

# LACI Production Monitoring Module

---

OPERATOR'S MANUAL



---

**LINCOLN**<sup>®</sup>  
**ELECTRIC**

Lincoln Electric Bester Sp. z o.o.  
ul. Jana III Sobieskiego 19A, 58-263 Bielawa, Poland  
[www.lincolnelectric.eu](http://www.lincolnelectric.eu)

Declaration of conformity



## **Lincoln Electric Europe**

Declares that the Module:

The Lincoln ArcLink Communication Interface K14130-1

conforms to the following directives:

**2014/35/EU , 2014/30/EU**

and has been designed in compliance with the following standards:

**EN 60974-1:2012; EN 60974-10:2014**

A handwritten signature in black ink, consisting of several overlapping, stylized loops and lines, positioned above the date and name.

20.04.2016

Piotr Spytek  
Operations Director

Lincoln Electric Bester Sp. z o.o., ul. Jana III Sobieskiego 19A, 58-263 Bielawa, Poland

07/11

**THANKS!** For having chosen the **QUALITY** of the Lincoln Electric products.

- Please Examine Package and Equipment for Damage. Claims for material damaged in shipment must be notified immediately to the dealer.
- For future reference record in the table below your equipment identification information. Model Name, Code & Serial Number can be found on the machine rating plate.

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

## ENGLISH INDEX







Safety .....	3
Installation and Operator Instructions .....	4
Mounting Instruction .....	11
Connection Diagram .....	12
WEEE .....	13
Spare Parts.....	13
Suggested Accessories .....	13



# WARNING

This equipment must 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 damage to this equipment. 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><b>WARNING:</b> This symbol indicates that instructions must be followed to avoid serious personal injury, loss of life, or damage to this equipment. Protect yourself and others from possible serious injury or death.</p>
	<p><b>READ AND UNDERSTAND INSTRUCTIONS:</b> 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 damage to this equipment.</p>
	<p><b>ELECTRIC SHOCK CAN KILL:</b> Welding equipment generates high voltages. Do not touch the electrode, work clamp, or connected work pieces when this equipment is on. Insulate yourself from the electrode, work clamp, and connected work pieces.</p>
	<p><b>ELECTRICALLY POWERED EQUIPMENT:</b> Turn off 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><b>ELECTRICALLY POWERED EQUIPMENT:</b> 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><b>ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS:</b> Electric current flowing through any conductor creates electric and magnetic fields (EMF). EMF fields may interfere with some pacemakers, and welders having a pacemaker shall consult their physician before operating this equipment.</p>
	<p><b>CE COMPLIANCE:</b> This equipment complies with the European Community Directives.</p>

 <p>Optical radiation emission Category 2 (EN 12198)</p>	<p><b>ARTIFICIAL OPTICAL RADIATION:</b> 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 Equipments (PPE) having filter with a protection degree up to a maximum of 15, as required by EN169 Standard.</p>
	<p><b>FUMES AND GASES CAN BE DANGEROUS:</b> 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><b>ARC RAYS CAN BURN:</b> 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. Use suitable clothing made from durable flame-resistant material to protect you skin and that of your helpers. 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><b>WELDING SPARKS CAN CAUSE FIRE OR EXPLOSION:</b> Remove fire hazards from the welding area and have a fire extinguisher readily available. 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 operate this equipment when flammable gases, vapors or liquid combustibles are present.</p>
	<p><b>WELDED MATERIALS CAN BURN:</b> 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><b>SAFETY MARK:</b> This equipment is suitable for supplying power for welding operations carried out in an environment with increased hazard 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.

## Installation and Operator Instructions

### General Description

The Lincoln ArLink Communication Interface (LACI) Module is designed to connect your Welding Power Source to your computer or the network.

Using Power Wave® Manager application, LACI allows you to configure and manage a multitude of settings and configuration options within the full range of the Lincoln Electric Speedtec line of Welding Power Source.

LACI also allows to use the newest technology like CheckPoint™ and Production Monitoring™.

Read this entire section before installation or operation of the machine.

## Controls and Operational Features



1. Remote Control Receptacle:
2. Status Led:
3. Ethernet Connector:

### Default TCP/IP settings of the LACI board

LACI is equipped with an ethernet communication interface.

LACI default factory settings	
DHCP	off
IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default gateway	192.168.0.1

Default LACI settings are designated to Direct Connection where IP address of the PC is set to range 192.168.0.[3...254]

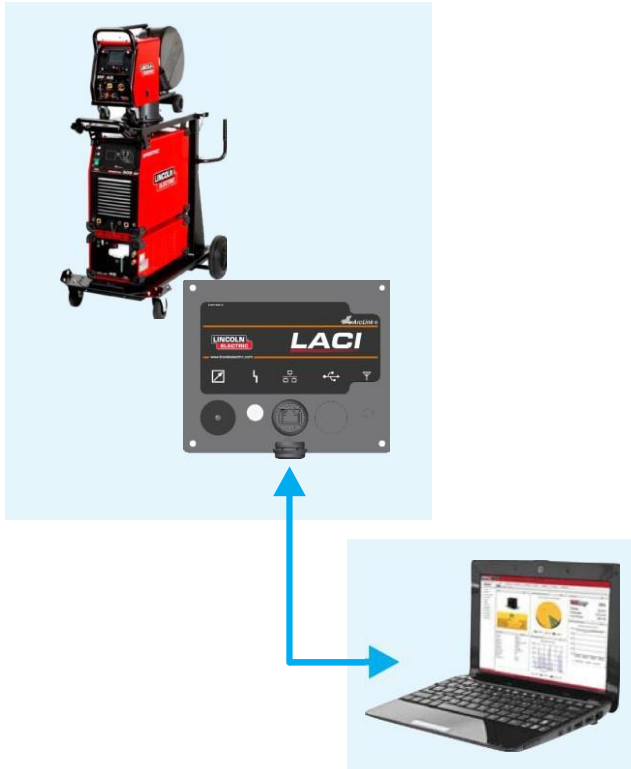
Download Power Wave Manager software from [www.powerwavesoftware.com](http://www.powerwavesoftware.com) section *Power Wave® Utilities* in order to change default configuration of the LACI.

## LACI with PC Connection

According to network infrastructure we can distinguish 2 different connection types:

- a) Direct Connection
- b) Local Area Network
  - i) with static IP addresses
  - ii) with dynamic IP addresses (DHCP server, e.g. Router)

### Direct Connection



The simplest case where LACI is connected to PC with one, common ethernet cable.

LACI default factory settings	
DHCP	off
IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default gateway	192.168.0.1



PC network settings	
DHCP	off
IP Address	192.168.0.3
Subnet Mask	255.255.255.0
Default gateway	192.168.0.1

Use above network settings for your PC.  
 Please refer guide how to change TCP/IP settings (*IP address*) in your PC operating system available in your system help or internet.

### Local Area Network



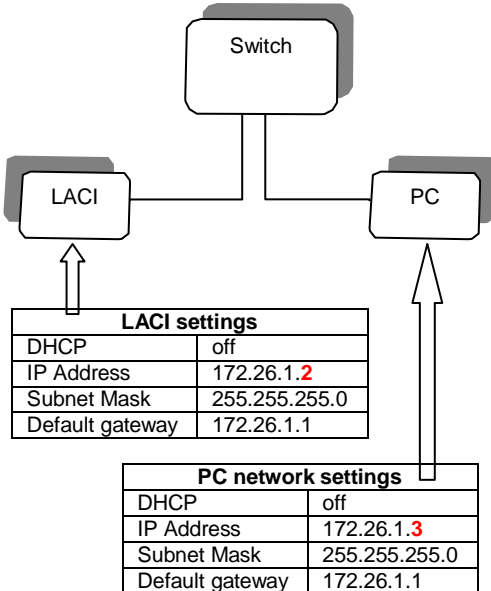


## Static IP Addresses

When LACI is connected to the network which is equipped with a Hub or Switch (no DHCP server) it is required to set proper IP address from the actual subnetwork range to LACI and PC.

Example:

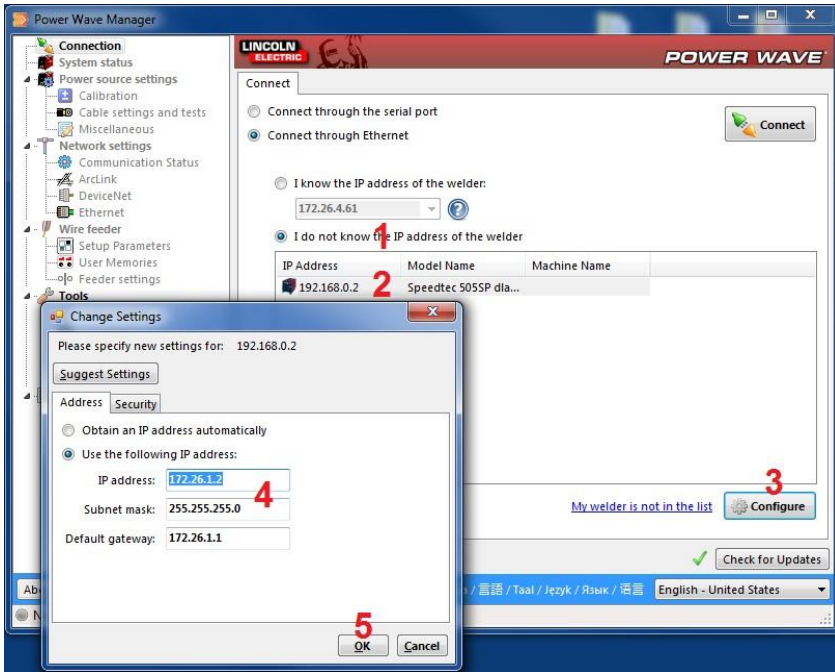
no DHCP server in network	
DHCP	Off
IP Addresses range	172.26.1.[2..255]
Subnet Mask	255.255.255.0
Default gateway	172.26.1.1



Please refer guide how to change TCP/IP settings (*IP address*) in your PC operating system available in your system help or internet.

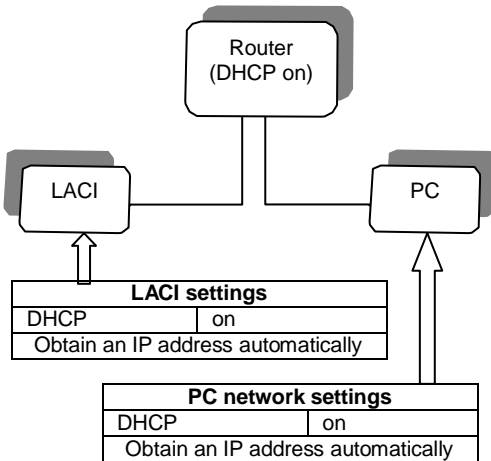
In order to change LACI IP address use Direct Connection first (see chapter a) to change LACI configuration.

- connect to LACI by Direct Connection
- run Power Wave Manager software on your PC (available on [www.powerwavesoftware.com](http://www.powerwavesoftware.com))
- Step 1: choice "I do not know the IP address of the welder"
- Step 2: click on row with LACI IP Address and Model Name
- Step 3: click on "Configure" button
- Step 4: change IP address, Subnet mask, Default gateway
- Step 5: click "OK" button
- Confirm new settings by clicking "Yes". Machine will be restarted.
- Connect LACI to Network Switch.



## Dynamic IP Addresses (DHCP Server, e.g. Router)

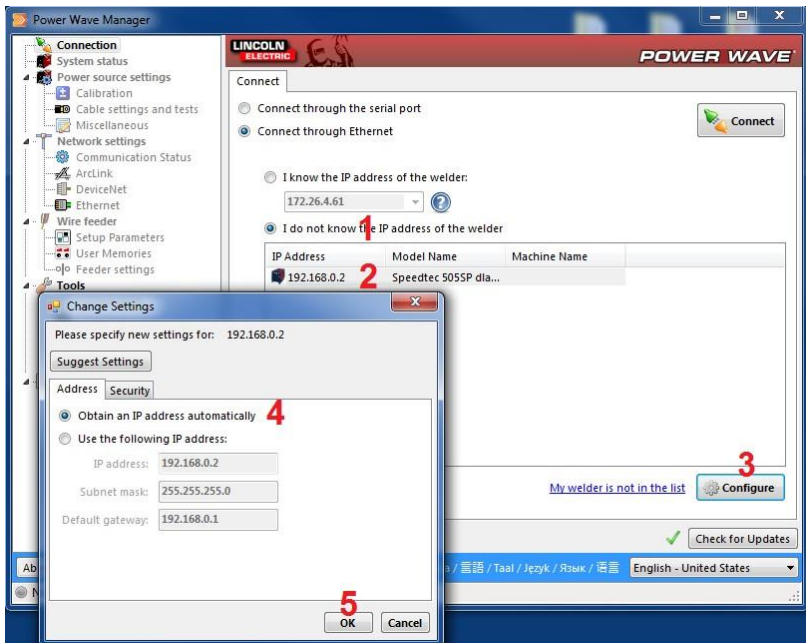
When LACI is connected to the network which is equipped with a DHCP server it is required to set proper configuration of the LACI and PC.



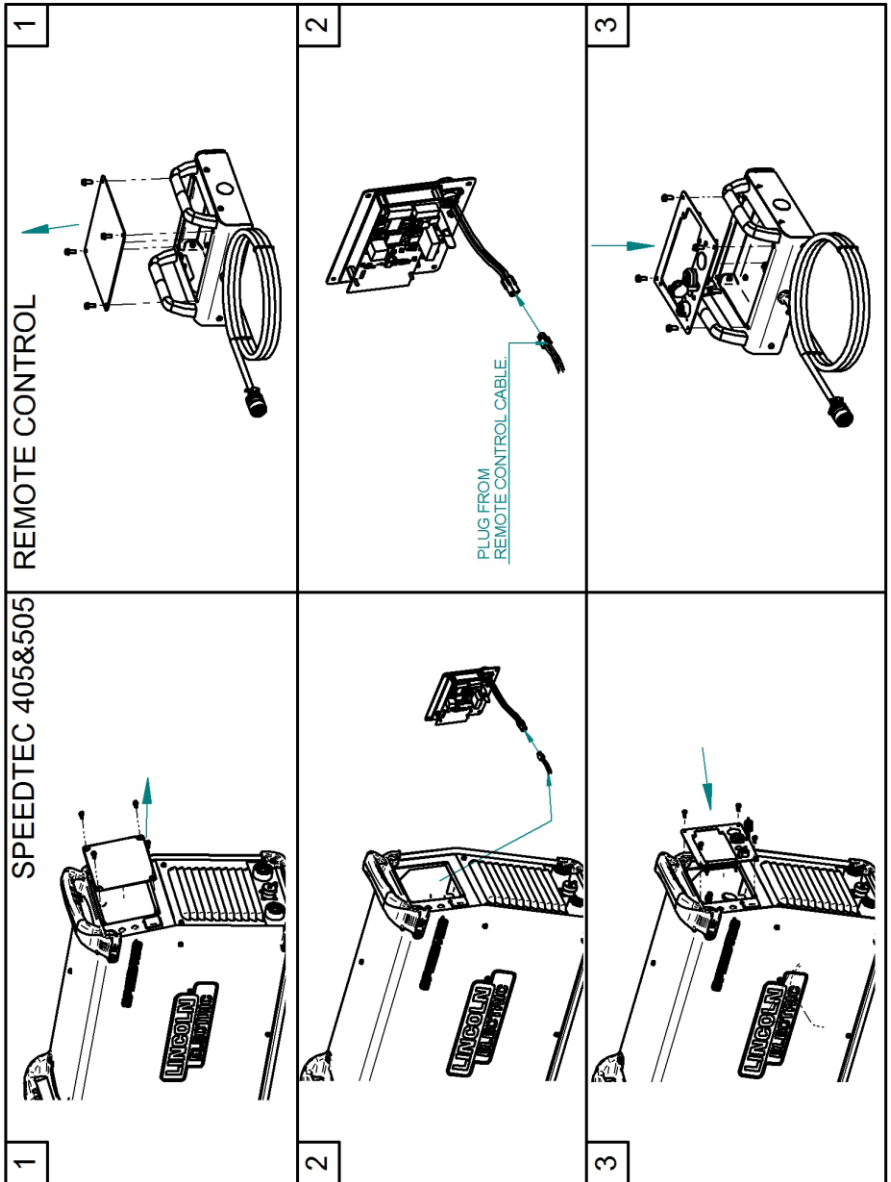
Please refer guide how to change TCP/IP settings to *Obtain an IP address automatically* in your PC operating system available in your system help or internet.

In order to switch LACI to “Obtain an IP address automatically” use Direct Connection first (see chapter a) to change LACI configuration.

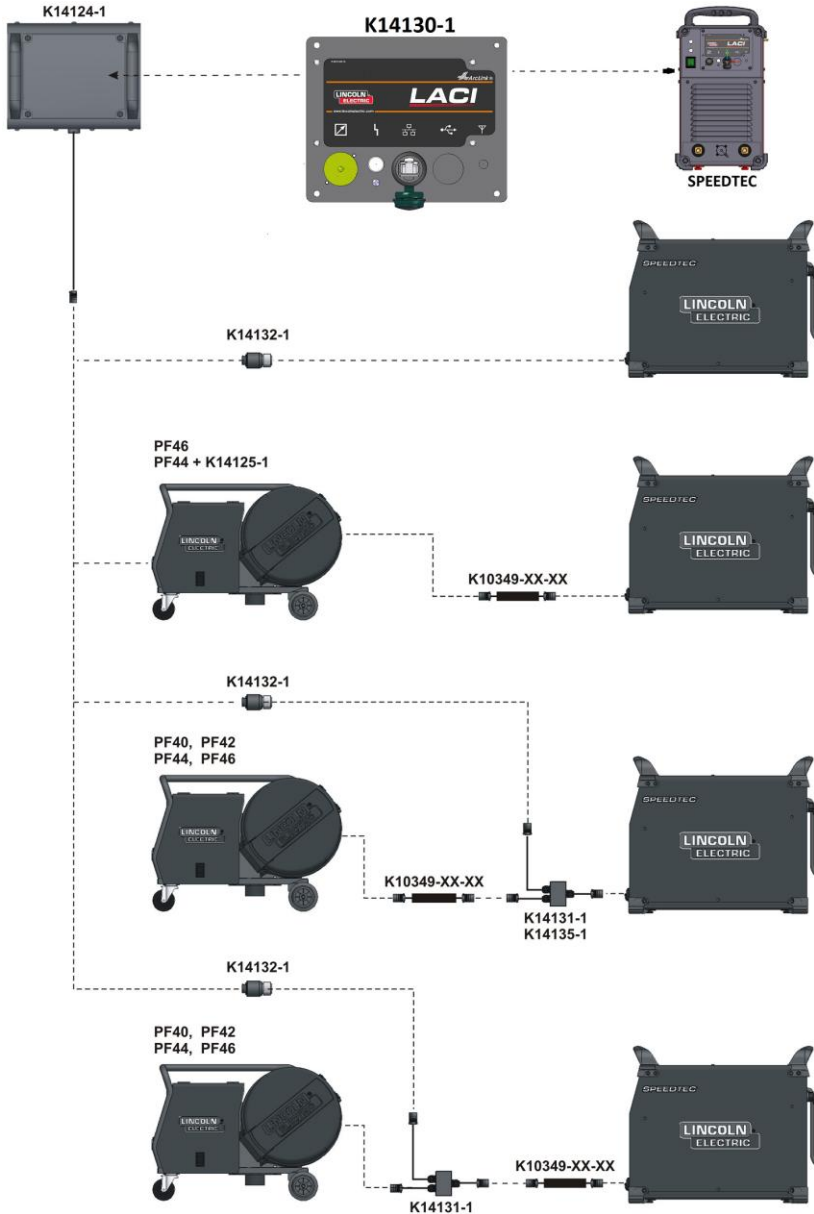
- connect to LACI by Direct Connection
- run Power Wave Manager software on your PC (available on [www.powerwavesoftware.com](http://www.powerwavesoftware.com))
- Step 1: choice “I do not know the IP address of the welder”
- Step 2: click on row with LACI IP Address and Model Name
- Step 3: click on “Configure” button
- Step 4: choice “Obtain an IP address automatically”
- Step 5: click “OK” button
- Confirm new settings by clicking “Yes”. Machine will be restarted.
- Connect LACI to Network Router.



# Mounting Instruction



# Connection Diagram



English



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

### 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.

## Suggested Accessories

K14124-1	Case of remote control (PENDANT).
K14132-1	5-PIN/12-PIN adapter.
K14131-1	ArcLink® "T" Connector Kit.