

RC7 ADVANCED

OPERATOR'S MANUAL



ENGLISH

THANK YOU! For choosing the **QUALITY** of the Lincoln Electric products.

- Please check packaging and equipment for damage. Claims for material damaged in shipment must be notified immediately to the dealer.
- For ease of use, please enter your product identification data in the table below. Model Name, Code & Serial Number can be found on the machine rating plate.

Model Name:
Code & Serial number:
Date & Where Purchased:

ENGLISH INDEX

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Technical Specifications

NAME		INDEX	
RC7 ADVANCED		K14203-1	
INPUT			
Input Voltage U ₁		EMC Class	
40Vdc		A	
DIMENSION			
Weight	Height	Width	Length
2,2 kg	250,7 mm	64 mm	244 mm
OTHERS			
Protection Rating	Operating Temperature	Storage Temperature	
IP23	from -10°C to +40°C	from -25°C to 55°C	

Electromagnetic Compatibility (EMC)

01/11

This machine has been designed in accordance with all relevant directives and standards. However, it may still generate electromagnetic disturbances that can affect other systems like telecommunications (telephone, radio, and television) or other safety systems. These disturbances can cause safety problems in the affected systems. Read and understand this section to eliminate or reduce the amount of electromagnetic disturbance generated by this machine.



This machine has been designed to operate in an industrial area. To operate in a domestic area it is necessary to observe particular precautions to eliminate possible electromagnetic disturbances. The operator must install and operate this equipment as described in this manual. If any electromagnetic disturbances are detected the operator must put in place corrective actions to eliminate these disturbances, if necessary with assistance from

Lincoln Electric.

Before installing the machine, the operator must check the work area for any devices that may malfunction because of electromagnetic disturbances. Consider the following.

- Input and output cables, control cables, and telephone cables that are in or adjacent to the work area and the machine.
- Radio and/or television transmitters and receivers. Computers or computer controlled equipment.
- Safety and control equipment for industrial processes. Equipment for calibration and measurement.
- Personal medical devices like pacemakers and hearing aids.
- Check the electromagnetic immunity for equipment operating in or near the work area. The operator must be sure that all equipment in the area is compatible. This may require additional protection measures.
- The dimensions of the work area to consider will depend on the construction of the area and other activities that are taking place.

Consider the following guidelines to reduce electromagnetic emissions from the machine.

- Connect the machine to the input supply according to this manual. If disturbances occur it may be necessary to take additional precautions such as filtering the input supply.
- The output cables should be as short as possible and positioned together as close as possible to each other. If possible connect the work piece to ground in order to reduce the electromagnetic emissions. The operator must check that connecting the work piece to ground does not cause problems or unsafe operating conditions for personnel and equipment.
- Shielding of cables in the work area can reduce electromagnetic emissions. This may be necessary for special applications.

WARNING

EMC classification of this product is class A in accordance with electromagnetic compatibility standard EN 60974-10 which means that the product is designed to be used in an industrial environment only.


WARNING






The Class A equipment is not intended for use in residential locations where the electrical power is provided by the public low-voltage supply system. There may be potential difficulties in ensuring electromagnetic compatibility in those locations, due to conducted as well as radiated disturbances.



WARNING

This equipment have to be used by qualified personnel. Be sure that all installation, operation, maintenance and repair procedures are performed only by qualified person. Read and understand this manual before operating this equipment. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or equipment damage. Read and understand the following explanations of the warning symbols. Lincoln Electric is not responsible for damages caused by improper installation, improper care or abnormal operation.

	<p>WARNING: This symbol indicates that instructions must be followed to avoid serious personal injury, loss of life, or equipment damage. Protect yourself and others from possible serious injury or death.</p>
	<p>READ AND UNDERSTAND INSTRUCTIONS: Read and understand this manual before operating this equipment. Arc welding can be hazardous. Failure to follow the instructions in this manual could cause serious personal injury, loss of life, or equipment damage.</p>
	<p>ELECTRIC SHOCK CAN KILL: Welding equipment generates high voltages. Do not touch the electrode, work clamp, or connected work pieces when this equipment is turned on. Insulate yourself from the electrode, work clamp, and connected work pieces.</p>
	<p>ELECTRICALLY POWERED EQUIPMENT: Turn off the input power using the disconnect switch at the fuse box before working on this equipment. Ground this equipment in accordance with local electrical regulations.</p>
	<p>ELECTRICALLY POWERED EQUIPMENT: Regularly inspect the input, electrode, and work clamp cables. If any insulation damage exists replace the cable immediately. Do not place the electrode holder directly on the welding table or any other surface in contact with the work clamp to avoid the risk of accidental arc ignition.</p>
	<p>ELECTROMAGNETIC FIELD MAY BE DANGEROUS: Electric current flowing through any conductor creates electromagnetic field (EMF). EMF fields may interfere with some pacemakers, and welders having a pacemaker shall consult their physician before operating this equipment.</p>
	<p>CE COMPLIANCE: This equipment complies with the European Community Directives.</p>
 <p style="font-size: small;">Optical radiation emission Category 2 (EN 12185)</p>	<p>ARTIFICIAL OPTICAL RADIATION: According with the requirements in 2006/25/EC Directive and EN 12198 Standard, the equipment is a category 2. It makes mandatory the adoption of Personal Protective Equipment (PPE) having filter with a protection degree up to a maximum of 15, as required by EN169 Standard.</p>
	<p>FUMES AND GASES CAN BE DANGEROUS: Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. To avoid these dangers the operator must use enough ventilation or exhaust to keep fumes and gases away from the breathing zone.</p>
	<p>ARC RAYS CAN BURN: Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing. To protect the skin, use suitable clothing made of durable, fireproof material. Protect other nearby personnel with suitable, non-flammable screening and warn them not to watch the arc nor expose themselves to the arc.</p>

	<p>WELDING SPARKS CAN CAUSE FIRE OR EXPLOSION: Remove fire hazards from the welding area and have a fire extinguisher easily accessible. Welding sparks and hot materials from the welding process can easily go through small cracks and openings to adjacent areas. Do not weld on any tanks, drums, containers, or material until the proper steps have been taken to insure that no flammable or toxic vapors will be present. Never use this equipment when flammable gases, vapors or flammable liquids are present.</p>
	<p>WELDED MATERIALS CAN BURN: Welding generates a large amount of heat. Hot surfaces and materials in work area can cause serious burns. Use gloves and pliers when touching or moving materials in the work area.</p>
	<p>CYLINDER MAY EXPLODE IF DAMAGED: Use only certificate, compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. Always keep cylinders in an upright position securely chained to a fixed support. Do not move or transport gas cylinders with the protection cap removed. Do not allow the electrode, electrode holder, work clamp or any other electrically live part to touch a gas cylinder. Gas cylinders must be located away from areas where they may be subjected to physical damage or the welding process including sparks and heat sources.</p>
	<p>MOVING PARTS ARE DANGEROUS: There are moving mechanical parts in this machine, which can cause serious injury. Keep your hands, body and clothing away from those parts during machine starting, operating and servicing.</p>
	<p>SAFETY MARK: This equipment is suitable for supplying power for welding operations carried out in an environment with increased risk of electric shock.</p>

The manufacturer reserves the right to make changes and/or improvements in design without upgrade at the same time the operator's manual.

Introduction

RC7 Advanced is a device for remote control of the power source to which it is connected. It has been designed with strict requirements in mind to ensure comfortable operation in a variety of environmental conditions (see Transport, Carrying and Work Position Subchapter).

RC7 Advanced panel can be connected both to the wire feeder and directly to the power source. The full list of possible configurations is provided in the Connection Configuration Chapter.

Installation and Operator Instructions

Read this entire section before installation or operating the machine.

Exploitation conditions

This machine can operate in harsh environments. However, it is important to use the following simple preventive measures that will ensure its long life and reliable operation:

- Do not place or operate this machine on a surface with an incline higher than 15° from horizontal.
- Do not use this machine for pipe thawing.
- This machine must be located where there is free circulation of clean air without restrictions for air movement. Do not cover the machine with paper, cloth or rags when switched on.
- Dirt and dust that can be drawn into the machine should be kept away from the item.
- This machine has a protection rating of IP23. Keep it dry when possible and do not place it on a wet ground or in puddles.
- Locate the machine away from a radio controlled machinery. Normal operation may adversely affect the operation of a nearby radio controlled machinery, which may result in injury or equipment damage. Read the section on electromagnetic compatibility in this manual.
- Do not operate in areas with an ambient temperature greater than 40°C.

Input Supply Connection

RC7 Advanced control panel is powered by a voltage of 40Vdc and its permissible value is given in the “Technical Specifications” Chapter.

Controls and Operational Features

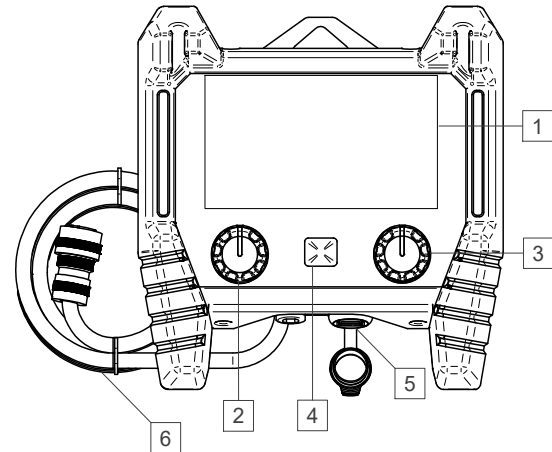


Figure 1

1. **U7 User Interface:** See User Manual “User Interface Advanced” IM3170.
2. **Left Control with Active Button:** Sets the value in the lower left corner of the display. Cancel selection. Return to the previous menu.
3. **Right Control with Active Button:** Sets the value in the lower right corner of the display. Confirmation of changes.
4. **Button:** It enables return to main menu.
5. **USB Port:** For connecting the USB memory and software updates.
6. **Control cable (5m):** 12-pin connection is for connection to the welding source.

After connecting the remote control in accordance with the selected connection diagram (see chapter Connection Configuration), RC 7 advanced is ready for operation.

Detailed operation of the RC7 advanced remote control can be found in the Advanced (U7) IM3170 user manual.

Transport, carrying and work position

RC7 Advanced is adapted to manual transport, additionally it has elements [7] for securing the power cord during transport.

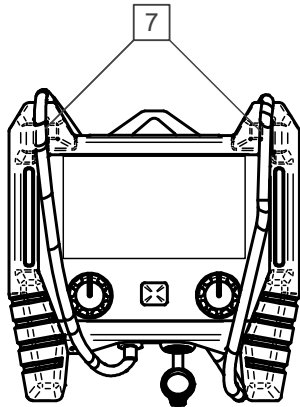


Figure 2

RC7 Advanced has been designed to provide the operator with the ability to work in various configurations:

- Bracket [8], which is used to support the device on a flat surface, e.g. a welding table (Figure 3).
- Rubber feet with a magnet [9], which are used to attach the device to metal elements, e.g. to the front panel of the power source (Figures 4 and 5).
- Bracket [10], which is used to suspend the RC device (Figure 6).

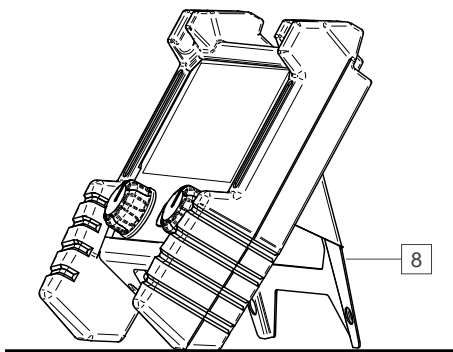


Figure 3

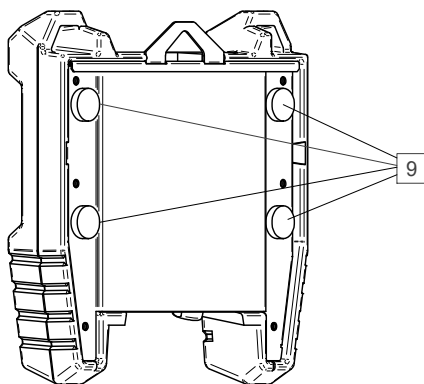


Figure 4

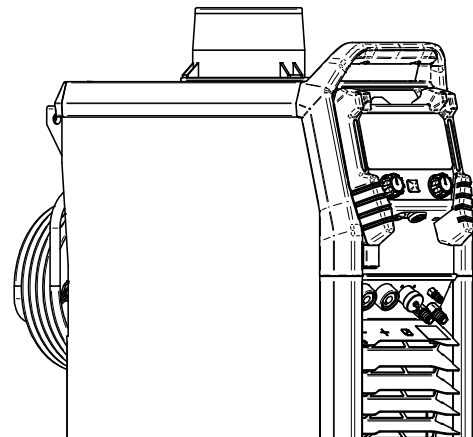
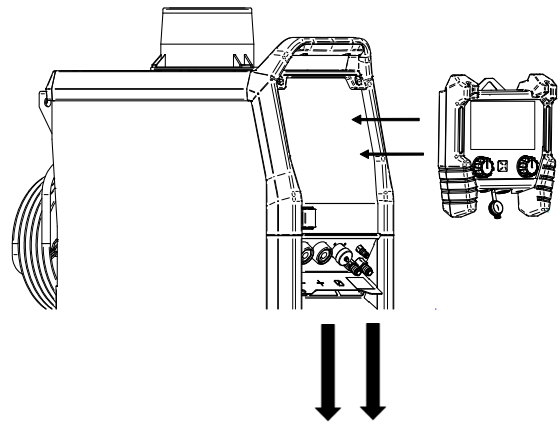


Figure 5

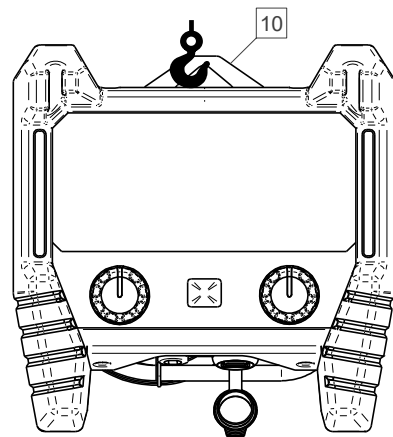


Figure 6



! WARNING

Falling equipment can cause injury and damage to unit.

Maintenance

WARNING

For any repair operations, modifications or maintenances, it is recommended to contact the nearest Technical Service Center or Lincoln Electric. Repairs and modifications performed by unauthorized service or personnel will cause the loss of the manufacturer's warranty

Any noticeable damage should be reported immediately and repaired.

Routine maintenance (everyday)

- Check condition of insulation of power lead. If any insulation damage exists replace the lead immediately.

Periodic maintenance (every 200 working hours but at least once a year)

Perform the routine maintenance and, in addition:

- Keep the machine clean. Using a dry (and low pressure) airflow, remove the dust from the external case and from the cabinet inside.

The frequency of the maintenance operations may vary in accordance with the working environment where the machine is placed.

WARNING

Do not touch electrically live parts.

WARNING

Before removed case, machine has to be turned off and the power lead has to be disconnected.

WARNING

Mains supply network must be disconnected from the machine before each maintenance and service. After each repair, perform proper tests to ensure safety.

Customer Assistance Policy

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

WEEE

07/06



Do not dispose of electrical equipment together with normal waste!

In observance of European Directive 2012/19/EC on Waste Electrical and Electronic Equipment (WEEE) and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative.

By applying this European Directive you will protect the environment and human health!

Spare Parts

12/05

Part List reading instructions

- Do not use this part list for a machine if its code number is not listed. Contact the Lincoln Electric Service Department for any code number not listed.
- Use the illustration of assembly page and the table below to determine where the part is located for your particular code machine.
- Use only the parts marked "X" in the column under the heading number called for in the assembly page (# indicate a change in this printing).

First, read the Part List reading instructions above, then refer to the "Spare Part" manual supplied with the machine that contains a picture-descriptive part number cross-reference.

Authorized Service Shops Location

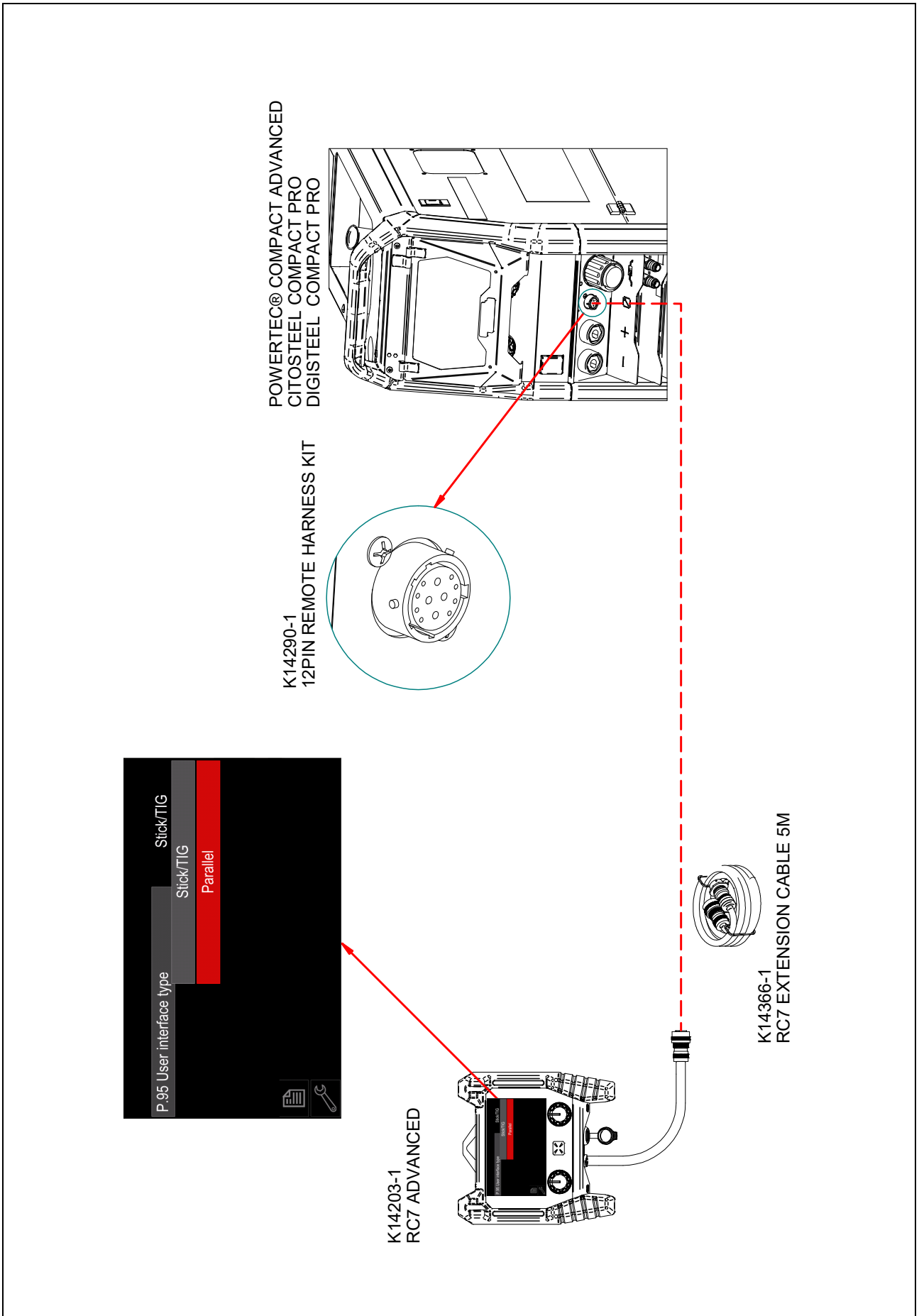
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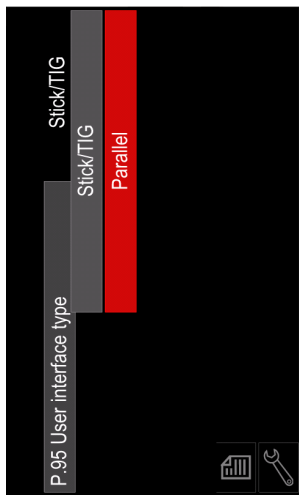
- The purchaser must contact Lincoln Electric or Authorized Service Facility about any defect claimed under warranty period.
- Contact your local Sales Representative for assistance in locating the nearest Authorized Service Facility.

Accessories

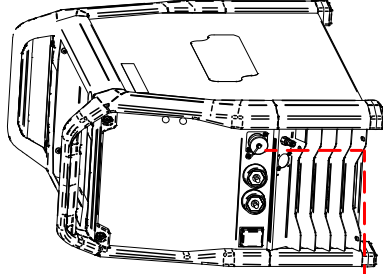
OPTIONS & ACCESSORIES	
K14366-1	RC7 EXTENSION CABLE – 5M
K14290-1	12-PIN REMOTE HARNESS KIT (POWERTEC®, DIGISTEEL, CITOSTEEL)
K14348-1	12-PIN REMOTE HARNESS KIT (SPEEDTEC®)
K14132-1	ADAPTER
K14131-1	ARCLINK –T FLEX

Connection configuration

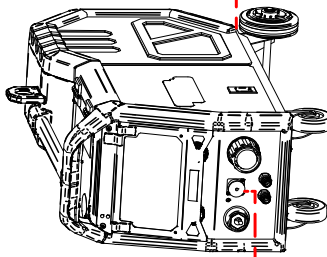




SPEEDTEC® SERIES



K14203-1
RC7 ADVANCED

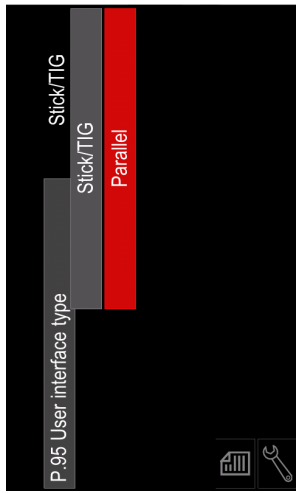


LF 56D / WF 56D

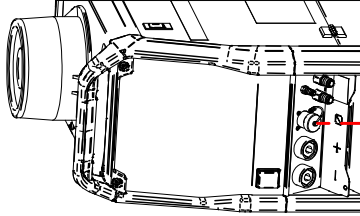
K14198-PG
K14199-PGW



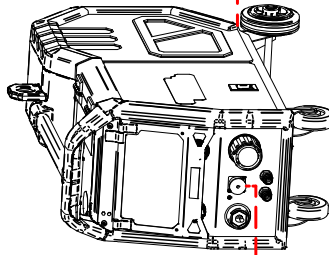
K14366-1
RC7 EXTENSION CABLE 5M



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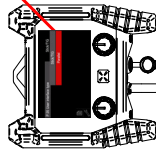


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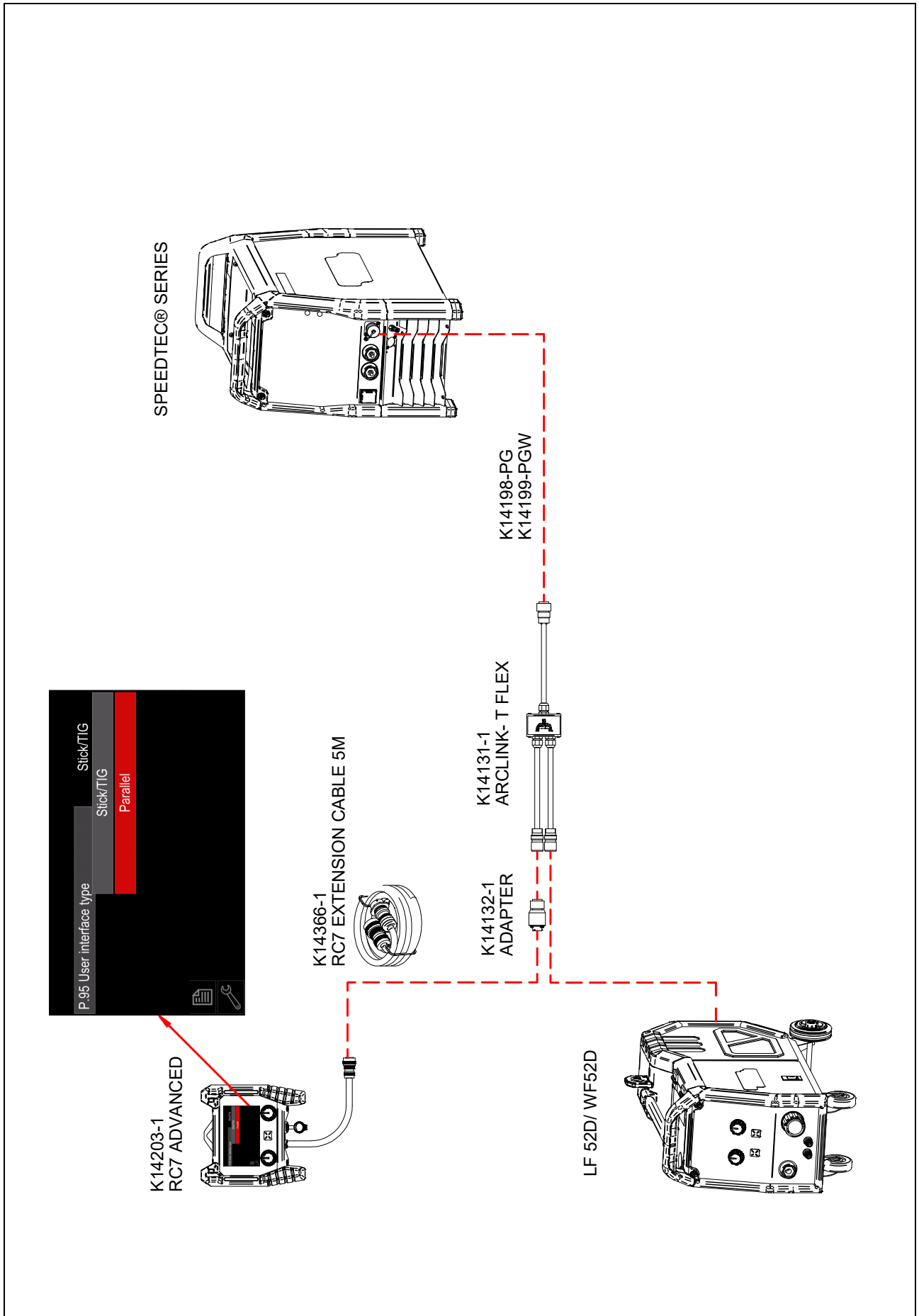


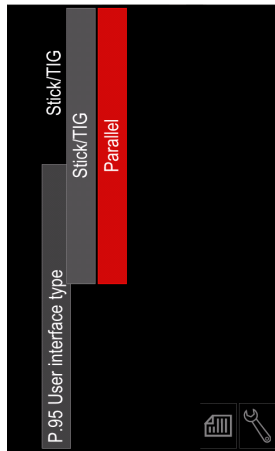
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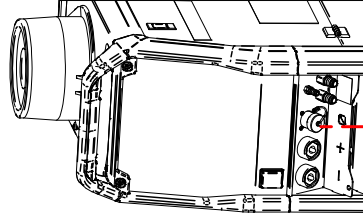


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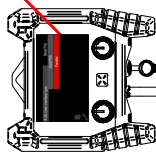




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RC7 ADVANCED



K14366-1
RC7 EXTENSION CABLE 5M

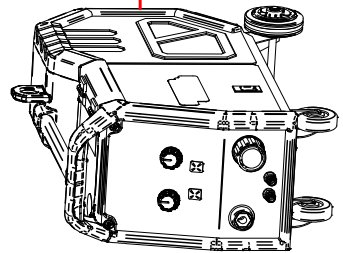


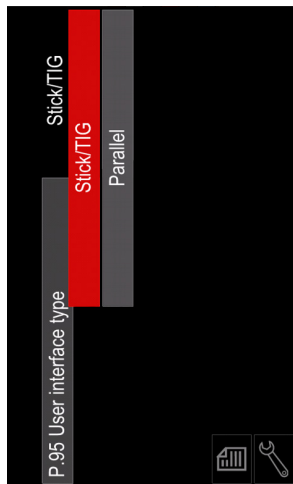
K14132-1
ADAPTER

K14131-1
ARCLINK- T FLEX

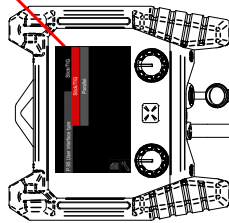
K14198-PG
K14199-PGW

LF 52D/ WF52D

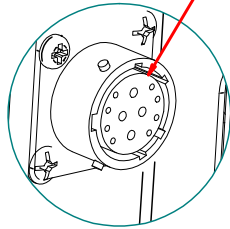




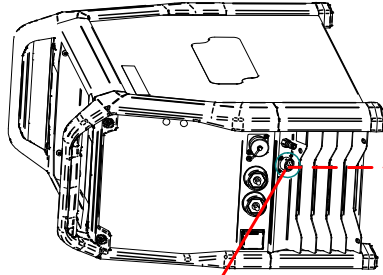
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RC7 ADVANCED



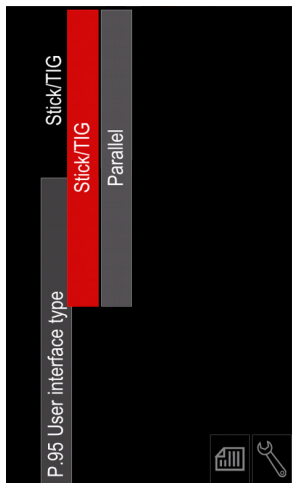
K14348-1
12PIN REMOTE HARNESS KIT



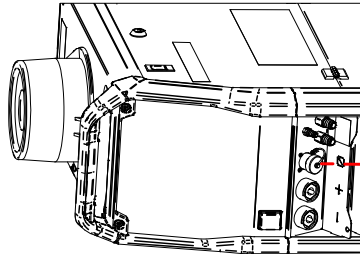
SPEEDTEC® SERIES



K14366-1
RC7 EXTENSION CABLE 5M

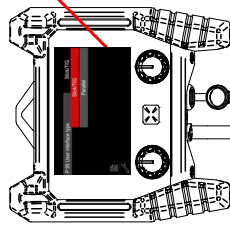


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K14132-1
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RC7 EXTENSION CABLE 5M