Safety Depends on You
Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. DO NOT INSTALL, OPERATE, OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL, AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT. And, most importantly, think before you act and be careful.
FOR ENGINE powered equipment.

1.a. Turn the engine off before troubleshooting and maintenance work unless the maintenance work requires it to be running.

1.b. Operate engines in open, well-ventilated areas or vent the engine exhaust fumes outdoors.

1.c. Do not add the fuel near an open flame welding arc or when the engine is running. Stop the engine and allow it to cool before refueling to prevent spilled fuel from vaporizing on contact with hot engine parts and igniting. Do not spill fuel when filling tank. If fuel is spilled, wipe it up and do not start engine until fumes have been eliminated.

1.d. Keep all equipment safety guards, covers and devices in position and in good repair. Keep hands, hair, clothing and tools away from V-belts, gears, fans and all other moving parts when starting, operating or repairing equipment.

1.e. In some cases it may be necessary to remove safety guards to perform required maintenance. Remove guards only when necessary and replace them when the maintenance requiring their removal is complete. Always use the greatest care when working near moving parts.

1.f. Do not put your hands near the engine fan. Do not attempt to override the governor or idler by pushing on the throttle control rods while the engine is running.

1.g. To prevent accidentally starting gasoline engines while turning the engine or welding generator during maintenance work, disconnect the spark plug wires, distributor cap or magneto wire as appropriate.

ELECTRIC AND MAGNETIC FIELDS may be dangerous

2.a. Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). Welding current creates EMF fields around welding cables and welding machines.

2.b. EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before welding.

2.c. Exposure to EMF fields in welding may have other health effects which are now not known.

2.d. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

2.d.1. Route the electrode and work cables together - Secure them with tape when possible.

2.d.2. Never coil the electrode lead around your body.

2.d.3. Do not place your body between the electrode and work cables. If the electrode cable is on your right side, the work cable should also be on your right side.

2.d.4. Connect the work cable to the workpiece as close as possible to the area being welded.

2.d.5. Do not work next to welding power source.
**ELECTRIC SHOCK can kill.**

3.a. The electrode and work (or ground) circuits are electrically "hot" when the welder is on. Do not touch these "hot" parts with your bare skin or wet clothing. Wear dry, hole-free gloves to insulate hands.

3.b. Insulate yourself from work and ground using dry insulation. Make certain the insulation is large enough to cover your full area of physical contact with work and ground.

In addition to the normal safety precautions, if welding must be performed under electrically hazardous conditions (in damp locations or while wearing wet clothing; on metal structures such as floors, gratings or scaffolds; when in cramped positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with the workpiece or ground) use the following equipment:

- Semiautomatic DC Constant Voltage (Wire) Welder.
- DC Manual (Stick) Welder.
- AC Welder with Reduced Voltage Control.

3.c. In semiautomatic or automatic wire welding, the electrode, electrode reel, welding head, nozzle or semiautomatic welding gun are also electrically "hot".

3.d. Always be sure the work cable makes a good electrical connection with the metal being welded. The connection should be as close as possible to the area being welded.

3.e. Ground the work or metal to be welded to a good electrical (earth) ground.

3.f. Maintain the electrode holder, work clamp, welding cable and welding machine in good, safe operating condition. Replace damaged insulation.

3.g. Never dip the electrode in water for cooling.

3.h. Never simultaneously touch electrically "hot" parts of electrode holders connected to two welders because voltage between the two can be the total of the open circuit voltage of both welders.

3.i. When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.

3.j. Also see Items 6.c. and 8.

**ARC RAYS can burn.**

4.a. 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 open arc welding. Headshield and filter lens should conform to ANSI Z87.1 standards.

4.b. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.

4.c. Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.

**FUMES AND GASES can be dangerous.**

5.a. Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. When welding, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone. When welding with electrodes which require special ventilation such as stainless or hard facing (see instructions on container or MSDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable OSHA PEL and ACGIH TLV limits using local exhaust or mechanical ventilation. In confined spaces or in some circumstances, outdoors, a respirator may be required. Additional precautions are also required when welding on galvanized steel.

5.b. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.

5.d. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to insure breathing air is safe.

5.e. Read and understand the manufacturer’s instructions for this equipment and the consumables to be used, including the material safety data sheet (MSDS) and follow your employer’s safety practices. MSDS forms are available from your welding distributor or from the manufacturer.

5.f. Also see item 1.b.
FOR ELECTRICALLY powered equipment.

8.a. Turn off input power using the disconnect switch at the fuse box before working on the equipment.

8.b. Install equipment in accordance with the U.S. National Electrical Code, all local codes and the manufacturer's recommendations.

8.c. Ground the equipment in accordance with the U.S. National Electrical Code and the manufacturer's recommendations.

Refer to http://www.lincolnelectric.com/safety for additional safety information.
# PRÉCAUTIONS DE SÛRETÉ

Pour votre propre protection lire et observer toutes les instructions et les précautions de sûreté spécifiques qui parraissent dans ce manuel aussi bien que les précautions de sûreté générales suivantes:

### Sûreté Pour Soudage À L’Arc

1. **Protégez-vous contre la secousse électrique:**
   a. Les circuits à l’électrode et à la pièce sont sous tension quand la machine à souder est en marche. Éviter toujours tout contact entre les parties sous tension et la peau nue ou les vêtements mouillés. Porter des gants secs et sans trous pour isoler les mains.
   b. Faire très attention de bien s’isoler de la masse quand on soude dans des endroits humides, ou sur un plancher métallique ou des grilles métalliques, principalement dans les positions assis ou couché pour lesquelles une grande partie du corps peut être en contact avec la masse.
   c. Maintenir le porte-électrode, la pince de masse, le câble de soudage et la machine à souder en bon et sûr état de fonctionnement.
   d. Ne jamais plonger le porte-électrode dans l’eau pour le refroidir.
   e. Ne jamais toucher simultanément les parties sous tension des porte-électrodes connectés à deux machines à souder parce que la tension entre les deux pinces peut être le total de la tension à vide des deux machines.
   f. Si on utilise la machine à souder comme une source de courant pour soudage semi-automatique, ces précautions pour le porte-électrode s’appliquent aussi au pistolet de soudage.

2. **Dans le cas de travail au dessus du niveau du sol, se protéger contre les chutes dans le cas où on recoit un choc. Ne jamais enrouler le câble-électrode autour de n’importe quelle partie du corps.**

3. **Un coup d’arc peut être plus sévère qu’un coup de soliel, donc:**
   a. Utiliser un bon masque avec un verre filtrant approprié ainsi qu’un verre blanc afin de protéger les yeux du rayonnement de l’arc et des projections quand on soude ou quand on regarde l’arc.
   b. Porter des vêtements convenables afin de protéger la peau de soudeur et des aides contre le rayonnement de l’arc.
   c. Protéger l’autre personnel travaillant à proximité au soudage à l’aide d’écrans appropriés et non-inflammables.

4. **Des gouttes de laitier en fusion sont émises de l’arc de soudage. Se protéger avec des vêtements de protection libres de l’huile, tels que les gants en cuir, chemise épaisse, pantalons sans revers, et chaussures montantes.**

5. Toujours porter des lunettes de sécurité dans la zone de soudage. Utiliser des lunettes avec écrans lateraux dans les zones où l’on pique le laitier.

6. Eloigner les matériaux inflammables ou les recouvrir afin de prévenir tout risque d’incendie dû aux étincelles.

7. Quand on ne soude pas, poser la pince à une endroit isolé de la masse. Un court-circuit accidentel peut provoquer un échauffement et un risque d’incendie.

8. S’assurer que la masse est connectée le plus près possible de la zone de travail qu’il est pratique de le faire. Si on place la masse sur la charpente de la construction ou d’autres endroits éloignés de la zone de travail, on augmente le risque de voir passer le courant de soudage par les chaines de levage, câbles de grue, ou autres circuits. Cela peut provoquer des risques d’incendie ou d’échauffement des chaines et des câbles jusqu’à ce qu’ils se rompent.

9. Assurer une ventilation suffisante dans la zone de soudage. Ceci est particulièrement important pour le soudage de tôles galvanisées plombées, ou cadmiées ou tout autre métal qui produit des fumées toxiques.

10. Ne pas souder en présence de vapeurs de chlore provenant d’opérations de dégraissage, nettoyage ou pistolement. La chaleur ou les rayons de l’arc peuvent réagir avec les vapeurs du solvant pour produire du phosgène (gas fortement toxique) ou autres produits irritants.


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# PRÉCAUTIONS DE SÛRETÉ POUR LES MACHINES À SOUDER À TRANSFORMATEUR ET À REDRESSEUR

1. **Relier à la terre le chassis du poste conformément au code de l’électricité et aux recommandations du fabricant. Le dispositif de montage ou la pièce à souder doit être branché à une bonne mise à la terre.**

2. **Autant que possible, l’installation et l’entretien du poste seront effectués par un électricien qualifié.**

3. **Avant de faire des travaux à l’intérieur de poste, la débrancher à l’interrupteur à la boîte de fusibles.**

4. **Garder tous les couvercles et dispositifs de sûreté à leur place.**
Thank You for selecting a QUALITY product by Lincoln Electric. We want you to take pride in operating this Lincoln Electric Company product as much pride as we have in bringing this product to you!

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.

Please Examine Carton and Equipment For Damage Immediately

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, Claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

Please record your equipment identification information below for future reference. This information can be found on your machine nameplate.

Product

Model Number

Code Number or Date Code

Serial Number

Date Purchased

Where Purchased

Whenever you request replacement parts or information on this equipment, always supply the information you have recorded above. The code number is especially important when identifying the correct replacement parts.

On-Line Product Registration

- Register your machine with Lincoln Electric either via fax or over the Internet.
  - For faxing: Complete the form on the back of the warranty statement included in the literature packet accompanying this machine and fax the form per the instructions printed on it.
  - For On-Line Registration: Go to our WEB SITE at www.lincolnelectric.com. Choose “Support” and then “Register Your Product”. Please complete the form and submit your registration.

Read this Operators Manual completely before attempting to use this equipment. Save this manual and keep it handy for quick reference. Pay particular attention to the safety instructions we have provided for your protection. The level of seriousness to be applied to each is explained below:

**WARNING**

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.

**CAUTION**

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.
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1 General Information

1.1 Introduction to Checkpoint™

Checkpoint™ is the newest technology available for the latest models of Lincoln Electric’s family of welding power sources.

Checkpoint™ is cloud based computing that allows the same functionality as Production Monitoring™ but does not require hardware or software installation, which means no software updates and more data storage capability. CheckPoint™ enables you to measure the Pulse™ of your Lincoln Electric® welders with critical alerts and unprecedented production visibility. CheckPoint™ is available for viewing on your smart phone, tablet and laptop or desktop of any computer or device with internet access.

Cloud based computing refers to the delivery of computing and storage capacity as a service to a community of end-users. End users access cloud based applications through a web browser or a desktop or mobile app while the business software and data are stored on servers at a remote location. Cloud computing allows companies to get applications up and running faster, with improved manageability and less maintenance; it relies on sharing of resources to achieve coherence and economies of scale similar to a utility (like the electricity grid) over a network (typically the Internet).

Checkpoint™ allows greater visibility; you can access your data anytime, anywhere, with any web device without the need for VPN client software. CheckPoint™ is easier to implement and maintain. You simply plug the welding power source into your network (Refer to the Power Wave Manager manual for instructions on how to complete this task). There is low overhead, and no computer hardware required in the field, it is as user friendly as going to a website. CheckPoint™ is more dynamic in that it is always changing with instant updates across all users.

IMPORTANT: Please keep in mind that CheckPoint™ offers 2 versions, which consist of a Standard and Premium version. The Standard version is available at no cost with every Power Wave®. This version stores data for up to 30 days with export capability. The Premium version is available for an annual subscription fee per power source, which allows unlimited data storage for a year. With CheckPoint™ it is possible to have a combination of Standard and Premium subscriptions based on your needs. Below is a chart detailing the differences in features. For support on CheckPoint™ dial 1.800.691.5797 in USA and Canada or direct dial 1.727.786.0121, you can also email support at support@lincolnelectricproductionmonitoring.com.

<table>
<thead>
<tr>
<th>Features</th>
<th>Standard</th>
<th>Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Ready, Global Data Access</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Cloud Ready, Global Data Access</td>
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<td>✔️</td>
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<tr>
<td>Email Notification System</td>
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<tr>
<td>Reporting</td>
<td>✔️</td>
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<tr>
<td>Manual Data Export</td>
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<td>Document Library</td>
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<tr>
<td>1 Year of Live Rolling Data Storage</td>
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<td>✔️</td>
</tr>
<tr>
<td>Automated Data Archiving</td>
<td>X</td>
<td>✔️</td>
</tr>
<tr>
<td>Share Data with Third Party Applications and Systems With ODATA API</td>
<td>X</td>
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</tr>
</tbody>
</table>
1.1.1 Weld logging

CheckPoint™ has the ability to record large quantities of weld statistics. Each log entry contains the following welding statistics:

- For current, voltage, wire feed speed and duration:
  - Minimum
  - Maximum
  - Average
  - Percent above limit
  - Percent below limit
  - Profile maximum limit
  - Profile minimum limit

- True Energy™
- Date and time the weld was made
- Duration of the weld
- Weld status after limit checking
- Part serial number, Consumable Lot, and Operator ID
- WeldScore™ Weld Logging

1.1.2 Weld Profiles

One of the principal goals of CheckPoint™ is to detect and log welds that are outside of user-defined limits with respect to voltage, current, wire feed speed, WeldScore™ and duration. This goal would be simple to implement if the welding power source were to perform only one type of weld over and over. However, in practical applications, this is not the case. The assembly of many different industrial components requires welds of varying type and length. The concept of Weld Profiles allows the welding power source to apply different limit settings for each weld that is performed on a certain part. Before the welding power source begins a new weld it selects the corresponding Weld Profile. The user can, therefore, assign one Weld Profile to each weld required for the part assembly.

Production Monitoring™ provides up to 32 profiles.

As an example, consider a part that requires 10 different welds for proper assembly. The user will begin by configuring 10 of the 32 programmable Weld Profiles, with proper limit settings for each of the different welds. The user can then begin welding the part, selecting the proper profile for each of the 10 welds.

There are several ways of selecting the Weld Profile: Based on welding set point, through DeviceNet (using a PLC), through an ArcLink® compatible controller, and through User Interface memory buttons.

1.1.3 Part Traceability

CheckPoint™ provides the capability to produce a report that lists all the welds that were made on a part for a given serial number. Before a weld is made, a serial number is communicated to the welding power source. Then, every weld that is made after this is assigned with this serial number until a new serial number is entered. Then a traceability report can be run that will look for this serial number from all the welding power sources in the system. Traceability solutions are typically customized to a customer’s specific needs, so please contact Lincoln Electric® for a quotation on your needs.

1.1.4 Electronic Notification System

When a welding power source, with CheckPoint™ is used, it can send email and text based notifications to multiple addresses. Each email text address can be configured to receive messages from the CheckPoint™ Data Center upon any of several event conditions.
1.1.5 How WeldScore™ Works

Traditional weld monitoring systems measure voltage and current and must then guess what the welding power source is trying to do before attempting to determine how well it is actually doing it. WeldScore™ is built right into the welding power source control system which gives it a significant advantage in that it removes the guesswork involved with how the power supply should be functioning. In addition to traditional voltage and current measurements, WeldScore™ also looks at 30-40 additional variables which help to make it more reliable and accurate than any previous weld monitoring system.

In order to assign a score, the welding power source must first be taught what is considered to be a good weld. This is done through the training section of Power Wave Manager. When a score is assigned to a future weld, it is done by comparing it to the taught weld. Therefore, it is necessary to teach the welding power source every weld for which a WeldScore™ is desired. Some examples of when new training is required include changes in wire feed speed, voltage, joint type, or position.

WeldScore™ is able to accommodate both welds with very tight tolerances and welds that have some acceptable process variation. If the welds taught to the welding power source all have very little variation, then the only welds that will receive a passing WeldScore™ are ones that meet that very tight tolerance. Likewise, if there is room for some variation (eg. small changes in electrical stickout or work angle) and the acceptable variations are used in the teaching process, then WeldScore™ will assign passing scores to welds that fall within those variations.

Where to Use WeldScore™

WeldScore™, like any statistical analysis, requires a controlled process. It will produce the most accurate results with single pass welds or welds with a small number of passes because as more passes are used, the process inherently becomes less repeatable. If there are a large number of variables that are allowed, a significant amount of variation, the criteria may be too broad for the WeldScore™ to be a meaningful value.

Meaning of the WeldScore™ Value

An instantaneous WeldScore™ value is calculated every 0.25 seconds. The average of these scores over the entire weld is reported as an overall score in Production Monitoring. A weld may receive a passing overall score if there is only a problem for a short portion of the weld time. For example, if a 50 inch weld has a score of 95% for 49 inches, but a score of 45% for the last inch, the overall score will be a 94%. Out of limit error reporting is calculated over a user-defined moving window of time. This means that even a weld with a high overall score can cause a limit error to be reported if the WeldScore™ falls out of bounds for a defined amount of time.

1.1.6 Mobile Devices

You can download native apps for iPhone, Blackberry, and Android to give mobile users access to their welder data anytime from anywhere: View dashboard widgets, history and alarm events, receive real-time text and email messages, download the latest documents, and scan barcodes as part of an easy-to-use traceability solution.

Links for downloading mobile apps are available at www.lincolncheckpoint.com under the mobile enabled portion of the home page. Refer to the individual mobile app manuals for instructions on how to use.
1.2 Architecture

1.2.1 CheckPoint™ Cloud Based Architecture

With CheckPoint™ there is no designated PC required to collect and store the data. The welding power source always initiates the transfer of information via firewall-friendly communications. At that point, the data is accessible via a web browser. Each piece of welding equipment still requires a network connection. Below is a diagram to give a visual of the CheckPoint™ architecture.

1.2.2 Security and Data Storage

Each CheckPoint™ customer’s data is stored in a state-of-the-art data center in dedicated and partitioned databases, exclusive to each customer. Additionally, when viewing the CheckPoint™ application, high security, industry standard encryption is utilized. The hosting center is a SAS 70 Type II compliant facility. SAS 70 is designated by the U.S. Securities and Exchange Commission (SEC) as an acceptable method to obtain assurance of a service organization’s internal controls without conducting separate assessments. Successful completion of the SAS 70 type II examination indicates that the processes, procedures, and controls have been formally evaluated and tested by an independent auditing firm. A service auditor’s examination performed in accordance with SAS No. 70 (SAS 70 audit) is widely recognized. It represents that a service organization has been through an in depth audit of their control objectives and control activities, which often include controls over information technology and related processes. A Type II report not only includes the service organization’s description of controls, but also includes detailed testing of the design and operating effectiveness. The hosting center environment is built with state-of-the-art equipment, technology investments, and operational expertise. There is an established disaster recovery program with redundancy and failover to protect the information stored in the system.

1.3 Requirements and Network Capacity

1.3.1 Access Requirements

Each PC or mobile device must have access to the internet. All welding power sources need to have access to the internet to report information back to the CheckPoint™ data center. Communication is initiated only by the welding
power source. Every welding power source has a unique 16 character serial number. This identification serial number is saved during the registration process and sent to the CheckPoint™ data center with each welding data packet. When data arrives at the CheckPoint™ data center, the identification serial number is used to save the data into your customer database. You will need to open up the following information on your server in order to grant the welding power sources access to the internet: http://ws.lincolncheckpoint.com at IP address 216.26.175.3 using port 80 to send out TCP and HTTP messages.

1.3.2 Accessing Data in CheckPoint™ Data Center

Each customer has a partitioned (separate) database for their data. Access is controlled by the customer using usernames and passwords that are created by Administrator. The administrator provides access to data as needed for who will be accessing data and running reports. The administrator and user set up will be discussed further in section 4.

1.3.3 Network Capacity

Networks and internet connections have a limited amount of bandwidth for sending data; each welding power source uses a small amount of bandwidth. Every 20 seconds, each power source sends a status update to the CheckPoint™ Data Center; the data packet is about 1KB in size. If a power source has completed a weld, or multiple welds, every 92 seconds it will send the new data; the data packet is about 2KB per weld. If there is an occurrence of a power source event or fault, every 66 seconds it will send the new data; the data packet is 0.5KB in size per event. In order to estimate the total bandwidth on your network you can multiply the number of power welding sources by the data quantity of data packets described.

In the event the network or internet connection goes down due to unexpected problems or scheduled maintenance, the welding power sources will continue to collect and hold the welding data until the network connection is reestablished. Each power source has enough internal memory to hold welding data for 2000 welds. Once the internet connection is reestablished, all welding data will be sent to the CheckPoint™ Data Center. If more than 2000 welds are made before the internet connections is reestablished, only the data from the last 2000 welds will be saved; data for the oldest welds will be lost.

NOTE: If the power source is turned off before the internet connection is reestablished, all welding data will be lost.

2 Preparing for Checkpoint™

It is essential to have at least one power source set up in CheckPoint™ prior to creating an account. The following sections will walk you through the necessary steps to complete this task. After successfully completing these steps you will become the CheckPoint™ Site Administrator and have the ability to add welding power sources and users via the “Manage” function of the application.

2.1 Install the Latest Welding Power Source Firmware

The latest welding power source firmware must be installed prior to setting up your first power source in CheckPoint™. The following steps will walk you through the entire process for updating the firmware.
2.1.1 Establishing a Connection to the Welding Power Source

To prepare the welding power source for the CheckPoint™ Data Center make sure that the power source has a network connection that has access to the internet. This will allow the welding power source the ability to send data from your location to the CheckPoint™ data center.

NOTE: Refer to the Power Wave Manager Manual to establish a network connection with a welding power source. This step must be completed in order for CheckPoint™ to collect data from the welding power sources.

2.1.2 Updating the Welding Power Source Firmware

The following steps will walk you through updating the welding power source with the latest firmware.

1. Open your browser and go to www.powerwavesoftware.com.
2. Enter your username and password in the Log In fields or select the Register Today link to create an account.
3. Select the System Software link.
4. Then select the Power Wave/Power Feed® MAXsa™ Systems link.
5. You will be taken to the Download Power Wave® Bundle –Free link.
6. Click on the Download Power Wave® Bundle-Free to run the update.
7. You will then be taken to the Lincoln Electric® System Update Utility screen requiring the IP address of the welding power source you are updating.
NOTE: Be aware that the IP address in the “I know the IP address of the welder:” field is the IP address of the last welding power source that was connected. You can retrieve the IP address for the welding power source you are updating by going to the actual welding power source or selecting the “I do not know the IP address of the welder” option. Keep in mind that the welding power source must be on the same subnet in order to retrieve the IP address when using this option. Refer to the Power Wave® Manager manual to obtain the IP address from the Welding Power Source. Also if the welding power source has older software the IP address will not show up (refer to section 2.1 to install the latest version of software) or if the PC is running some type of security software or firewall, this may block the IP from showing up. Having multiple Ethernet adapters enabled at once can cause issues (disabling any wireless communication is helpful for a PC to directly connect to a welding power source).

8. Once you have established the IP address for the power source you are updating, select the button in the upper right hand corner of the screen to establish the connection.

9. The software will scan the welding power source to check for the updated firmware. If the firmware is updated you will receive the message “Update not required”, select Exit to close the window. If it is not updated you must select Continue to update the welding power source.
10. Once the firmware has finished updating you can exit the program.

2.2 Installing the Latest Version of Power Wave® Manager Software

Once the power source has been updated you will now need to upgrade to the latest version of Power Wave® Manager. Please keep in mind that if you do not have Power Wave® Manager installed you will need to complete the install for the first time.

2.2.1 Updating the Latest Version of Power Wave® Manager Software

1. If necessary open your browser and go to www.powerwavesoftware.com
2. Enter the same username and password in the Log In field that was previously used to update the welding power source in the previous section.
3. Select the Power Wave® Manager link.
4. You will then be taken to the Power Wave® Software page.
5. Click the Power Wave® Manager link to download the latest version of the software.
6. Once you begin to Run the software you will receive the Installer Language dialog box.
7. Click the drop down arrow to select your language then click OK.
8. If you are running an older version of Power Wave® Manager you will receive a message that a “Previous version of Power Wave Utilities is already installed”.
9. Click OK to remove the old version to continue with the upgrade.

10. If you do not have a previous version of Power Wave® Manager select Next on Power Wave® Utilities Setup to accept the license agreement and begin the installation process.
11. After the older version is updated or Power Wave® Manager is installed for the first time on your PC the installer will automatically close the program.
12. You can now close the web page.

2.3 Enable CheckPoint™ in Power Wave® Manager

Now that you have upgraded the welding power source firmware and installed or update to the latest version of Power Wave® Manager. You can now add the welding power source to CheckPoint™.

2.3.1 Accessing Power Wave® Manager

To open Power Wave® Manager.

1. Select Start to open the Start Menu.
2. Select Programs on the Start Menu.
3. Then select Lincoln Electric® in the Programs list.
5. Navigate to Power Wave® Manager in the Power Wave® Utilities list.
6. You will now be taken to the Power Wave® Manager Connect screen as shown below.

NOTE: This screen is similar to the Power Wave® System Utility connect screen. Notice the IP address of the power source you previously updated is populated in the “I know the IP address of the welder:” field. Remember the connect screen will store the IP address of the last power source, so there is no need to enter a new IP address. If this address is not the same please refer to the Power Wave® Manager manual to find the correct IP address.

7. Once you have established the IP address for the power source you want to update, select the button in the upper right hand corner of the screen to connect.
8. Now that your connection has been established you will be taken to the Power Wave® Manager Installation screen to enable CheckPoint™.

### 2.3.2 Enabling CheckPoint™

After establishing a connection to the welding power source you can now enable and set up CheckPoint™. The steps below will walk you through this process.

1. Click on the Install option under the Production Monitoring heading on the left side of the Installation screen.
2. On the right side of the screen in the Power Source name field, enter a name for the welding power source. If this section is not available it means that the connected welding power source does not have updated firmware. Follow the steps in section 2.1 to complete this task. Once the firmware is updated you will then be able to continue.
3. Select the Enable CheckPoint™ over the Internet box in the CheckPoint™ Setup section to place a check in it

   **NOTE:** Observe the “Email notifications are disabled when CheckPoint™ is enabled. Alerts will be generated from the cloud.” message. This means emails will no longer be sent from the welding power source, they will now be generated from the CheckPoint™ Data Center.

4. Enter an IP address in the DNS server field. Please note this information is not necessary. If you are unable to obtain it, you will still be able to proceed.

   **IP Address:** Is a unique 32-bit long code number which each computer acquires automatically through its internet access provider (IAP) for connecting to the internet. This address is in 'a.b.c.d' format where each letter (separated by a period) is a number with value from 0 to 255. However, every computer connected to the internet also has a domain name (consisting of a maximum of 20 alphanumeric characters) which is easier to remember than its associated IP address. Specialized computers (called 'domain name servers') translate the domain names into their corresponding IP addresses so that the recipient (target) computers can be located and the data is correctly routed. Also called web address or a uniform resource locator (URL).

   **DNS Server:** Short for Domain Name System is a computer that matches the domain names with their IP address.

5. Now you will need to select the Proxy Server box in the Enable Proxy Server section to enable the Proxy Server IP field. This step is optional only if you are using a Proxy Sever. You can leave the Proxy Server IP field unchecked if you are not using a Proxy Server.

   **Proxy Server:** Is a server that stands between an external network (such as Internet) and an organization's internal (private) networks and serves as a firewall. It prevents external users from directly accessing the internal information resources, or even knowing their location. All external requests for information are intercepted by the proxy server and checked for their validity, and only authorized requests are passed on to the internal server. This security, however, comes at the cost of inconvenience to genuine users and slower performance.

6. Enter the Proxy Server IP address. You can obtain this information from the Network Administrator. Please note this information is needed in order to gain access to the internet from your network.

7. Once you have entered all required information you can select the **Apply Settings** button in the bottom left hand corner of the Installation screen.

8. You will then receive an End User Agreement screen. Accept the End User Agreement to continue.

9. After accepting the End User Agreement you will receive a “Settings Applied” screen.

10. After applying settings you now need to test the connection to CheckPoint™ by clicking the button in the CheckPoint™ Test section.
11. If your settings were correct you should receive the Status: Success message in the bottom right hand corner of the Installation screen.

NOTE: If you received a Status: Failed message you can hover your mouse over the message to retrieve information as to why your test failed. The most common reason why this can fail is that a firewall is blocking messages (refer to section 1.3.1 for what must be “opened up”) and web security software may be installed. Having invalid Ethernet settings in the welding power source could also cause the connection to fail, make sure it has a valid subnet mask and gateway address. If the proxy requires authentication you will have to allow it to bypass the Proxy Server.

2.3.3 Saving the Production Monitoring Installation Key

Each individual power source has a unique installation Key file; these files are used to register the equipment in CheckPoint™. The steps below walk you through how to save the installation key file to access later for setting up a CheckPoint™ account.

1. Select the button on the Installation screen.
2. A Save In dialog box will open.
3. Navigate to the location on the PC you want to save the file and select Save.
4. You can now close Power Wave® Manager.
3 Setting Up CheckPoint™

3.1 Connecting to CheckPoint™ and Setting up Your Account

Now that you have updated the welding power source firmware and have the latest version of Power Wave® Manager software you are ready to create a CheckPoint™ account. Navigate to the CheckPoint™ website by entering www.lincolncheckpoint.com into your web browser.

3.1.1 Getting Started

Once on the CheckPoint™ website select the Get Started area to begin the process of creating an account.

1. You will then be taken to the Get Started page.
2. On the Getting Started page select the here link in Step 4 to begin the registration process.
3. You will be taken to a New Account Page.
4. This page allows the first user to set up an account.
   NOTE: The first user created becomes the CheckPoint™ Administrator which will have access to setup other users and add welding power sources in CheckPoint™.
5. Fill out all required information and click Submit when finished.
3.1.2 Validating Information in CheckPoint™

After submitting your name and e-mail address information you will then be able to validate your information in Checkpoint™. Follow the steps below to complete the validation process.

1. After submitting the account registration information, a verification message explaining that “an e-mail will be sent to the address you provided to validate your e-mail address” is displayed.

![Verification Message](image)

2. Check your e-mail inbox.
3. Open the Validation e-mail and click the link in the message to validate the CheckPoint™ account.

![Validation Email](image)

3.1.3 Uploading the Installation Key File

Once you have completed the validation process you will now need to upload the Installation Key file you saved in step 3 of section 2.3.3.

NOTE: At least one welding power source must be registered to create a valid account.

After clicking on the Validation link you will be taken to a screen detailing instructions on how to save the welding power source Installation Key file. Keep in mind this step was completed in section 2.3.3. You will not be able to continue without adding at least one welding power source to CheckPoint™. To upload the Installation Key file:

1. Select the Continue button at the bottom of the screen.
2. You will then be taken to the CheckPoint™ Registration Step 2 screen.
3. On this screen you will need to enter the welding power source Name and Description.
4. Click the Select button and navigate to the location where you saved the Installation Key file.
5. Once you have entered this information select the **Continue** button.

**IMPORTANT:** Please be aware the connection status of the welding power source may not be available for 15 minutes. If it is not available be patient and do not delete and add it again for this causes a longer delay.

### 3.1.4 Register Your Company

After uploading your Installation Key file and selecting **Continue** you will now be able to register your company.

1. On the **Registration Step 3:** screen you will need to enter your company information.

   **IMPORTANT:** Please read over your information to ensure it is accurate before selecting Continue in the next step. This information cannot be changed once it is created. In the event you need to change this contact support at 1.800.691.5797 USA and Canada, direct dial number is 1.727.786.0121 or email support at support@lincolnproductionmonitoring.com.

2. After entering the company information select the **Continue** button.

3. You will then be taken to a **Registration Step 4** screen that shows that CheckPoint™ is “Setting up your system”, do not click the back or refresh buttons during this process or it may fail.
4. Once the process is completed you will see the “Process Completed!” screen as shown below:

5. On the Process Completed screen select the [here] link to continue.
6. You will then be taken to the End User License Agreement page.
7. Click the box next to “I agree with the above terms and conditions.” to place a check in it.

8. Once you have accepted the terms select the [Continue] button to advance to the next screen.
9. You will then be taken to a screen requesting a password.
10. Complete the information on this screen then click the [Save] button to continue.
11. After saving your new password information you will then be taken to CheckPoint™.
4 Managing CheckPoint™

Upon completing your account set up in CheckPoint™ you will see the Dashboard. This is the first screen that appears when logging into CheckPoint™. This screen provides the end user with an overview of the last 24 hours of production. It is used to see a general summary of all the machines connected in the system, for an individual work center, a container within a work center or an individual welding power source. We will further explore the Dashboard screen in section 5.2. In the following sections we will explain managing items in CheckPoint™. In the management section you can add users, add welding power sources, set up shifts, create alerts and add documentation. The following sections will describe how to perform these functions using the Manage link.

4.1 Manage

In order to perform the administrative functions in CheckPoint™ you need to open the Manage section of your account. The steps below will walk you through this process.

4.1.1 Accessing the Manage Section of CheckPoint™

1. Select the arrow in the upper right hand corner of the CheckPoint™ to open Administrator access.
2. Select the Manage link.
3. You will then be taken to the Manage page.
4. On the left side of the screen are the Manage options.

Note: If you have more than one location you can select the drop down arrow in this section to select the location you want to manage.
The Manage options are broken down into 3 main categories. The first section is User Management. In this section you can add, delete and modify user access. The second section is the System section which deals with setting Shift Schedules, adding, deleting and moving Welders and setting Alerts. The third section is the Library which allows end users to add up to 15GB of documentation providing a single point of data storage for engineering, QA and maintenance documentation.

4.2 User Management

This section of the Manage option allows the administrator to grant user access to the system. Keep in mind only the individual that set up the company account becomes the administrator in CheckPoint™ at this time. They will have the ability to add users and give specific access to individuals. There are two levels of access granted in CheckPoint™ the first level is the administrator this access allows you to create, delete and modify users access. The second level of access is a non administrative user which does not allow the user to create and modify users but they can have access to modify their settings if granted access.

4.2.1 Display Current Users

By selecting the Users submenu under the User Management section. A list of current users will be displayed. Each user will have basic information displayed such as: First Name, Email address, status Active or Locked.

4.2.2 Adding Users

1. Adding a new user can be accomplished by selecting the “New User” link at the top of the screen.
2. You will receive the **Create a New User** screen, which shows the General screen.

3. Enter all user information in the **General Information** section.
4. The **Site Admin Options** section allows you to give a user **Administrator** access.
5. Select the box next to the “**Allow the user to manage their own settings?**” to place a check in it if you want the user to have access to manage their account settings such as modifying their general information and system alert options.
6. If you want to allow the user to receive system notifications in the **System Alert Options** section select **Yes**, if not select **No**.
   
   **NOTE:** Alerts are configured on the Alerts page of the System section.
7. Once you have entered all information and selected **Alert Options** and **Admin Options** for the user click the **Save** link at the top of the screen.
   
   **NOTE:** Once a user account is setup the user will receive an e-mail to setup an account to CheckPoint™.

### 4.2.3 Modifying Users

To modify a user

1. Select the **Users** link to display all current users set up in CheckPoint™.
2. Click the icon next to the user you want to modify.
3. The **Edit Settings** screen will open for that user.
4. Once you are finished modifying settings select the **Save** link at the top of the screen to save the settings.
and close the window.

### 4.2.4 Deleting Users

To delete a user:

1. Select the **Users** link to display all current users set up in the CheckPoint™.
2. Click the icon next to the user you want to delete from the system.
3. You will receive a message asking “Are you sure you want to delete this User?”
4. Select **OK** to delete the user.
5. The user is then deleted from the list of users.

### 4.2.5 Selecting User Membership

The Membership link is used to allow a user access to other sites you may have set up in CheckPoint™. To allow a user access to other sites, select the **edit** icon next to the user you want to edit Membership for. On the left side of the **Edit Settings** screen select the **Membership** link; the sites you want to edit a user’s access for appear in a list on the right side of the screen. You can give a user access by selecting the site. You can delete the user’s access by clicking the red X next to the site to delete access for that user.

After making changes on the Membership link click the **Save** link at the top of the screen to save and exit the screen.

### 4.2.6 Setting User Alerts

This section allows the administrator to set up specific **User Alerts** for each user to receive. Select the user you want to set **User Alerts** for. Click the **Edit** icon next to that user. On the **Edit Alerts** screen select the alert(s) you want that user to receive from the list of Alerts. Keep in mind the alerts are set up in the **Alerts** area under the **System** section.
After selecting alerts click the link at the top of the screen to save the alerts and exit the screen.

### 4.2.7 Selecting User API Keys

API (Application Programming Interface) Access Keys is only available in the premium edition of CheckPoint™. This section is used to access various database through an Open Data Protocol standard. When using the premium edition, each user can have unique API Keys assigned to them.

### 4.3 System

The system section pertains to shop factory settings. In this section the CheckPoint™ administrator will be able to setup and modify the **Shift Schedule** for each shift, add, move or delete **Welders** and set **Alerts**.

#### 4.3.1 Shift Schedule

The Shift Schedule page, allows you to view current shifts. Each shift includes the **Name**, **Description**, **Start Time** (the time of day the shift begins), **End Time** (the time of day the shift ends), and **Recurrence** (how often the shift repeats). The following sections will walk you through how to modify shifts and give examples of shift settings.

1. To access shifts select the **Shift Schedule** link on the left side of the screen.
2. On the right side of the screen you can view the current shifts.
3. You can now see the **Name** of the shift, the **Description**, **Start Time** **End Time** and **Recurrence** of each shift.

#### 4.3.2 Modifying a Shift

To modify a shift:

1. Click the icon next to the shift you want to modify to open the **Shift Editor** as shown below:
The General section allows the administrator to configure general shift settings.

- **Shift Name** - A new name of the shift can be entered or an existing name can be selected from the drop down list. If an existing shift name is chosen, the new shift will be associated with the existing shift or shifts using the same name. To configure some shift schedules, multiple configurations of the same shift may be required.

- **Description** - Enter a brief description of the shift.

- **Time** - The start and end time of the shift. Click the clock icon to display an interactive time selection popup or you can type in the time.

- **Next Production Day** - If the End of time is earlier than the Start Time, a check box will appear asking which production day the data occurring in that shift belongs to. If the checkbox is checked the data for that shift will be placed in the next day’s data bucket. Otherwise the data will be placed in the same day’s data as the start time.

### Shift Start Date

The **Start Date** section of the Shift Editor allows the administrator to set the date the shift becomes effective. This date is used to determine what day the shift should begin. There are two options. The “No Starting Date” option uses the date “January 1st 2000” as the base day. The “Effective Date” option allows the user to select a day the shift begins. This date can be manually typed in or set by an interactive calendar. To use the calendar, click on the calendar icon.

**NOTE:** the “No Starting Date” option is not available if the “Occurrence(s)” option is set to “None”. The **Repeat Settings** section has more details on the “Occurrence(s)” option.

### Shift-End Date

The **End Date** section of the Shift Editor allows the administrator to determine when the shift stops. There are three options. The “Continues Forever” option is used when a shift never ends. The user can also select the shift to end after a certain number of occurrences. The last option allows the user to select a certain date the shift ends on. This date can be manually typed in or set by an interactive calendar. To use the calendar, click on the calendar icon.

**NOTE:** The End Date is not available if the “Occurrence(s)” option is set to “None”. The Repeat settings section has more details on the “Occurrence(s)” option.
Shift – Repeat Settings

The Repeat Settings section of the Shift Editor allows the administrator to determine the reoccurrence of the shift. The option details depend on what type of “Occurrence(s)” is selected. Below are descriptions of each type.

- **None**- When a shift is setup to never repeat, the shift only happens on the effective date. The End Date section and the “No Starting Date” option under the Start Date section are disabled when this type is selected. For example, an extra shift might have occurred only once on 3-28-2010.

- **Hourly**- When a shift is setup to repeat hourly, the hour interval of the shift can be configured. A minimum of one hour must be set. To change the number of hours, either manually enter a number into the text box or use the up and down arrows to toggle the value up or down.

- **Daily**- When a shift is setup to repeat on a day-by-day basis, the day interval of the shift can be configured. For example, the shift manager might occur every other day. Alternatively, the shift can be setup to occur every week day (Monday, Tuesday, Wednesday, Thursday, and Friday).

- **Weekly**- When a shift is setup to repeat on a weekly basis, the week interval of the shift can be configured. Additionally, the days of the week that the shift should occur on can be configured. For example, the shift might occur every 5th week on Monday, Wednesday, and Friday. To change the number of weeks, either manually enter a number into the text box or use the up and down arrows to toggle the value up or down.
down arrows to toggle the value up or down. To change which day or days of the week the shift occurs on, select or deselect the corresponding days’ checkboxes.

![Repeat Settings](image)

- **Monthly**- When a shift is setup to repeat on a monthly basis, the shift can be configured using two different options. The shift can be setup to occur on a certain day of the month. For example, the shift might occur every 3rd day of the month. The second option is to set it up to occur on a general day of the month. For example, the shift might occur every last Friday of the month. For both options, the user can set the month interval of the shift. For example, the shift might occur on the 6th day of every five months.

![Repeat Settings](image)

- **Yearly**- When a shift is setup to repeat on a yearly basis, the shift can be configured using two different options. The shift can be setup to occur on a certain day of a certain month. For example, the shift might occur on the 17th of July every year. The second option is to set it up to occur on a general day of a certain month. For example, the shift might occur on the last Friday of June every year.

![Repeat Settings](image)

### 4.3.3 Saving a Shift

Once all properties of a shift have been selected, click the **Submit** button at the bottom of the Shift Editor screen to save the shift and close the screen.

### 4.3.4 Adding a Shift

To add a shift, click on the **New Shift** link just below the Shift Schedule Title.
4.3.5 Removing a Shift

To remove a shift, click the icon to the left of the desired shift. This will display the following prompt:

![Message from webpage]

Select OK to remove the shift.

4.3.6 Shift Examples

**Example 1:**

We have three shifts that occur at the same time every day. The shifts are named Shift A, Shift B, and Shift C. Shift A starts at 6:00 AM and ends at 2:00 PM. Shift B starts at 2:00 PM and ends at 10:00 PM. Shift C starts at 10:00 PM and ends at 6:00 AM.

First, we will setup Shift A. If a default shift already exists, edit it, or create a new shift. Below are the settings needed to setup Shift A. Once the properties are properly filled out, click the Submit button.

**Shift Name** – Shift A
**Description** – Shift A
**Time** – From 6:00 AM to 2:00 PM
**Start Date** – The shift has no starting date
**End Date** – The shift continues forever
**Occurrence(s)** – Daily
**Repeat Frequency** – Every 1 day
Next, we will setup Shift B. If a default shift already exists, edit it, or create a new shift. Below are the settings needed to setup Shift B. Once the properties are properly filled out, click the Submit button.

**Shift Name** – Shift B  
**Description** – Shift B  
**Time** – From 2:00 PM to 10:00 PM  
**Start Date** – The shift has no starting date  
**End Date** – The shift continues forever  
**Occurrence(s)** – Daily  
**Repeat Frequency** – Every 1 day

Finally, we will setup Shift C. If a default shift already exists, edit it, or create a new shift. Below are the settings needed to setup Shift C. Once the properties are properly filled out, click the Submit button.

**Shift Name** – Shift C  
**Description** – Shift C  
**Time** – From 10:00 PM to 6:00 AM  
**Next Production Day** – The data belongs to the current Production Day (leave the checkbox unchecked)  
**Start Date** – The shift has no starting date  
**End Date** – The shift continues forever  
**Occurrence(s)** – Daily  
**Repeat Frequency** – Every 1 day
Example 2:

We have two shifts that alternate between day shift and night shift every other week. Also, no one works on the weekends. The shifts are named Shift A and Shift B. Shift A starts at 6:00 AM and ends at 6:00 PM the first week and starts at 6:00 PM and ends at 6:00 AM the next week. Shift B starts at 6:00 PM and ends at 6:00 AM the first week and starts at 6:00 AM and ends at 6:00 PM the next week. This will require two different shift configurations for each shift.

First, we will setup the first configuration for Shift A. If a default shift already exists, edit it, or create a new shift. Below are the settings needed to setup the first configuration for Shift A. Once the properties are properly filled out, click the Submit button.

**Shift Name** – Shift A  
**Description** – Shift A  
**Time** – From 6:00 AM to 6:00 PM  
**Start Date** – 4/2/2012  
**End Date** – The shift continues forever  
**Occurrence(s)** – Weekly  
**Repeat Frequency** – Every 2 weeks on Monday, Tuesday, Wednesday, Thursday, and Friday
Next, we will setup the first configuration for Shift B. If a default shift already exists, edit it, or create a new shift. Below are the settings needed to setup the first configuration for **Shift B**. Once the properties are properly filled out, click the **Submit** button.

**Shift Name** – Shift B  
**Description** – Shift B  
**Time** – From 6:00 PM to 6:00 AM  
**Next Production Day** – The data belongs to the current Production Day (leave the checkbox unchecked)  
**Start Date** – 4/2/2012  
**End Date** – The shift continues forever  
**Occurrence(s)** – Weekly  
**Repeat Frequency** – Every 2 weeks on Monday, Tuesday, Wednesday, Thursday, and Friday

Next, we will setup the second configuration for Shift A. If a default shift already exists, edit it, or create a new shift. Below are the settings needed to setup the second configuration for **Shift A**. Once the properties are properly filled out, click the **Submit** button.

**Shift Name** – Shift A  
**Description** – Shift A  
**Time** – From 6:00 PM to 6:00 AM  
**Next Production Day** – The data belongs to the current Production Day (leave the checkbox unchecked)  
**Start Date** – 4/9/2012  
**End Date** – The shift continues forever  
**Occurrence(s)** – Weekly  
**Repeat Frequency** – Every 2 weeks on Monday, Tuesday, Wednesday, Thursday, and Friday
Finally, we will setup the second configuration for Shift B. If a default shift already exists, edit it. Else, create a new shift. Below are the settings needed to setup the second configuration for Shift B. Once the properties are properly filled out, click the Submit button.

**Shift Name** – Shift B  
**Description** – Shift B  
**Time** – From 6:00 AM to 6:00 PM  
**Start Date** – 4/9/2012  
**End Date** – The shift continues forever  
**Occurrence(s)** – Weekly  
**Repeat Frequency** – Every 2 weeks on Monday, Tuesday, Wednesday, Thursday, and Friday

### 4.4 Managing Welding Power Sources

The second sub-heading “Welders” under the “System” section pertains to equipment & container entries. To add, delete, name or organize welding power sources you must be in the manage section of CheckPoint™ and have administrative access to perform these tasks. Welding power sources are easily added by selecting “Welders” under the System section on the left side of the page. When this is selected the display area shows current welding power sources and their properties. The following sections will walk you through how to add, delete, name or organize the welding power sources.

#### 4.4.1 Adding a Welding Power Source

To add welding power sources to CheckPoint™ complete the following steps.

1. Select **Welders** under the **System** section of the **Manage** screen.  
2. Click on **New Welder** under **Welders** at the top of the screen.  

3. You will then receive the **General** screen to add **New Welder** information.  
   **NOTE:** Keep in mind that the organization of welding power sources in this section is how they will show up in the Asset tree in the CheckPoint™ Dashboard.
4. After you enter the **Welder Name** and **Welder Description**, you will then need to upload the **Installation Key File**.
   NOTE: Refer to section 2.3.3 for instructions on how to save the **Installation Key File**.

5. In the **Installation File** field click the **Select** button to navigate to the location where you saved the **Installation Key** file from Power Wave® Manager.

6. After locating the file select the Open button.

7. Select the **Continue** button to finish adding the power welder source.

8. The welding power source is then displayed in the list of **Welders**.
   IMPORTANT: Please be aware the connection status of the welding power source may not be available for 15 minutes. If it is not available be patient and do not delete and add it again for this causes a longer delay.

### 4.4.2 Adding a Container

Containers are separate divisions under the main factory description. Once a new container is assigned new or previously added welding power sources can be allocated to specific container locations.

NOTE: The following sections use the term **Assets** instead of welding power sources. When the term Asset is used it is referring to a welding power source.

To add a container

1. Select **New Container** under **Welders** at the top of the screen.

2. The **Asset Container** screen opens.

3. Enter the **Name**, **Description** and **Parent Asset** on the **Asset Container** screen.

4. Click the **Save** link to save the **New Container** and close the screen.

5. The container will now show in the list of welders.
4. You can relocate power welding sources to **Containers** by clicking the icon next to the power welding source and selecting the **Parent** link to select your container on the **Asset Management** page.

### 4.5 Alerts

Alerts can be set up to alert the end user of specific events, weld limit errors and other custom process variations.

#### 4.5.1 Accessing Alerts

To set an **Alert**:

1. Select the **Alerts** link under the **System** section on the **Manage** page.
2. You will then see the **Alerts** page listing alerts on the right side of the page.
3. At the top of the **Alerts** page select **New Alert** link to add an Alert.

4. You will be taken to the **New Alert Definition** page in which you will define your alerts.
4.5.2 Asset Status Alerts

Asset Status link allows you to create an alert when a welder goes offline or comes back online.

To setup up the Asset Status alert:

1. Click the “Create an alert when a welder goes offline or comes back online” link to open the New Alert Definition page.
2. On the New Alert Definition page enter the Name of the alert the Description of the alert.
3. Select Yes or No for Use Throttling. The Yes option is used to minimize spam.
4. If you selected Yes in the Use Throttling option you will now need to enter your Throttling Options. Example: Send an alert only once every 2 Days(s)
5. Select the All Assets link to select which Assets to set the alerts for.
NOTE: if you want to receive an alert for all assets check the All Assets box. If you want to receive the alert for specific Assets uncheck the All Assets box and select which Assets you want to receive the alert for by placing a check in the box next to the Asset or Container.

6. Click the Save link to save your options and exit the screen.

NOTE: If you want an alert to be sent when a power welding source comes back online select the Do not send an alert when the machine comes back online link and put a check in the box to be alerted.

### 4.5.3 Event Alerts

You can configure alerts when one or more events occur or when one or more alarms exceed a threshold. To set Event Alerts:

1. Follow steps 1-4 in section 4.5.1.

2. On the New Alert Definition page select the under Events to configure the alerts you want to send.

3. Select the All Assets link to select which assets you want to receive an alert for. Follow steps 5 through 6 in section 4.5.2 to complete this task.

4. To configure an alert for specific events instead of all events, select the All Events link to enter your options for the events you want an alert sent.
5. Click the Save link to save your options and exit the screen.

### 4.5.4 Tags Alerts

Tag alerts are based on individual items. To set a Tag Alert:

1. Follow steps 1-4 in section 4.5.1 to open the Alerts page.
2. Select the **Create an alert when a tag state is set** link under the Tags section to configure the alert.

3. Select your options and select the Save link to save your options and exit the screen.

### 4.6 Library

The subscriber version of CheckPoint™ allows end users to add up to 15gb of documentation providing a single point of data storage for engineering, QA and maintenance. The standard version of CheckPoint™ includes documents provided by Lincoln Electric®.
4.6.1 Accessing the Library

These instructions are only used if you are using the subscriber version of CheckPoint™. Documents added can be linked to a main site as well as to a specific piece of equipment in that site location. To access the Library:

1. Select the Documents link under the Library section. On the Manage screen.
2. Click the New Document link under Document Library at the top of the page.

4.6.2 Adding or Linking Documents to the Library

NOTE: If you are linking a document you must know the web address of where this document is posted on the internet.

On the Library Manager page you can upload or link a document. To add or link a document to the Library:

1. Select the drop down arrow next to the type field to select Document or Link.

2. Then select the link at the top of the page to continue loading or linking your document.
3. To add your file click the button to navigate to the location where your file is saved.
4. Enter the Name and Description of your document.
5. Then select the button to load or link your document.
6. To associate your document with an Asset use the tree in the Associated Assets section and place a check mark in the box next to the asset you want to associate to the file.
7. To associate a file, folder or image to the file you have uploaded, put a check in the box next to the file in the Folders section.
8. Select the Finish link to save your information and close the screen.

5 CheckPoint™ User Interface

Once a user is created in CheckPoint™ following the instructions in section 4.2.2, they will receive an e-mail requesting them to log in and create a password to establish their account as shown below:

Dear Nicole, Welcome!

Your Username and temporary Password are:
Username: majorsolutions@gmail.com
Password: FGlKMeVB

The first time you log in to lincolncheckpoint.com you will be asked to change your password. Click here to login.

Email: Support@lincolnproductionmonitoring.com | Contact Us: 1.800.407.0459
5.1 User Account

Once a user clicks the link they will be taken through the process of creating an account.

To setup a user account for CheckPoint™:

1. The user must first accept the End User License Agreement before they can continue.

2. After accepting the License Agreement select the Continue button to finish setting up the account.

3. You will then be taken to a screen to create a password and confirm it.

4. After creating a new password and entering secret question information click the Save button to continue.

5. The user will then be taken to the Summary screen.
5.2 CheckPoint™ Dashboard

The Dashboard is the first screen that appears after logging into CheckPoint™; it displays widgets that show Summary graphs and charts that can be organized by “Today”, “Past 7 Days” and “Custom” which includes a user editable criteria selection. The summary information widgets show data for a single welding power source (asset) or an aggregate of welding power sources referred to as a container. The following sections will outline the information displayed on the Summary tab.

Asset Tree

Asset is a physical or logical grouping of items you configured the Asset tree in section 4.4. In a manufacturing facility, this could be a single welding power source or a container within a plant. The Asset Tree displays all Assets that have been created, and allows navigation through those Assets. This section is used to select which welding power sources or containers will be used for a report.

To navigate through the Asset Tree, simply expand and collapse Assets as needed. If an icon appears in a box next to an Asset, then there are other Assets (Sub-Assets or Child Assets) beneath this one in hierarchy that are not being shown. Click on the box and the Asset will expand, displaying all of its Sub-Assets.

If a is in the box next to the Asset it has already been expanded and all Sub-Assets are currently shown. To hide these Assets, click on the box and the Parent Asset will collapse.

To select an Asset, simply navigate through the Asset Tree until the desired Asset is found. Select it by clicking on the text portion. A selected Asset will be highlighted as shown in the diagram to the left.

A single welding power source can be selected for a report just by clicking on the desired welding power source. In the example of the Asset Tree shown above, welding power source Application Bob’s Cell will be used for any generated reports. Also a Container item can be selected for a report. For example if the Sheet Metal Division Container is selected, then the welding power sources WCH# 7921A, WCH# 7925, WCH# 7935 North, WCH# 7935 South will be used for any generated reports. If the top most item is selected, in the example to the left this would be the Lincoln Electric/Cleveland item, then all the welding power sources will be included in the report.

NOTE: When selecting between a single welding power source and a group of welding power sources, the Summary screen will display information for the current selection.

Topic Area

The Topic Area lists the main sections for CheckPoint™.

There are 5 different topics, Summary, Weld Listing, Limit Errors, Events and Documents. To select a topic, simply click on the corresponding tab in the Topic Area.
## 5.2.1 Summary Tab Overview

The summary tab provides a snapshot of data depending on your selection of a single welding power source or a container. Below is a chart that outlines what data is displayed when a welding power source or container is selected for “Today”, “Last 7 Days” and “Custom”.

<table>
<thead>
<tr>
<th>Selected Item</th>
<th>Container</th>
<th>Welding Power Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Displayed</td>
<td>Today</td>
<td>Last 7 Days</td>
</tr>
<tr>
<td>Availability</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Productivity</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Lowest Consumable Time Remaining</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Consumable Package</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serial Numbers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welder Detail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weld Score™</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Live Update</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average True Energy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The screen shot below shows the Summary tab for Today when a welding power source is selected. It displays Status, Availability, Consumable Information, Assigned Serial Numbers, Welder Details, Productivity, & Weld Score Information.

This screen shot displays the Summary tab for Today when a Container is selected.
**Status**

The Status area displays current status information for a single welding power source. The icon in the upper right hand corner of this area will display information regarding the status of the welder when selected.

Below is a list of what the items mean in the Status section:

Red – Faulted (Not Ready, Latched Fault or Faulted)
Green - Welding
Yellow - Idle
Gray – Not Communicating/Disconnected – NO communications within the last 3 minutes.

**Availability**

The Availability graph shows the total arc-on-time compared to idle and disconnect time. The graph also represents the welding power source availability and faulted time. This is a rolling 24 hour graph. The Availability graph is displayed when a single welding power source is selected in a Container. When a container is selected this shows the availability for all welders in the container.

**Consumable Information**

Consumable Package information is setup using Power Wave Manager™. Time remaining is calculated off the last three days of production data for a single welding power source.

**Lowest Consumable Time Remaining**

This information is shown only when a container is selected. It reveals the Lowest Consumable Time Remaining for each welding power source within the Container.
**WeldScore™ Information**

The WeldScore™ Information is displayed for a single welding power source the data displayed is for the last weld that was performed by the welding power source selected. WeldScore™ profiles are setup using Power Wave Manager™.

The WeldScore™ graph shows the numbers of welds scored vs. welds not scored as well as the average weld score per hour.

**Productivity**

This graph provides an overview of the number of welds made in the last 24 hours. The information is broken down by welds in limit vs. welds out of limit, as well as the total welds made per hour. This graph is also available when a Container is selected.
Serial Numbers

The summary page displays the consumable lot information when a single welding power source is selected. This information is available in two different locations. Each **Consumable Lot** number shown is a link that takes you directly to the certificate of conformance for the consumable in use.

5.2.2 Last 7 Days

The **Last 7 Days** summary screen provides a breakdown of the production over the past 7 days, similar to the 24 hour summary page. This is a snapshot of the **Last 7 Days** for a single welding power source.
5.2.3 Custom

The Custom option allows you to set the Criteria for what you want to view on the summary screen for an individual welding power source or a Container.

The Criteria displays the data selection that is used for a given report. Clicking on this area brings up a window that enables a user to set the selection criteria for a report. Not all Criteria Edit screens are the same. The selection filters displayed depends on the tab that is selected.

To set the Criteria select the Criteria link and enter the parameters you would like to view for an individual welding power source or container. After entering all Criteria values click the Save link. The criteria will now be saved until new values are entered or as long as “cookies” on the computer are not cleared and do not expire.

Custom Criteria Options
- **Start Date** – Specifies the beginning date for a report.

To select a different day from what is shown, click on the icon located at end of text box. Clicking on this will bring up a graphical calendar, like what is shown to the left. To select a different month, click either the or icons on the top of the calendar. This will have the calendar go to the either the previous or next month. The and icons will have the selected month change by three month intervals.

- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts should be shown along with the “Any” option.
- **Group By** - Specifies what you want the report to be grouped by: **Year, Month, Day, Hour** or **Shift**.

### 6 Running Reports

#### 6.1 Selecting Reports

To run a report, follow the instructions below:

1. Select the **welding power source** or **container** for the report you want to run from the **Asset Tree**; refer to the Asset Tree section in section 5.2.1.
2. Select the desired **Topic** tab (Weld Listing, Limit Errors, Events, etc).
3. Click on the desired report in the **Action** area.
4. Click on the **Criteria** area and set the report filters to use.
6.1.1 Report Links

Some reports have links to other reports “built into” the data. When a report data item is underlined, clicking on it will take you to another report. The other report will usually show more detail for the selected item.

For example: The Weld Listing Summary report, the Start of Weld Field is underlined. This means that this item is a “link” to another report. Clicking on this link will give you a detailed report on the Start of Weld for the option chosen.

6.1.2 Exporting Report

In the top right corner of some screens you will see a or icons. These icons indicate that the report data can be exported into Excel or to a Comma Separated format file. Even though all data is not displayed the export will copy all data from the report to the file of your choice.

6.1.3 Refreshing Report Data

At the bottom of some reports, there is icon. Clicking this icon updates the data on the page. The reports on the Summary page are refreshed automatically all other reports are refreshed manually to show data that was collected since the report was produced.

6.1.4 Report Page Numbers

When all the data for a report cannot fit on a single page, page numbers are displayed at the top of the page as shown below:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>...</th>
</tr>
</thead>
</table>

Clicking on the page numbers will bring up the next group of data for that report. The icon will take you to the last page of the report the icon will take you to the first page of the report. You can also select how many items you wish to see on the page by changing the number in the Page size box by clicking the drop down menu.
6.2 Report Topics

The following sections will explain the report topic and the data that is displayed for the selected topic. Keep in mind that if you have the standard version of check point the reports will only display data for 30 days. This is important when selecting date ranges in the Criteria section of the report you want to display data for. The subscriber version allows you to access report data for up to 1 year.

6.2.1 Weld Listing Tab

The Weld Listing tab provides detailed information for the welds made by a specific welding power source or Container.

6.2.2 Weld Listing-Summary

The Weld Listing Summary enables the user to select reports for a particular date. The reports depend on whether a single welding power source is selected or a Container is selected in the Asset Tree. If a single welder is selected each report action will show information that is specific to the welding power source selected. If a Container is selected the data displayed for the action report chosen will be for all welding power sources in the Container selected.

The data points for the reports on this tab will be individual welds themselves. The data can then be filtered by the shift, the hour. You can also select the criteria link for specific information you want to run the report for. The weld listing information can also be viewed for specific date ranges.

Weld Listing Criteria
- **Start Date** – Specifies the beginning date for a report
- **End Date** - Specifies the ending date for a report.
- **Weld Profile** - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.
- **Part Serial Number** - Specifies the Part Serial Number to use for the report.
- **Operator ID** – Specifies the Operator number to use for the report.
- **Consumable Lot** – Specifies the consumable number to use for the report.
- **Sort By** - Used to determine which item the report will sort by; the choices are Start of Weld and Weld Profile.
- **Sort Direction** – Determines what order the report will display your choices are Descending and Ascending.
- **Listing Limit** – Determines how many items you want displayed in your report.

**Note:** The weld information can also be sorted by any of the report column headings by clicking on the column name.

---

### 6.2.3 Weld Listing-Weld Profile

The **Weld Profile** graph shows the total number of welds made for each **Weld Profile** as well as how many welds are in or out of limit. You can pull this report for a single welding power source or a **Container**.

The data for the **Weld Profile** report can be filtered for a given date range or shift.
- **Start Date** – Specifies the beginning date for a report
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.

6.2.4 Weld Listing-WeldScore™

The WeldSore™ graph shows the average score per hour over the time period selected. This graph can be customized to show WeldSore™ for as many or as few Weld Profiles trained, as well as for different time durations. This information is also displays information for a single welding power source or a container.
WeldScore™ Criteria

- **Start Date** – Specifies the beginning date for a report
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- **Group By** – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- **Weld Profile** - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.

6.2.5 Weld Listing—Current/Voltage

The average **Current** and **Voltage** graphs display the voltage and current for the profiles selected over the specific time period specified. Modifications can be made to the information shown by changing the information under the “criteria” section.
Current/Voltage Criteria

- **Start Date** – Specifies the beginning date for a report.
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- **Group By** – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- **Weld Profile** - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.
6.2.6  Weld Listing-Wire Feed Speed

The average Wire Feed Speed graph displays the wirefeed speed for the profiles selected over a specific time period. Modifications can be made to the information shown by changing the information in the “criteria” section.

Wire Feed Speed Criteria

- Start Date – Specifies the beginning date for a report
- End Date - Specifies the ending date for a report.
- Shift - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- Group By – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- Weld Profile - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.
6.2.7  Weld Listing-Deposition

This graph plots the average **Deposition** rate per hour for the Weld Profile(s) selected.

**Deposition Criteria**

- **Start Date** – Specifies the beginning date for a report
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- **Group By** – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- **Weld Profile** - Specifies the weld profile that will be used for the report. The available selections are: Any and 1 to 32.
6.2.8 Weld Listing-True Energy™

Displays the average amount of energy that was put in the welding power source as defined by Energy = Current * Volts * Time. If a welding power source has older software it will not support the True Energy™ calculation and a 0 will be displayed for this item.

True Energy™ Criteria

- **Start Date** – Specifies the beginning date for a report
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- **Group By** – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- **Weld Profile** - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.
6.2.9 Weld Listing-Duration

The **Duration** report shows the average weld duration by Weld Profile in seconds.

### Duration Criteria

- **Start Date** – Specifies the beginning date for a report.
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- **Group By** – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- **Weld Profile** - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.
6.2.10 Weld Listing-Count

The **Count** report shows the number of welds by Weld Profile. This report is a summary based on the specified criteria.

### Count Criteria

- **Start Date** – Specifies the beginning date for a report.
- **End Date** - Specifies the ending date for a report.
- **Shift** - Specifies which shift to display information for when generating a report. The available choices depend on how the shifts are configured. All the available shifts can be displayed using the “All Shifts” option.
- **Group By** – Allows you to determine how the report data is grouped. The choices are Day, Month, Year, Hour and Shift.
- **Weld Profile** - Specifies the Weld Profile that will be used for the report. The available selections are: Any and 1 to 32.
6.3 Limit Errors Tab

The Limit Errors Tab displays errors that are in or out of limits for Current, Voltage, Wire Feed Speed, Time and WeldScore™ errors. You can display data for “Today”, “Last 7” days or “Custom” for an individual welding power source or a container. The following section displays the graphs for Limit Errors when a container is selected.

6.3.1 Limit Errors-Today

6.3.2 Limit Errors – 7 Days
6.3.3 Limit Errors-Custom

Limit Errors-Custom Criteria

Criteria

- **Start Date:** 6/1/2012
- **End Date:** 6/30/2012
- **Shift:** All Shifts
- **Group By:** Month
6.4 Events Tab

The Events Tab report displays an event log detailing the type of event, the source and description of the events that have occurred. This report provides a summary or history of events for an individual welding power source or a container based on selected criteria. The screen shots in the following sections display events when a container is selected.

6.4.1 Events Summary
Events-Summary Criteria

- **Start Date** – Specifies the beginning date for a report.
- **End Date** - Specifies the ending date for a report.
- **Event Log Type**: Allows you to select which event type you want displayed in the report. If you want to display all events that occur, select All from the drop down menu.
- **Record Count**: Determines the number of records you want to display in the report.

This report can be printed from the screen by clicking the icon in the upper right hand corner of the report.

6.4.2 Events-History
Events-History Criteria

- **Start Date** – Specifies the beginning date for a report.
- **End Date** – Specifies the ending date for a report.
- **Event Log Type**: Allows you to select which event type you want displayed in the report. If you want to display all events that occur, select **All** from the drop down menu.
- **Record Count**: Determines the number of records you want to display in the report.

This report can be printed or exported into an Excel or CSV file. Refer to section 6.1.2 for instructions on how to export the file.

### 6.5 Documents Tab

The document links allow you to access documentation that was previously uploaded in your CheckPoint™ account. The documents available to you depend on whether you have a subscription service or standard service. The subscription service allows you to upload your own documents as shown in the Manage section of CheckPoint™. The standard version only allows you access documents that are uploaded by Lincoln Electric®.
6.5.1 Accessing Documents

To access documents simply click the Documents tab.

You will then be taken to a screen that lists documents uploaded in your CheckPoint™ account.

Keep in mind that if you have a standard version of CheckPoint™ the documents loaded are standard depending on the welding power sources you have uploaded into CheckPoint™. If you have the subscriber version you can upload your own documents up to a limited amount of space defined in the previous documents section.

To access the Operating Manuals

1. Click the folder next to Operating Manuals.
2. You will then be taken to a listing of manuals loaded into the system.
3. Select the manual you would like to review.
<table>
<thead>
<tr>
<th>WARNING</th>
<th>AVISO DE PRECAUCION</th>
<th>ATTENTION</th>
<th>WARNUNG</th>
<th>ATENÇÃO</th>
<th>注意事項</th>
<th>警告</th>
<th>위험</th>
<th>تحذير</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not touch electrically live parts or electrode with skin or wet clothing.</td>
<td>No toque las partes o los electrodos bajo carga con la piel o ropa mojada.</td>
<td>Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension.</td>
<td>Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung!</td>
<td>Não toque partes elétricas e electrodos com a pele ou roupa molhada.</td>
<td>注意事項</td>
<td>警告</td>
<td>위험</td>
<td>تحذير</td>
</tr>
<tr>
<td>Insulate yourself from work and ground.</td>
<td>Aíselo de trabajo y de la tierra.</td>
<td>Isolez-vous du travail et de la terre.</td>
<td>Isolieren Sie sich von den Elektroden und dem Erdboden!</td>
<td>Isole-se da peça e terra.</td>
<td>注意事項</td>
<td>警告</td>
<td>위험</td>
<td>تحذير</td>
</tr>
<tr>
<td>Keep flammable materials away.</td>
<td>Mantenga el material combustible fuera del área de trabajo.</td>
<td>Gardez à l’écart de tout matériel inflammable.</td>
<td>Entfernen Sie brennbares Material!</td>
<td>Mantenha inflamáveis bem guardados.</td>
<td>注意事項</td>
<td>警告</td>
<td>위험</td>
<td>تحذير</td>
</tr>
<tr>
<td>Wear eye, ear and body protection.</td>
<td>Protéjase los ojos, los oídos y el cuerpo.</td>
<td>Protégez vos yeux, vos oreilles et votre corps.</td>
<td>Tragen Sie Augen-, Ohren- und Körperschutz!</td>
<td>Use proteção para a vista, ouvido e corpo.</td>
<td>注意事項</td>
<td>警告</td>
<td>위험</td>
<td>تحذير</td>
</tr>
</tbody>
</table>

READ AND UNDERSTAND THE MANUFACTURER’S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER’S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.
<table>
<thead>
<tr>
<th>Keep your head out of fumes.</th>
<th>Turn power off before servicing.</th>
<th>Do not operate with panel open or guards off.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los humos fuera de la zona de respiración. Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases.</td>
<td>Desconectar el cable de alimentación de poder de la máquina antes de iniciar cualquier servicio.</td>
<td>No operar con panel abierto o guardas quitadas.</td>
</tr>
<tr>
<td>Vermeiden Sie das Einatmen von Schweibrauch! Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes!</td>
<td>Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öffnen; Maschine anhalten!)</td>
<td>Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen!</td>
</tr>
<tr>
<td>ヒュームから顔を離さずして下さい。換気や排煙に十分留意して下さい。</td>
<td>メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切って下さい。</td>
<td>パネルやカバーを取り外したまま機械操作をしないで下さい。</td>
</tr>
<tr>
<td>头部遠離煙霧。在呼吸區使用通風或排風裝置。</td>
<td>維修前切断電源。</td>
<td>格柵板打開或沒有安全罩時不準作業。</td>
</tr>
<tr>
<td>보수전에 전원을 차단하십시오.</td>
<td>모든 전원을 쏟으십시오.</td>
<td>전원이 열린 상태로 작동하지 마십시오.</td>
</tr>
<tr>
<td>위험</td>
<td>각자 허전히 작업을 억지하지 마십시오.</td>
<td>■ 악수는 삐어지기 전에 악수해야 합니다. ■ 기계를 사용하는 사람이 악수를 깨는 경우.</td>
</tr>
<tr>
<td>不要接近操作中的设备。</td>
<td>逆向不正确的空气流。</td>
<td>■ 门户的摇动，如果不正确的空气流。</td>
</tr>
<tr>
<td>请详细阅读并理解制造商提供的说明以及应该使用的联接材料，并请遵守贵方的有关劳动保护规定。</td>
<td>■ 消除噪音的环境。</td>
<td>■ 门户的摇动。</td>
</tr>
</tbody>
</table>

使用機械或溶材的メーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

이 제품에 동봉된 작업지침서를 숙지하시고 귀사의 작업자 안전수칙을 준수하시기 바랍니다。

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读完和理解的有关法律说明书的这些材料和材料前要使用，并且读完有关的这些材料的使用。