

# SECTION 1 – SAFETY PRECAUTIONS – READ BEFORE USING

LiveArc 2018-01

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

## 1-1. Symbol Usage



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



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

**NOTICE** – Indicates statements not related to personal injury.

 Indicates special instructions.



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

## 1-2. Welding Training System Hazards



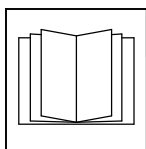
The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the Safety Standards listed in Section 1-4. Read and follow all Safety Standards.



Only qualified persons should install, operate, maintain, and repair this equipment. A qualified person is defined as one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated ability to solve or resolve problems relating to the subject matter, the work, or the project and has received safety training to recognize and avoid the hazards involved.



Welding-related hazards are present when using the welding training system. Read the welding power source and wire feeder Owner's Manuals and labels carefully for more information on arc welding hazards. Also read American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, from American Welding Society ([www.aws.org](http://www.aws.org)).



### READ INSTRUCTIONS.

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.
- Use only genuine replacement parts from the manufacturer.
- Perform installation, maintenance, and service according to the Owner's Manuals, industry standards, and national, state, and local codes.
- Do not repair, modify, or disassemble the training system or use with parts or accessories not supplied by the manufacturer. Use only approved components and accessories from the manufacturer.
- Be sure all hardware is properly tightened.
- Do not use the training system until you are sure it is correctly assembled and working properly.
- Before each use, inspect the training system for damage and verify it is secure and installed properly.
- Use the training system only as specified in the manual.



### ELECTRIC SHOCK can kill.

Touching live electrical parts can cause fatal shocks or severe burns.

- Do not touch live electrical parts.
- Disconnect input power before installing or servicing this equipment.
- Do not touch grounded surfaces when using this equipment (metal pipes, enclosures, structures, etc.).
- Keep cords dry, free of oil and grease, and protected from hot metal and sparks.
- Frequently inspect input power cord and ground conductor for damage or bare wiring – replace immediately if damaged – bare wiring can kill.
- Turn off all equipment when not in use. Do not leave equipment until it has completely stopped.
- Use only well-maintained equipment. Repair or replace damaged parts at once. Maintain unit according to the manual.
- Keep all panels and covers securely in place.
- Do not use the training system during an electrical storm. Turn off equipment and disconnect input power until risk of lightning has passed.
- Always verify the supply ground – check and be sure that cord plug is connected to a properly grounded receptacle outlet.
- Do not use equipment in damp or wet conditions.
- Incorrectly installed or improperly grounded equipment is a hazard. Properly install, ground, and operate this equipment according to its Owner's Manual and national, state, and local codes. Also read American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, from American Welding Society ([www.aws.org](http://www.aws.org)).



### FIRE OR EXPLOSION hazard.

- Do not install or place unit on, over, or near combustible surfaces.
- Do not install unit near flammables.
- Use the training system only for the recommended application or the protection provided by the equipment can be impaired. Do not use the training system table for non-welding operations, such as painting, sawing wood, or any activity that could produce flammable materials.



### HOT PARTS can burn.

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



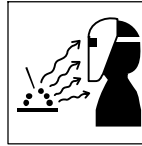
### FALLING EQUIPMENT can injure.

- Do not exceed the maximum weight rating of welding table, drawers, or shelves (see Specifications). Spread weight evenly on welding table, and in drawers and shelves. Do not use the welding table, tray, drawers, or shelves to stand on or support heavy equipment.
- Use correct procedures and equipment of adequate capacity to lift and support unit.
- If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.
- Do not use powered equipment to drag unit.
- Do not move or install training system where it could tip. Install the training system on a firm, level surface and away from flammable materials. Lock wheels to keep table in position.
- Follow the guidelines in the Applications Manual for the Revised NIOSH Lifting Equation (Publication No. 94-110) when manually lifting heavy parts or equipment.



### MOVING PARTS can injure.

- Keep people away from touch screen protective cover when it is being opened. Keep cover closed when welding.
- Keep people away from optional positioning arm when it is being raised or lowered.



### ARC RAYS can burn eyes and skin.

Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.

- Wear an approved welding helmet fitted with a proper shade of filter lenses to protect your face and eyes from arc rays and sparks when welding or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards).
- Wear approved safety glasses with side shields under your helmet.
- Use protective screens or barriers to protect others from flash, glare and sparks; warn others not to watch the arc.
- Wear body protection made from durable, flame-resistant material (leather, heavy cotton, wool). Body protection includes oil-free clothing such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.

## 1-3. Proposition 65 Warnings

**⚠ WARNING: This product can expose you to chemicals including lead, which are known to the state of California to cause cancer and birth defects or other reproductive harm.**

For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## 1-4. Principal Safety Standards

*Safety in Welding, Cutting, and Allied Processes*, ANSI Standard Z49.1, is available as a free download from the American Welding Society at <http://www.aws.org> or purchased from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihs.com](http://www.global.ihs.com)).

*Applications Manual for the Revised NIOSH Lifting Equation*, The National Institute for Occupational Safety and Health (NIOSH), 1600 Clifton Rd, Atlanta, GA 30329-4027 (phone: 1-800-232-4636, website: [www.cdc.gov/NIOSH](http://www.cdc.gov/NIOSH)).

*Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General requirements*, CAN/CSA Standard C22.2 No. 61010-1-12, from Canadian Standards Association, Standards Sales, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N5 (phone: 800-463-6727, website: [www.csagroup.org](http://www.csagroup.org)).