



Access[®] E Network Setup Guide

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SECTION 1 – SAFETY PRECAUTIONS

 Protect yourself and others from injury — read, follow, and save these important safety precautions and operating instructions.

safety_stm 2011-10

1-1. Symbol Usage



DANGER! – Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

NOTICE – Indicates statements not related to personal injury.

 Indicates special instructions.



This group of symbols means Warning! Watch Out! ELECTRIC SHOCK, MOVING PARTS, and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

1-2. Servicing Hazards



The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard.



Only qualified persons should test, maintain, and repair this unit.



During servicing, keep everybody, especially children, away.



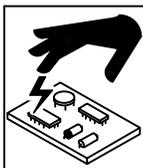
ELECTRIC SHOCK can kill.

- Do not touch live electrical parts.
- Turn Off welding power source and wire feeder and disconnect and lockout input power using line disconnect switch, circuit breakers, or by removing plug from receptacle, or stop engine before servicing unless the procedure specifically requires an energized unit.

- Insulate yourself from ground by standing or working on dry insulating mats big enough to prevent contact with the ground.
- Do not leave live unit unattended.
- If this procedure requires an energized unit, have only personnel familiar with and following standard safety practices do the job.
- When testing a live unit, use the one-hand method. Do not put both hands inside unit. Keep one hand free.
- Disconnect input power conductors from deenergized supply line BEFORE moving a welding power source.

SIGNIFICANT DC VOLTAGE exists in inverter welding power sources AFTER removal of input power.

- Turn Off inverter, disconnect input power, and discharge input capacitors according to instructions in Troubleshooting Section before touching any parts.



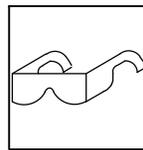
STATIC (ESD) can damage PC boards.

- Put on grounded wrist strap BEFORE handling boards or parts.
- Use proper static-proof bags and boxes to store, move, or ship PC boards.



FIRE OR EXPLOSION hazard.

- Do not place unit on, over, or near combustible surfaces.
- Do not service unit near flammables.



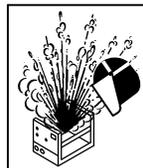
FLYING METAL or DIRT can injure eyes.

- Wear safety glasses with side shields or face shield during servicing.
- Be careful not to short metal tools, parts, or wires together during testing and servicing.



HOT PARTS can burn.

- Do not touch hot parts bare handed.
- Allow cooling period before working on equipment.
- To handle hot parts, use proper tools and/or wear heavy, insulated welding gloves and clothing to prevent burns.



EXPLODING PARTS can injure.

- Failed parts can explode or cause other parts to explode when power is applied to inverters.
- Always wear a face shield and long sleeves when servicing inverters.



SHOCK HAZARD from testing.

- Turn Off welding power source and wire feeder or stop engine before making or changing meter lead connections.
- Use at least one meter lead that has a self-retaining spring clip such as an alligator clip.
- Read instructions for test equipment.



FALLING EQUIPMENT can injure.

- Use lifting eye to lift unit only, NOT running gear, gas cylinders, or any other accessories.
- Use equipment of adequate capacity to lift and support unit.
- If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.
- Follow the guidelines in the Applications Manual for the Revised NIOSH Lifting Equation (Publication No. 94-110) when manually lifting heavy parts or equipment.



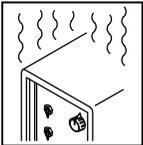
MOVING PARTS can injure.

- Keep away from moving parts such as fans.
- Keep away from pinch points such as drive rolls.
- Have only qualified persons remove doors, panels, covers, or guards for maintenance and troubleshooting as necessary.
- Keep hands, hair, loose clothing, and tools away from moving parts.
- Reinstall doors, panels, covers, or guards when maintenance is finished and before re-connecting input power.



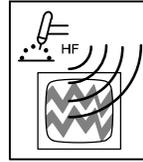
ELECTRIC AND MAGNETIC FIELDS (EMF) can affect Implanted Medical Devices.

- Wearers of Pacemakers and other Implanted Medical Devices should keep away from servicing areas until consulting their doctor and the device manufacturer.



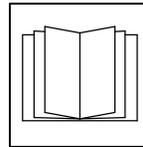
OVERUSE can cause OVERHEATING.

- Allow cooling period; follow rated duty cycle.
- Reduce current or reduce duty cycle before starting to weld again.
- Do not block or filter airflow to unit.



H.F. RADIATION can cause interference.

- High-frequency (H.F.) can interfere with radio navigation, safety services, computers, and communications equipment.
- Have only qualified persons familiar with electronic equipment install, test, and service H.F. producing units.
- The user is responsible for having a qualified electrician promptly correct any interference problem resulting from the installation.
- If notified by the FCC about interference, stop using the equipment at once.
- Have the installation regularly checked and maintained.
- Keep high-frequency source doors and panels tightly shut, keep spark gaps at correct setting, and use grounding and shielding to minimize the possibility of interference.



READ INSTRUCTIONS.

- Use Testing Booklet (Part No. 150 853) when servicing this unit.
- Consult the Owner's Manual for welding safety precautions.
- Use only genuine replacement parts from the manufacturer.
- Read and follow all labels and the Technical Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.

1-3. California Proposition 65 Warnings

⚠ Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

⚠ This product contains chemicals, including lead, known to the state of California to cause cancer, birth defects, or other reproductive harm. *Wash hands after use.*

1-4. EMF Information

Electric current flowing through any conductor causes localized electric and magnetic fields (EMF). Welding current creates an EMF field around the welding circuit and welding equipment. EMF fields may interfere with some medical implants, e.g. pacemakers. Protective measures for persons wearing medical implants have to be taken. For example, restrict access for passers-by or conduct individual risk assessment for welders. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

1. Keep cables close together by twisting or taping them, or using a cable cover.
2. Do not place your body between welding cables. Arrange cables to one side and away from the operator.
3. Do not coil or drape cables around your body.

4. Keep head and trunk as far away from the equipment in the welding circuit as possible.
5. Connect work clamp to workpiece as close to the weld as possible.
6. Do not work next to, sit or lean on the welding power source.
7. Do not weld whilst carrying the welding power source or wire feeder.

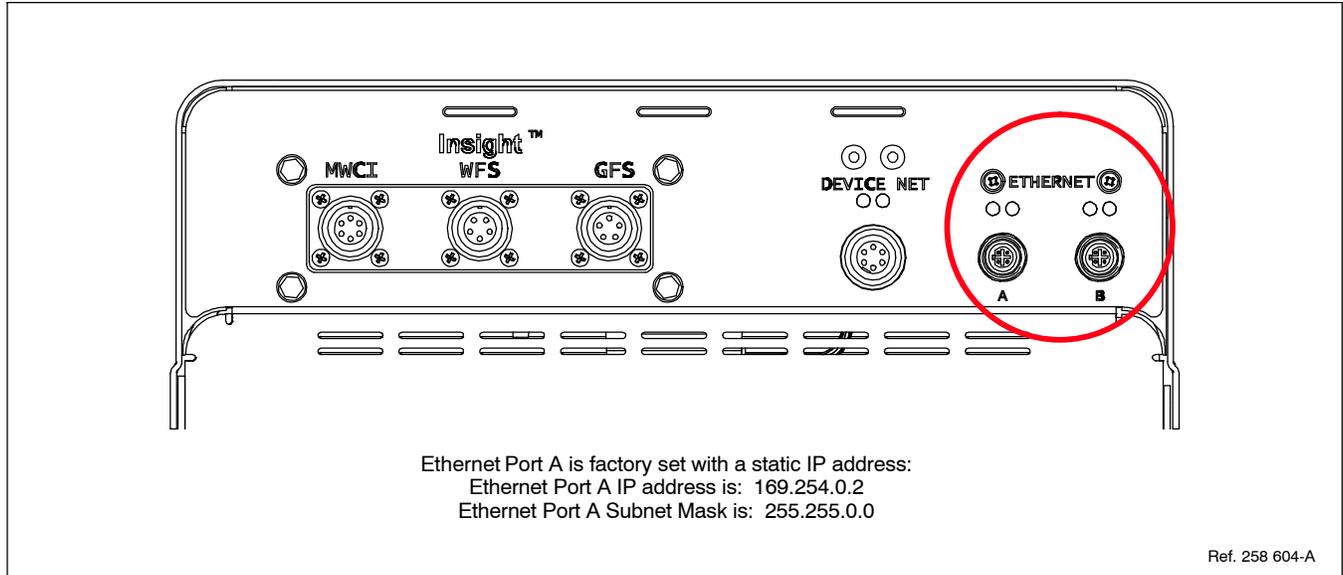
About Implanted Medical Devices:

Implanted Medical Device wearers should consult their doctor and the device manufacturer before performing or going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations. If cleared by your doctor, then following the above procedures is recommended.

SECTION 2 – ACCESS E NETWORK SETUP

There are two 10/100 Ethernet NICs (Network Interface Connections) on the rear panel of the Access E. These NICs require an industrial Ethernet cable and **do not** provide a connection for standard RJ-45 Ethernet cables.

Miller Electric Mfg. Co. offers Industrial Ethernet cables available for use with the Access E. These are available in 3, 5 and 10 meter lengths (part numbers 300734, 300735 and 300736). They have a shielded RJ-45 connection to connect to a PC or network drop. Shielded CAT-5 cable is strongly recommended in the welding environment, and proper termination of the shield is important for noise-free operation.



Ethernet Port B is factory set to receive an IP address by means of a DHCP server. It should be noted that while the Access E is capable of receiving an IP address by means of a DHCP server, the server must be setup so that the Access E receives the same IP address in the event that power is cycled on the welding machine. If the Access E receives a different IP address, communication with the machine will be lost until the new IP address is discovered and utilized. The IP address of the Access E must be known in order to communicate with the device as WNS is not supported.

While either port can be used for any purpose, Port A is generally used for direct connections while Port B is used for network connections (to reconfigure Ports A and B, see Section 6).

The simplest connection is to use the factory default connection of the Access E, Ethernet port A, connected directly to a computer for configuration. This is in the IP address range of a PC when directly connected to the welding machine (no DHCP server, communication will take about 1 minute after connection for Windows XP). (See <http://www.ietf.org/rfc/rfc3927.txt>).

The Centerpoint™ program (see Section 7 for Centerpoint™ PC requirements) can handle weld monitoring functions from several Access E machines, depending on the speed and configuration of the network. For semi-automatic setups, one PC or PC-HMI running Centerpoint™ is the most common configuration.

SECTION 3 – SEMI-AUTOMATIC INSTALLATIONS

Access E semi-automatic with PC or PC-HMI in the cell: This requires only a direct connection between the Access E and the PC device running Centerpoint™. A cable of the appropriate length can be connected between Access E Port A and the PC device. The other port of the Access E can be connected to a factory intranet for configuration and diagnosis via web pages.

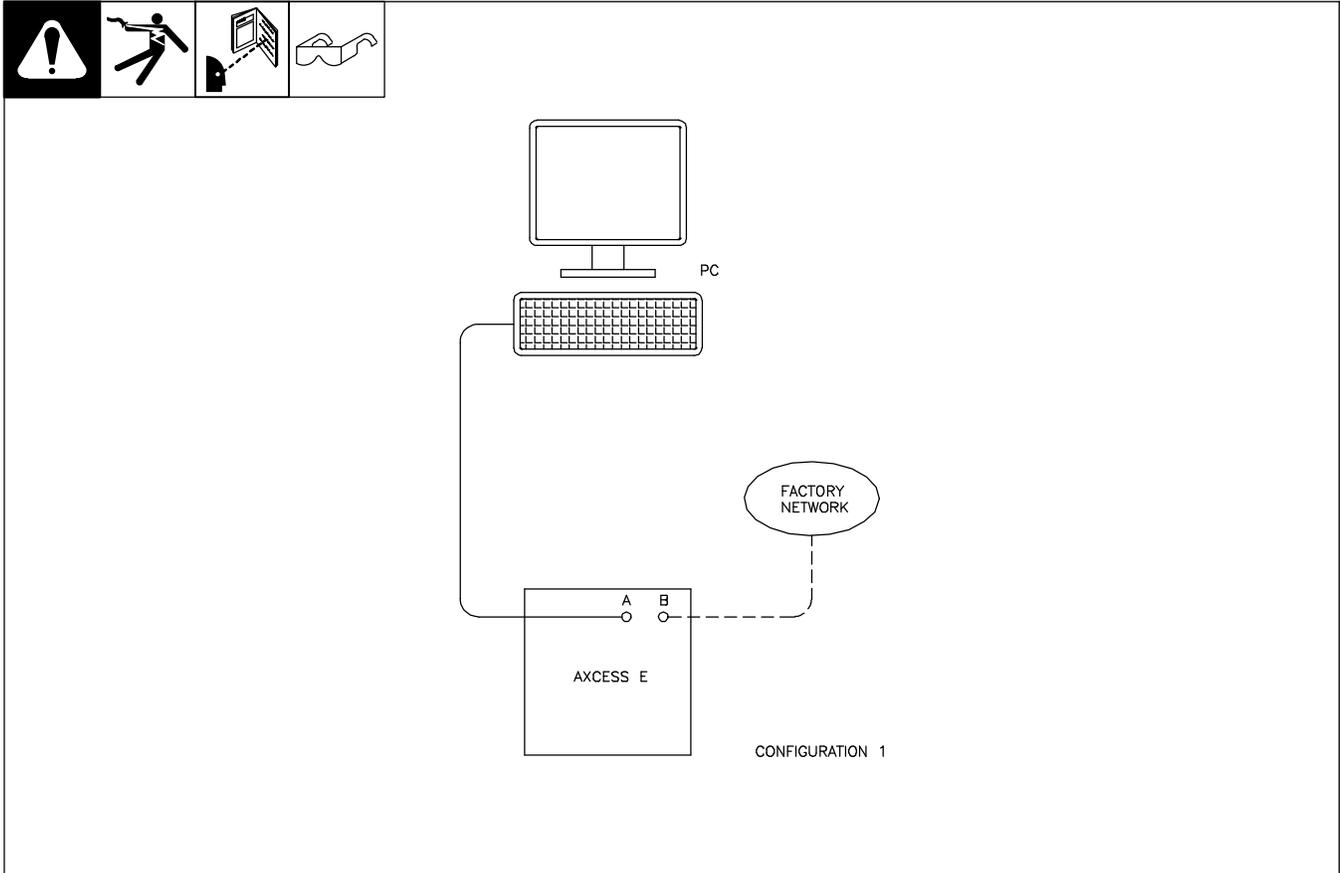


Figure 1 – Typical Installation 1 – Access E Semi-automatic With PC Or PC HMI In The Cell

Access E semi-automatic with multiple welders per PC device: This configuration will require an Ethernet 10/100 capable switch, and cables between each Access E and the switch. The PC device will also plug into the switch. If the switch is connected to a company intranet, the Access E's web pages can be viewed from other PC devices on the network. IP addresses can be set before connecting the welders to the switch if static addresses are used. If DHCP on an intranet is used, connect the Access E's Port B, or use Port A to navigate to Ethernet settings page (see Section 6) to note the IP address assigned to Port B by the DHCP server. If the factory intranet has a lot of broadcast traffic or there are 10 or more Access E machines on one switch, it is recommended that the switch not be connected to the intranet to prevent excess network loading.

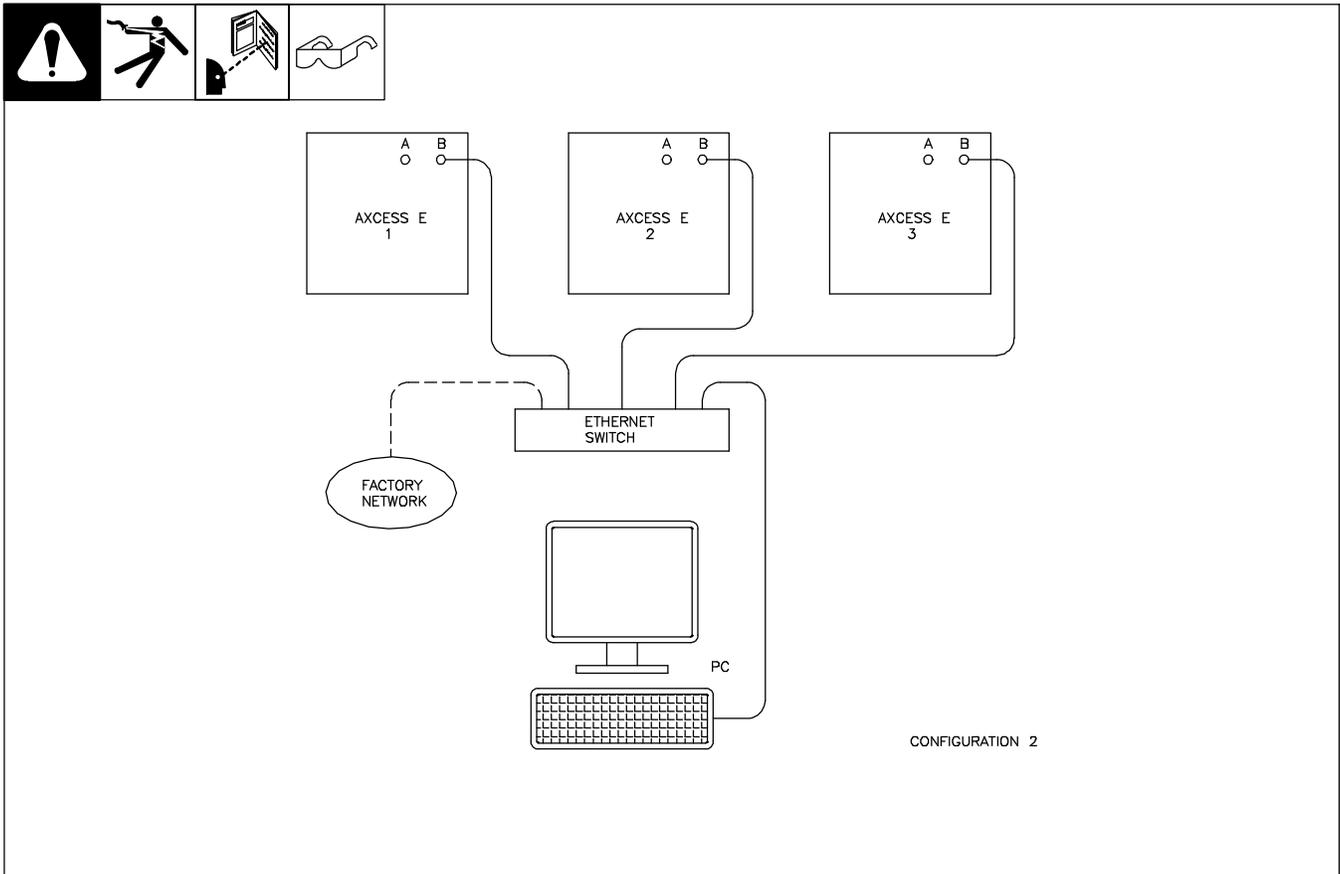


Figure 2 – Typical Installation 2 – Access E Semi-automatic With Multiple Welders Per PC Device

SECTION 4 – ANALOG OR DEVICENET INSTALLATIONS

Auto-Access E Analog or Devicenet connected to a robot with PC or PC-HMI in the cell: A direct connection is needed for the ADAM block (part number 300803) which provides Part ID and Weld ID information to Insight™ and Centerpoint™ from the robot. This is done with an Ethernet cable from Port A to the ADAM block. Port B would then be used to connect the PC running Centerpoint™ to the Access E. This could be through a network connected switch, in which case no setup is needed (DHCP) or a direct connection by assigning a fixed address to Port B. (Part 301150 is needed for robots with sourcing inputs/outputs). (The ADAM block is pre-configured to operate on Port A).

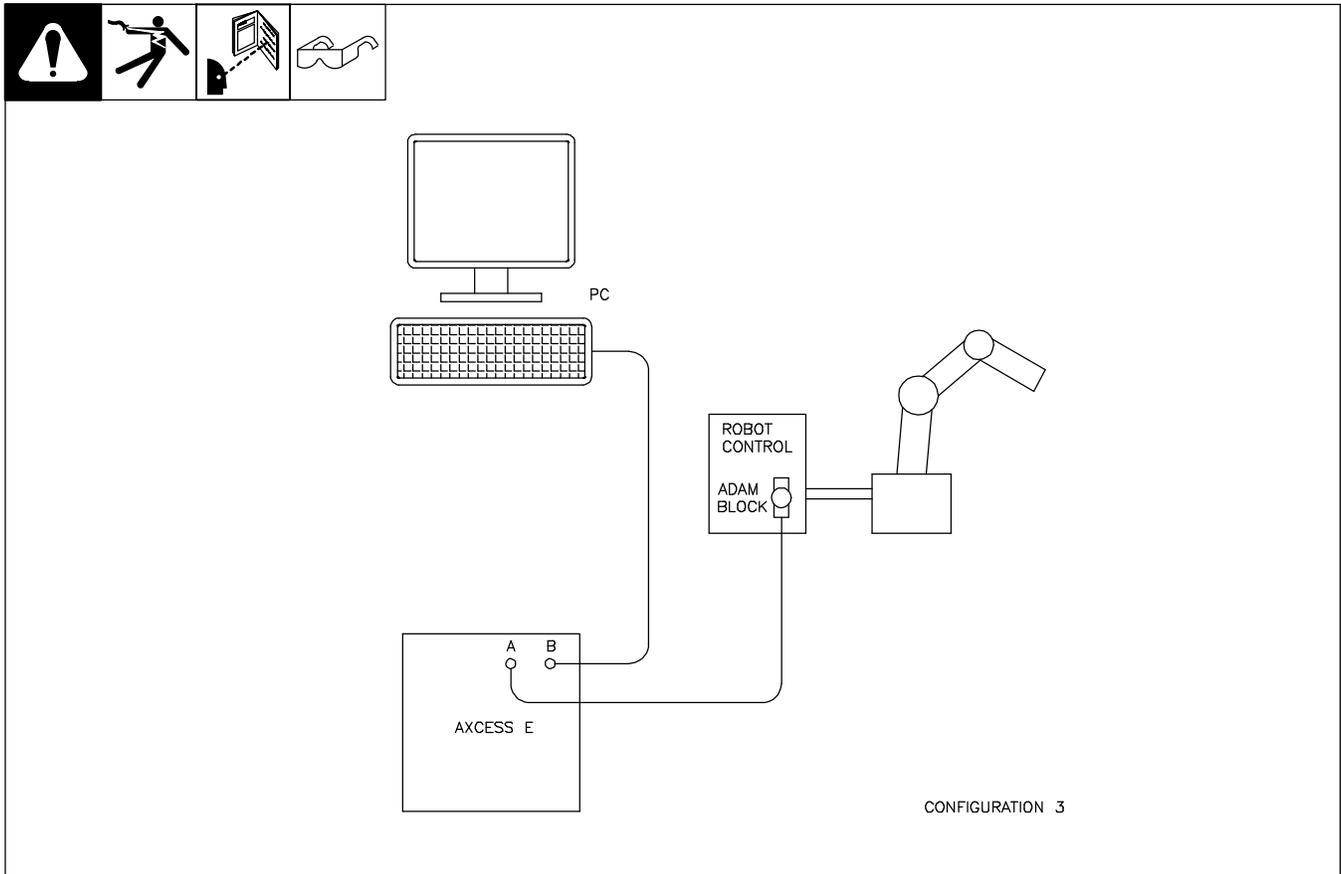


Figure 3 – Typical Installation 3 – Auto-Access E Analog Or Devicenet Connected To A Robot With PC Or PC-HMI In The Cell

Auto-Access E Analog or Devicenet connected to a robot with multiple welders per PC device: A direct connection is needed for the ADAM block which provides Part ID and Weld ID information to Insight™ and Centerpoint™. This is done with a cable on Port A to the ADAM block. Port B would then be used to connect Centerpoint™ to the Access E's. This could be through a network connected switch, in which case no setup is needed (DHCP) or a direct connection by assigning a fixed address to Port B. (The ADAM block is pre-configured to operate on Port A).

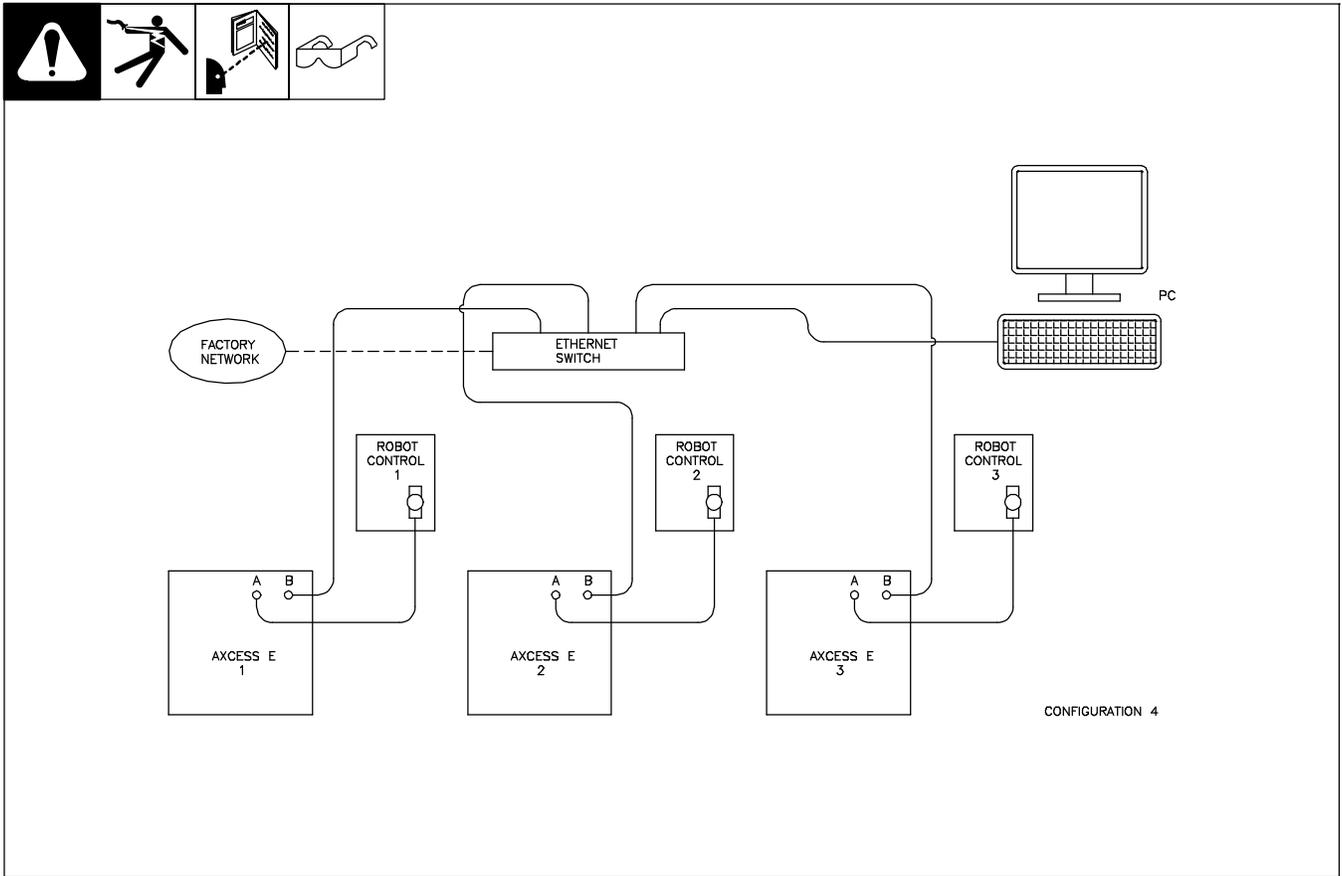


Figure 4 – Typical Installation 4 – Auto-Access E Analog Or Devicenet Connected To A Robot With Multiple Welders Per PC Device

SECTION 5 – ETHERNET/IP INSTALLATIONS

Auto-Access E digital connected to a robot with PC or PC-HMI in the cell: A direct connection is needed for the robot which commands the welder and which provides Part ID and Weld ID information to Insight™ and Centerpoint™. This is normally done with a cable on Port A to the robot. Port B would then be used to connect Centerpoint™ to the welder. This could be through a network connected switch, in which case no setup is needed (DHCP) or a direct connection by assigning a fixed address to Port B.

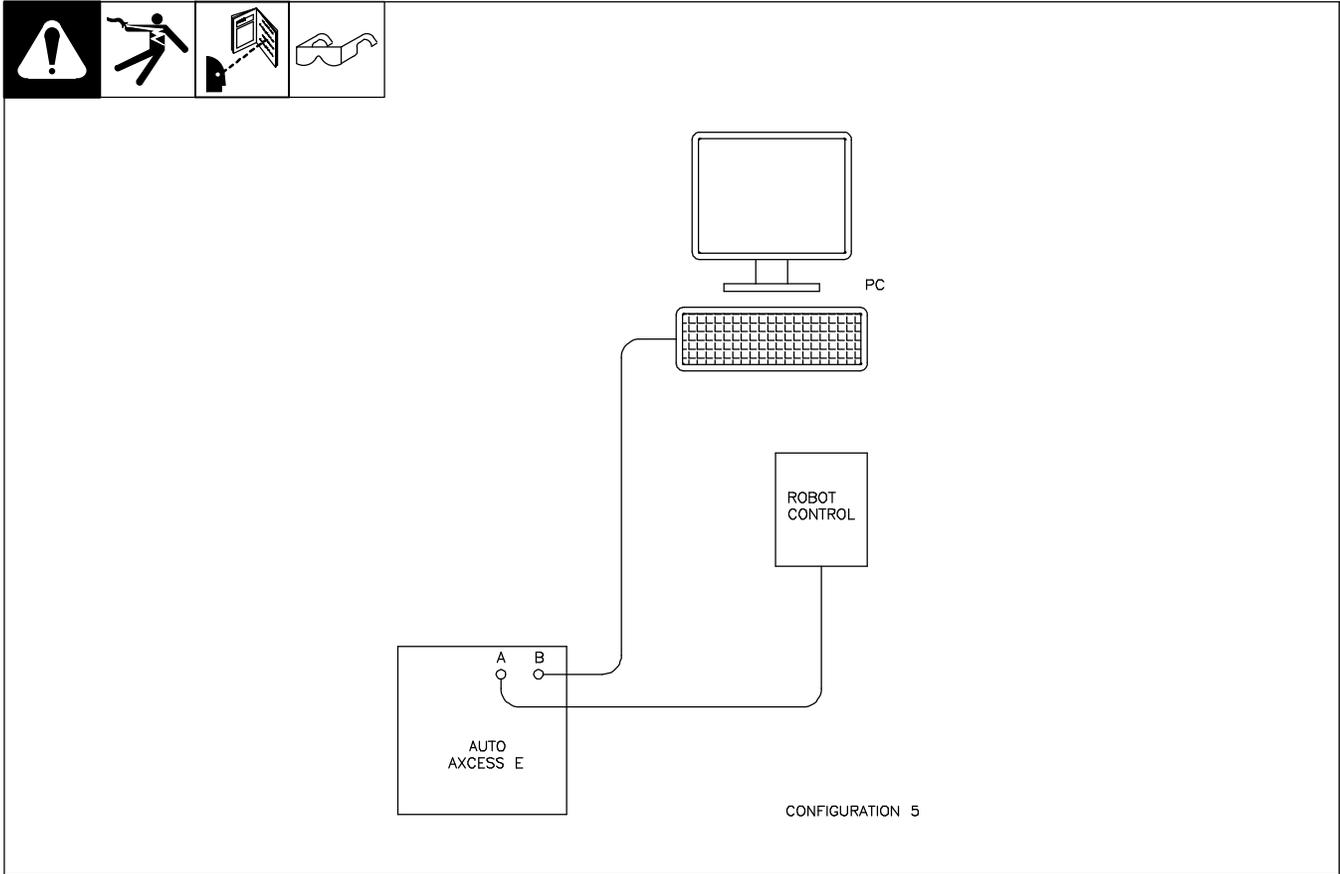


Figure 5 – Typical Installation 5 – Auto-Access E Digital Connected To A Robot With PC Or PC-HMI In The Cell

Auto-Access E Digital connected to a robot with multiple welders per PC device: A direct connection is needed for the robot which commands the welder and provides Part ID and Weld ID information to Insight™ and Centerpoint™. This is normally done with an Ethernet cable from Port A to the robot. Port B would then be used to connect Centerpoint™ to the welder. This could be through a network connected switch, in which case no setup is needed (DHCP) or a direct connection by assigning a fixed address to Port B.

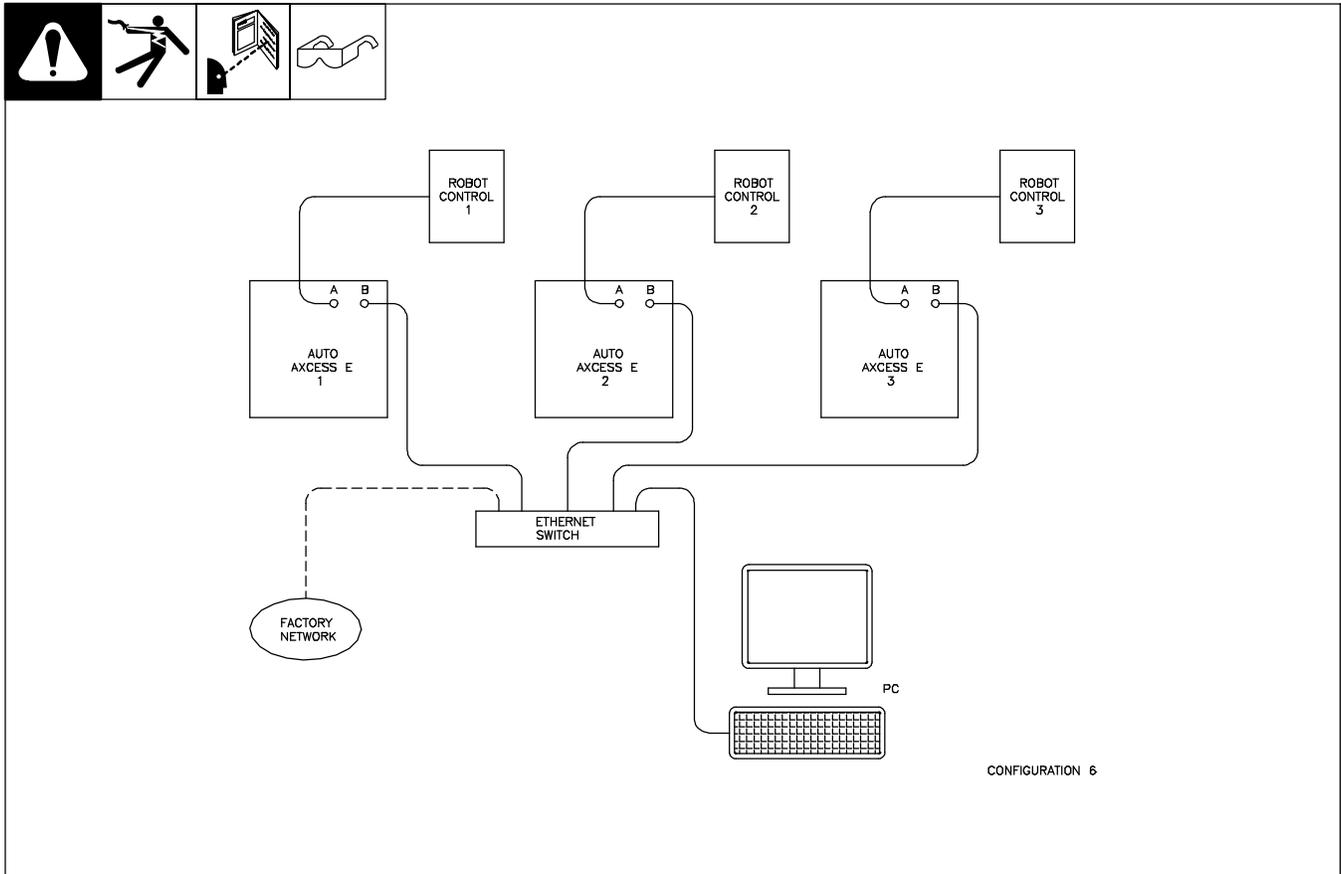


Figure 6 – Typical Installation 6 – Auto-Access E Digital Connected To A Robot With Multiple Welders Per PC Device

Auto-Access E Digital connected to a robot with multiple welders per robot and per PC device: Direct connection is needed for the robot which commands the welders and provides Part ID and Weld ID information to Insight™ and Centerpoint™. This is normally done with an Ethernet cable from Port A to the robot, and in this case possibly a switch in the robot controller to connect the multiple welders. Port B would then be used to connect the PC running Centerpoint™ to the Access E's using a separate network connected switch, in which case no setup is needed (DHCP) or fixed addresses could be assigned to the welders connected to the other switch. If EtherNet/IP traffic and Centerpoint™ traffic are mixed on the same switch, careful measurements of available bandwidth and latency will need to be performed at installation.

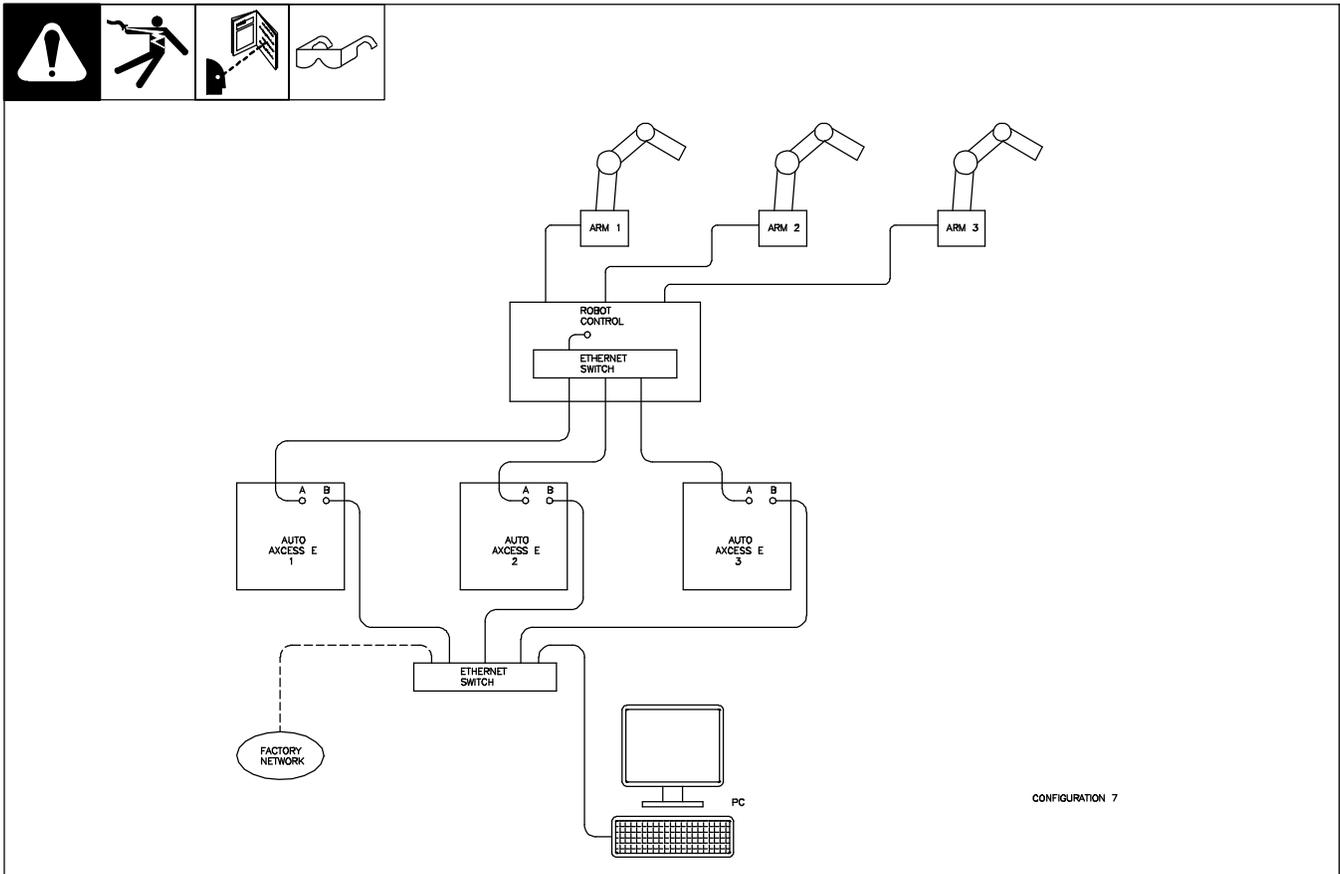


Figure 7 – Typical Installation 7 – Auto-Access E Digital Connected To A Robot With Multiple Welders Per Robot And Per PC Device

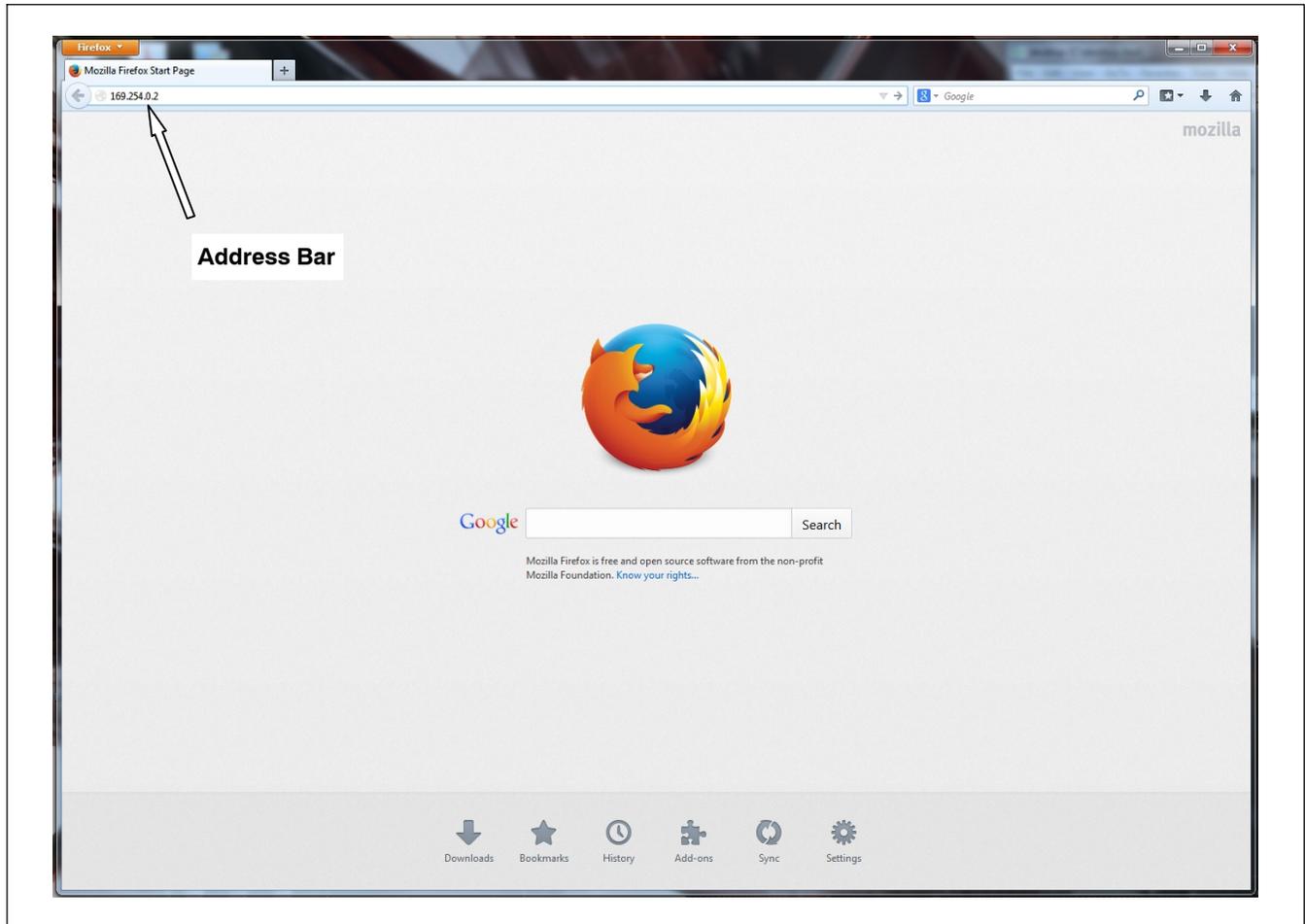
SECTION 6 – CHANGING IP ADDRESS CONFIGURATION

1. Connect Ethernet cable from computer to Ethernet Port A on the Access E.

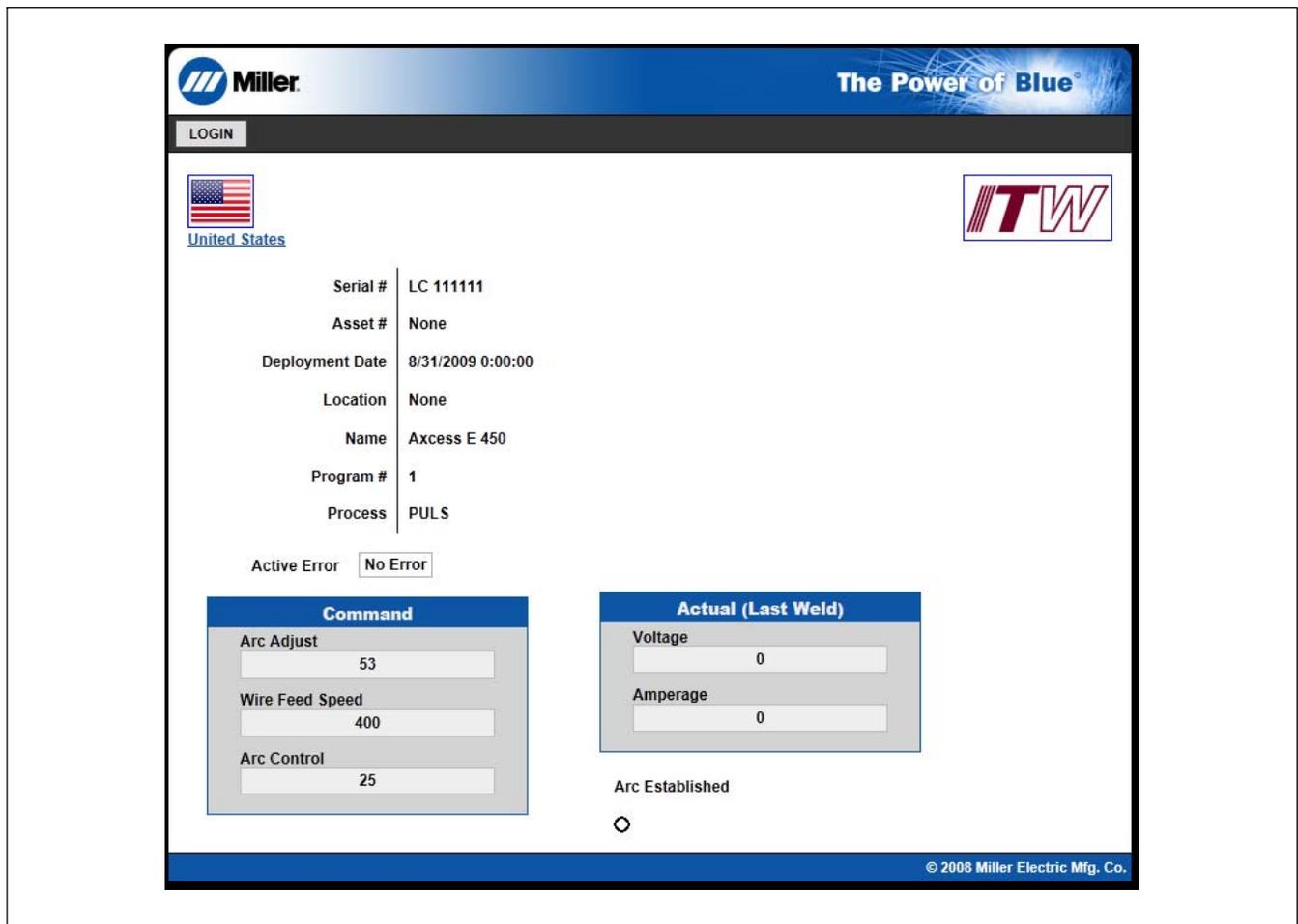
It may take up to 1 minute for the PC to acquire an IP address. If the PC is set up with a static IP address it must either be changed to DHCP or assigned an address in the range of Port A.

2. Open a web browser, enter 169.254.0.2 in the address bar and press the “Enter” key on the keyboard.

- a. Compatible web browsers:
 - i. Internet Explorer version 7 and higher
 - ii. Mozilla FireFox version 3 and higher
 - iii. Google Chrome version 15 and higher
 - iv. Safari version 5.1 and higher
 - v. Opera version 11.5 and higher

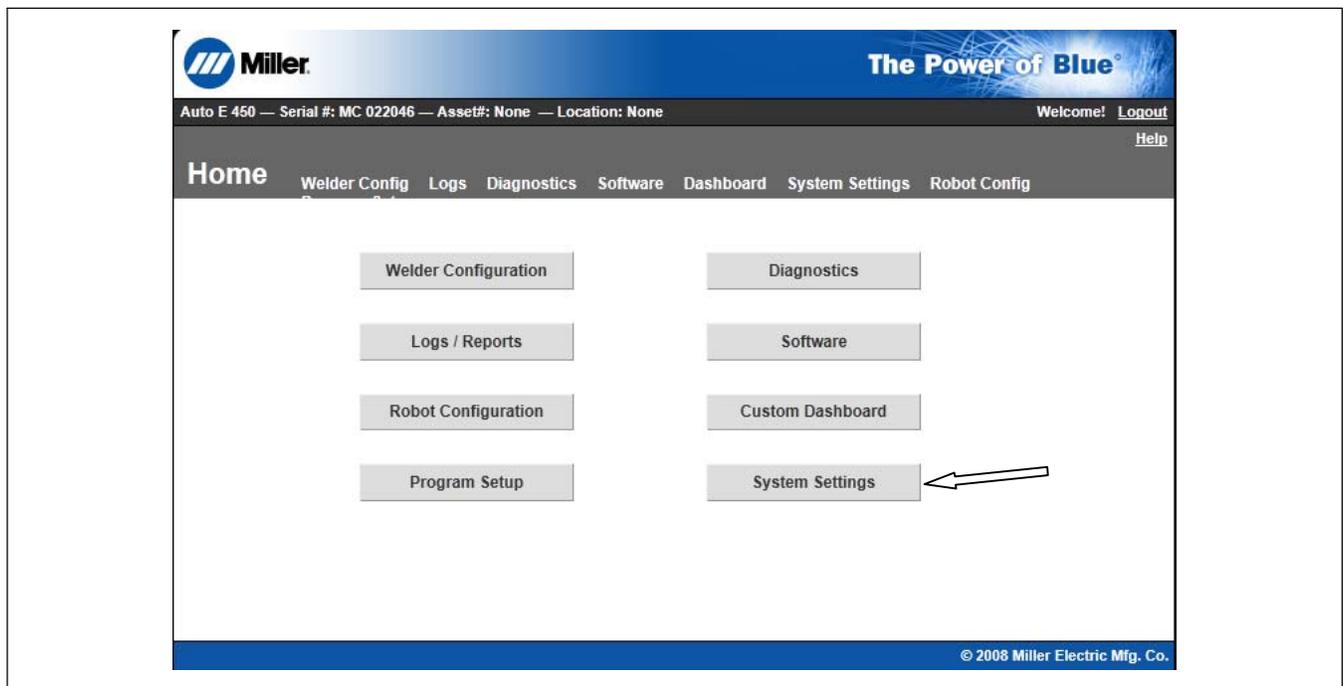


3. Click the "Login" button on the Miller web page.

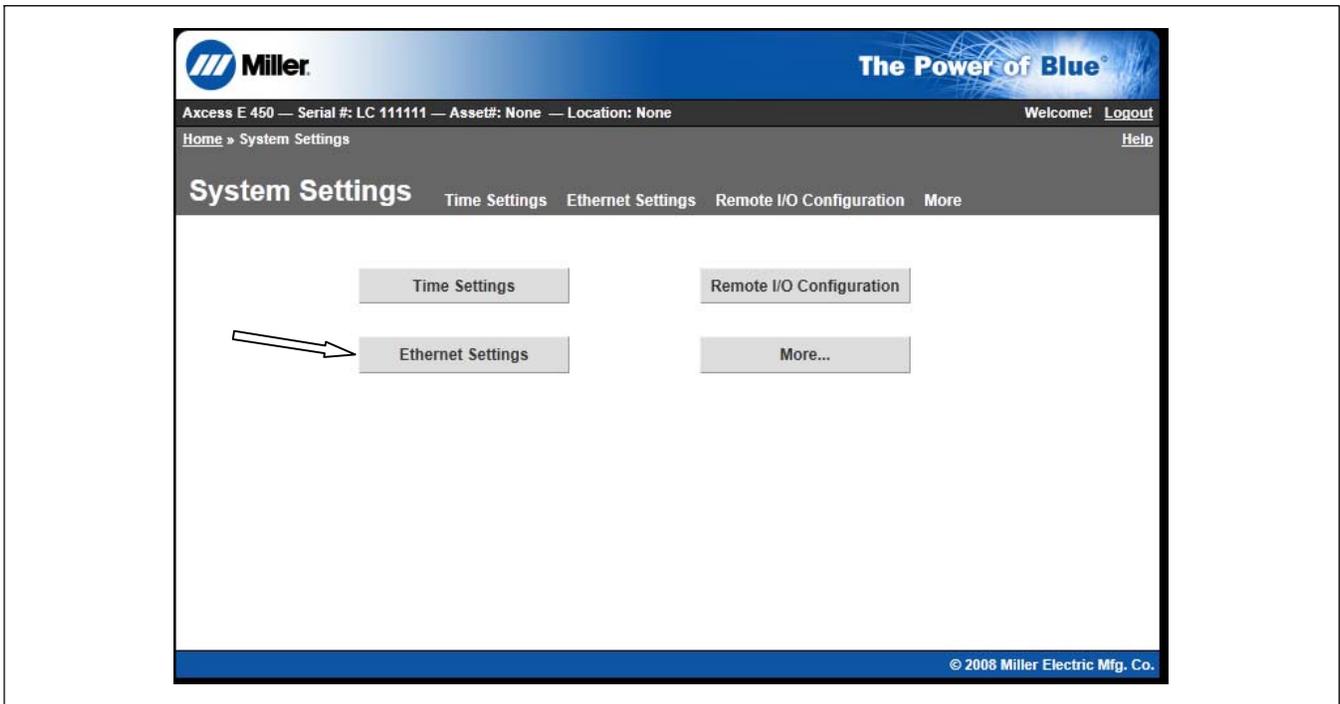


If you are using Microsoft Internet Explorer as your browser and the Miller "Login" page does not come up or you get an error, your IT department may have configured Microsoft Internet Explorer to use a proxy server. This will prevent the browser from connecting to the Access E. Contact your IT department or install and use a different browser to interface with the Access E.

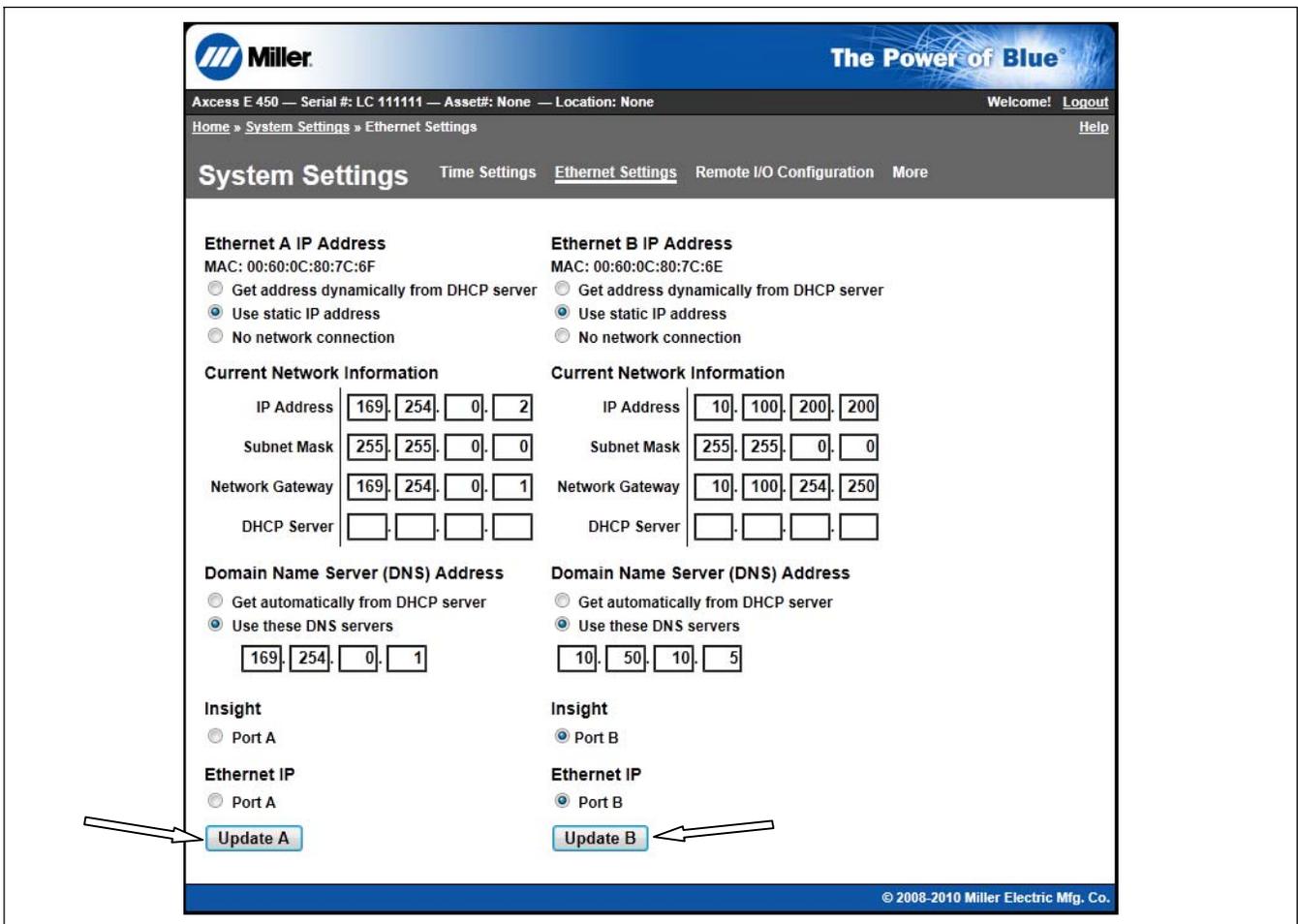
4. Click the "System Setting" button on the home page.



5. Click the "Ethernet Settings" button on the System Settings page.



6. After changing the settings for either Ethernet A or B, click the "Update" button at the bottom of the web page.



SECTION 7 – PC REQUIREMENTS FOR CENTERPOINT™

In general, any PC running Windows XP or Windows 7 is capable of running Centerpoint™. The PC must be able to run .NET4. In addition, the recommended system hardware would be:

- Intel Core 2 Duo, AMD Athlon X2 or better
- 2 GB ram (32 bit) or 4 GB ram (64 bit)
- 20 GB of available hard drive space

☞ *This hard drive space is a minimum requirement to run Centerpoint™ and provide storage of data for a limited amount of time. If the PC is going to be the permanent data storage machine, the larger the hard drive the better. A calculator exists to calculate the amount of hard drive space needed for specific customer production rates.*

- Internet browser installed:
 - ◇ Mozilla FireFox 3.5 or higher
 - ◇ Google Chrome 15 or higher
 - ◇ Microsoft Internet Explorer 7 or higher

☞ *If the company has configured Internet Explorer with any information or set it up to use a proxy server, it will be better to install FireFox or Chrome rather than reconfigure Internet Explorer.*

- Appropriate authorization/permissions to install software on the PC
- Optional – Dual NIC's (Network Interface Cards)

☞ *This option allows the PC to have a point-to-point Ethernet connection to the Access E for data collection while also being connected to the plant network. This essentially isolates the Access E from the plant network. Remote Desktop tools can then be used to communicate with the Access E over the network.*



Owner's Record

Please complete and retain with your personal records.

Model Name

Serial/Style Number

Purchase Date

(Date which equipment was delivered to original customer.)

Distributor

Address

City

State

Zip



For Service

Contact a DISTRIBUTOR or SERVICE AGENCY near you.

Always provide Model Name and Serial/Style Number.

Contact your Distributor for:

Welding Supplies and Consumables

Options and Accessories

Personal Safety Equipment

Service and Repair

Replacement Parts

Training (Schools, Videos, Books)

Technical Manuals (Servicing Information and Parts)

Circuit Diagrams

Welding Process Handbooks

To locate a Distributor or Service Agency visit www.millerwelds.com or call 1-800-4-A-Miller

Contact the Delivering Carrier to:

File a claim for loss or damage during shipment.

For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.

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