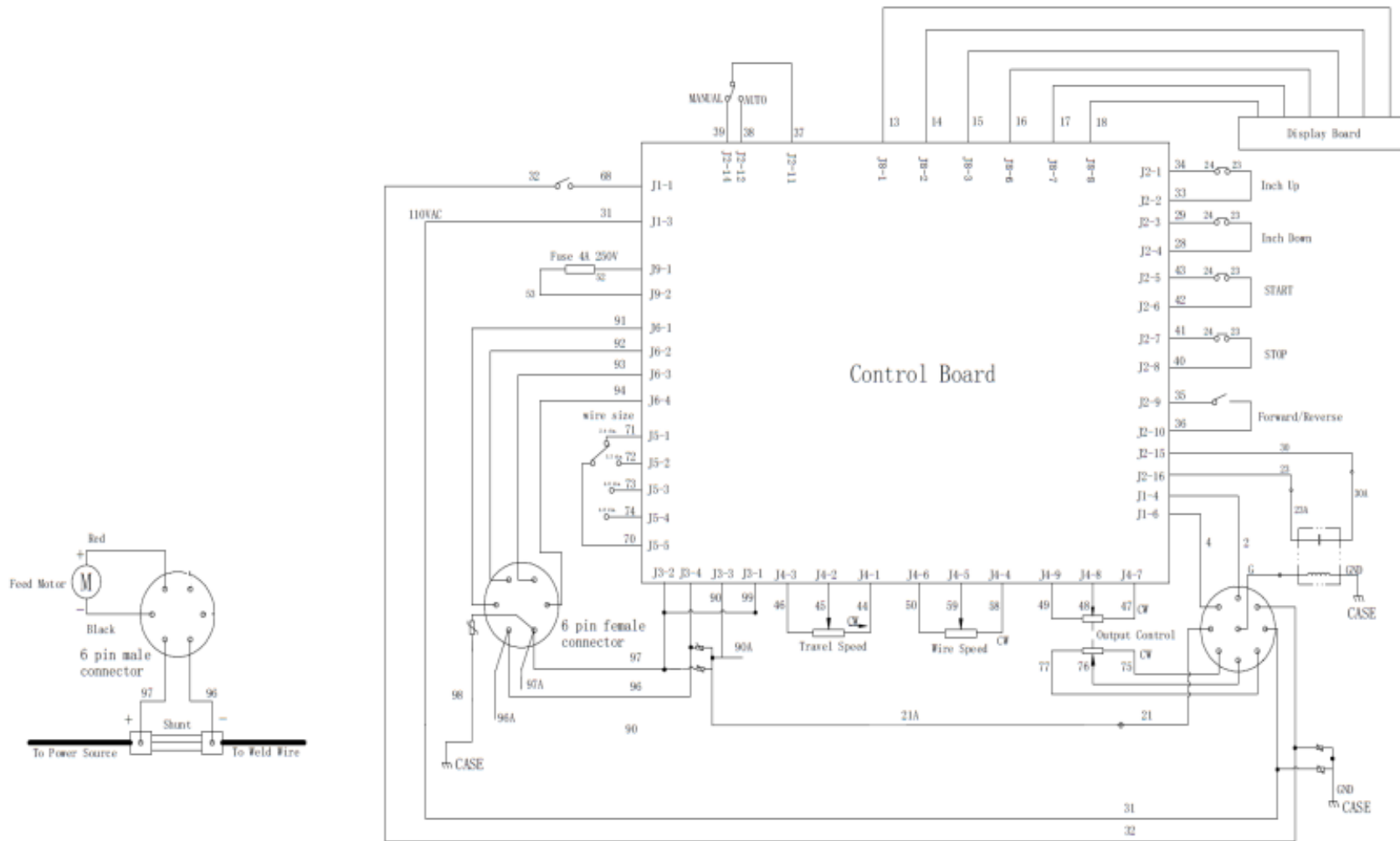


Notice

In case you fail to understand the testing process or conduct testing and maintenance for some reasons, please contact the local service personnel authorized by Lincoln Electric for technical assistance.

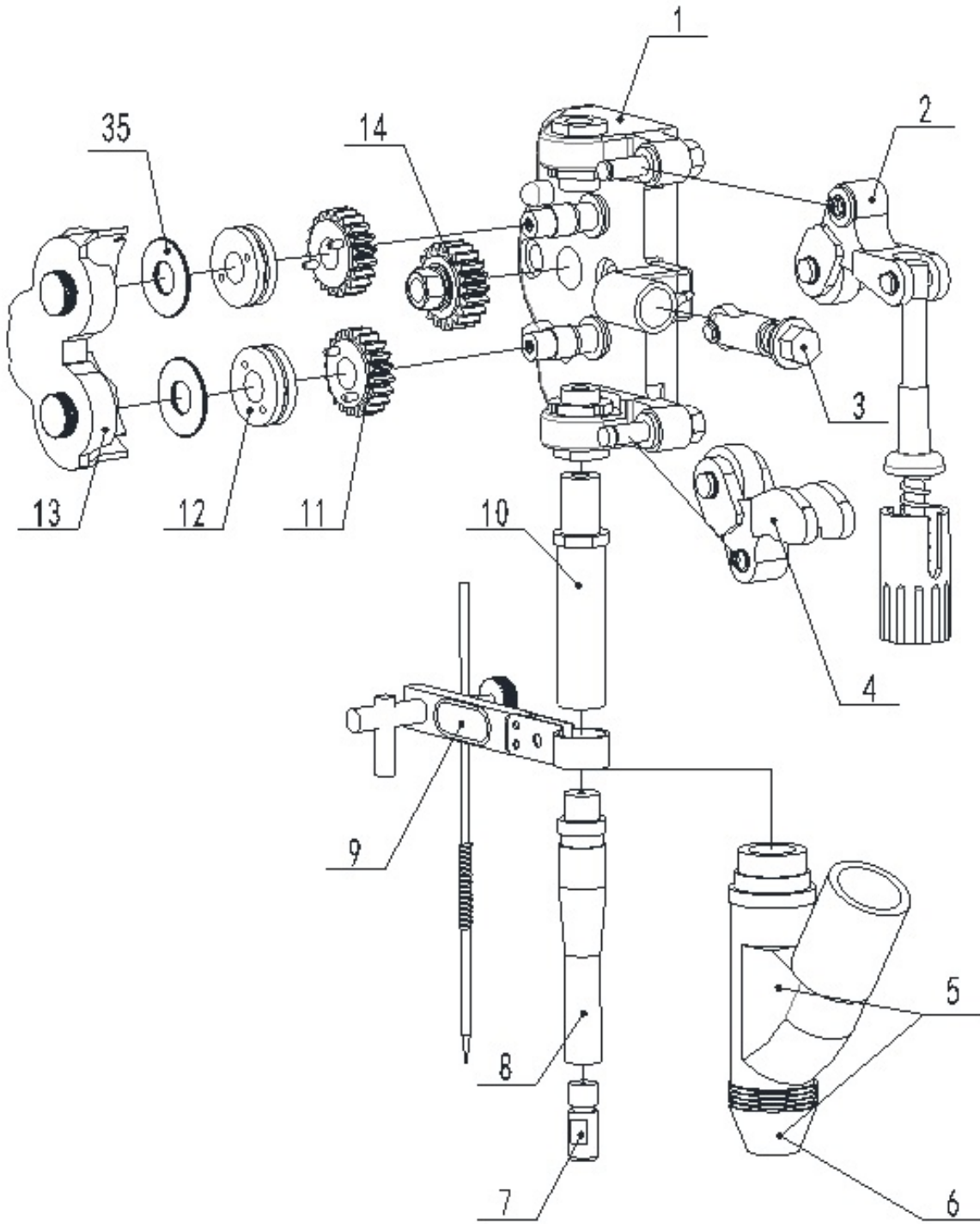
Please carefully read and also comply with the safety guidelines of this manual

Problem (symptom)	Possible cause	Suggested operation process
	circuit board.	authorized by Lincoln Electric for technical assistance.
Date display instrument displays error code ERR 0081	Overload fault of wire feed motor 1. Twist or knotting of wire. 2. Excessive stress of tensioning wheel. 3. Wire shows mismatch with contact tube 4. Wire pipe is blocked by dirt. 5. Internal damage of control circuit board.	1. Check wire and ensure it is smooth 2. Adjust the stress of tensioning wheel. 3. Change contact tube. 4. Clean the dirt in wire pipe. 5. In case the failure repeats, please contact the local Maintenance Department authorized by Lincoln Electric for technical assistance.
Date display instrument displays error code ERR 0414	Fault code of ground loop 1. Welding circuit of work piece disconnects. 2. Internal joint of control box is loose. 3. Internal damage of control circuit board.	1. Check and repair the grounding wire of welding. 2. Open the front panel of control box after no power, and ensure the plug connection is tight. 3. In case the failure repeats, please contact the local Maintenance Department authorized by Lincoln Electric for technical assistance.



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HEAD PARTS DRAWING and LIST

ITEM	PART No.		DESCRIPTION	NAME	QTY
1	KP63088	KP63164	BRACKET	ROVER FEEDING ASSM	1
2	KP63087		HANDLE & UPPER PRESSURE ASSM		1
3	KP63121		Straightening Roll ASSM		1
4	KP63112		LOWER PRESSURE ASSM		1
5	KP63086		NOZZLE ASSM		1
6	KP63093		NOZZLE		1
7	KP63098-16		TIP Φ 1.6		1
	KP63098-20		TIP Φ 2.0		
	KP63098-24		TIP Φ 2.4		
	KP63098-25		TIP Φ 2.5		
	KP63098-30		TIP Φ 3.0		
	KP63098-32		TIP Φ 3.2		
	KP63098-40		TIP Φ 4.0		
	KP63098-48		TIP Φ 4.8		
	KP63098-50		TIP Φ 5.0		
	KP63098-60		TIP Φ 6.0		
8	KP63068		GUN TUBE		1
9	KP63069		POINTER & BRACKET		1
10	KP63071		WIRE GUIDE		1
11	KP63091		DRIVEN GEAR		2
12	KP63092-1		DRIVE Roll Φ 2.0		2
	KP63092-2		DRIVE Roll Φ 2.0~ Φ 2.8		
	KP63092-3		DRIVE Roll Φ 3~ Φ 4		
	KP63092-4		DRIVE Roll Φ 4.2~ Φ 5		
	KP63092-5		DRIVE Roll Φ 6.0		
13	KP63073		GEAR COVER		1
14	KP63090		DRIVING GEAR		1
35	KP63094		OIL WASHER		2
36	KP63160		EXTENSION TUBE		1

RCH-1Control Box



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