ERA introduces e-Training

By Wes Grueninger Sr.



When the popular Joe Davis seminars ended last year, the Electrical Rebuilder's Association (ERA) looked for new ways to provide training for its members. Information and training are what the ERA is all about. The second sentence of the ERA bylaws states, "The purpose of the Electrical Rebuilder's Association is to further the electrical rebuilding industry by providing information and training to the members of the association."

After asking members what they wanted, it quickly became apparent that the old ways of providing training had to change. For most small rebuilders, attending an out-of-town weekend training session is no longer possible. The most common reason: lost income. Even if the travel, the lodging and the meals were affordable, the income lost from not being at work makes a weekend away for training just too expensive.

A review of today's traditional training alternatives (seminars, teleconferencing, text-based courses, audio courses, DVD courses, and webinars) reveals that each has significant drawbacks. So we had to find something else, and the obvious choice was the Internet. After sifting through the options, e-Training (Web-based training) stood out as the best method. e-Training consists of modularized training videos, available over the Web, anytime of the day or night, anywhere you have access to the Internet!

But before we could offer training on the Internet, we had to determine if enough members had the necessary broadband connections. In December 2008, the ERA called every rebuilder member to ask what type of Internet connection they had. The results…92 percent of rebuilder members had access to broadband. With the rapid spread of broadband, this percentage continues to increase.

The decision was made to proceed with Web-based instruction in the form of e-Training videos. This is the most effective way to present our training material. Complex subjects will be separated into chapters, and videos of each chapter will be created. The advantage of using chapters is their instant accessibility. Members will be able to view a precise topic without wasting time "wading through" unrelated material, and they can watch e-Training videos as many times as they want.

In June 2009, I began building the foundations of the ERA e-Training Library. The first step was to upgrade the existing Web site to be able to handle video streaming. Sending video across the Internet requires moving huge amounts of data, and our server wasn't up to the task. We moved the site to a new, speedier server in July and began testing and development of how to best deliver video.

After doing extensive research and trial-runs, we decided to offer each video in three different sizes. Even though members have "broadband," there is a tremendous difference in the speed of broadband services. While most broadband users can view videos in DVD-quality, some cannot. To reach the largest audience, videos will be offered for:

Cable—this is fastest Internet connection and offers the best viewing experience. Videos are presented at 720 x 480.

DSL High—this size will work for most DSL users. Videos are presented at 480 x 320.

DSL Low—this size is recommended for DSL subscribers that have poor line quality. Videos are presented at 360 x 240.

The first e-Training videos are online now and ready to watch. Richard Vensel's popular DVD, "Advanced Soldering Techniques," has been divided into 18 chapters (see "ERA Soldering Topics"). The length of the chapters ranges from two minutes to 10 minutes.

These bite-sized chapters make it easy to find exactly what you are looking for. Do you want to learn how to solder a copper brush to an aluminum field coil? Simply click on Chapter 8, and in three minutes you will know how to make a secure connection. That is good, usable information, delivered as economically and efficiently as possible—your time and money saved.

The "Advanced Soldering Techniques" DVD is sold to ERA members for $49.95. Now, this information is available on the ERA Web site—free to all members. That adds even more value to your ERA membership!

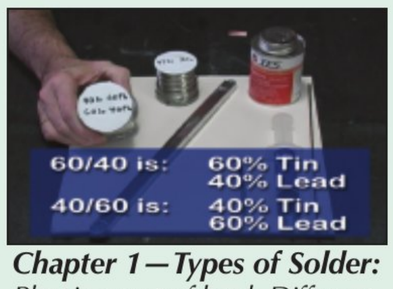
What's next? Now that we have some experience producing e-Training videos and getting them on the Web site, the ERA Technical Committee is drawing up a list of potential training topics. We will be creating new videos and making them available on the Web site. Is there a topic that you would like to see in a training video? Are you interested in helping create the videos? We welcome your ideas and your help. You can contact me or any ERA board member. (Contact information can be found on the ERA Web site.)

Happy viewing.

Wes Grueninger Sr. is the ERA Web site director.

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ERA Soldering Topics



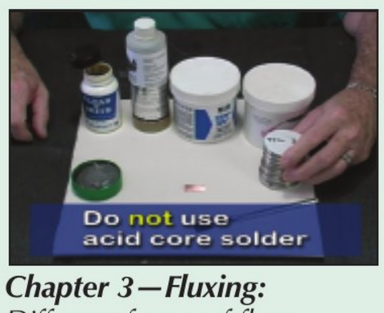
Chapter 1—Types of Solder: *Phasing out of lead; Different compositions of solder; Solder melting points; Temperature vs. tensile strength; Solder for solder pots; and Silver solder (ribbon, rods, paste).*



Chapter 2a—Cleaning: *Best practices for insulation removal; Cleaning with alcohol; and Advantages of a brass wire wheel.*



Chapter 2b—Cleaning continued: *Cleaning prior to soldering brush leads; Cleaning steel surfaces; and Cleaning slip rings.*



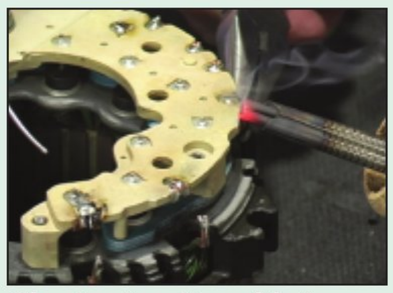
Chapter 3—Fluxing: *Different forms of flux; Purpose and chemical reactions of flux; Flux for soldering aluminum; and Ways to block heat while soldering.*



Chapter 4—Tinning: *Purpose and importance of tinning; Demonstration, discussion and time comparison of tinning (soldering irons, soldering guns, hot lips—resistance tool, and dual carbon electrodes—resistance tool); Using spike protection when resistance soldering; Tinning steel; and Tinning aluminum.*



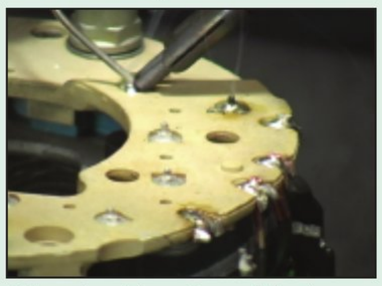
Chapter 5—Shop Air Quality: *Toxic gasses released during soldering and spot welding; and Fume extractors and fans.*



Chapter 6a—De-soldering: *Tools for de-soldering; Where to put the heat; and Replacing pressed-in welded lead diodes.*



Chapter 6b—De-soldering continued: *Using a stainless steel brush; Methods of blocking heat; and Un-soldering button diodes.*



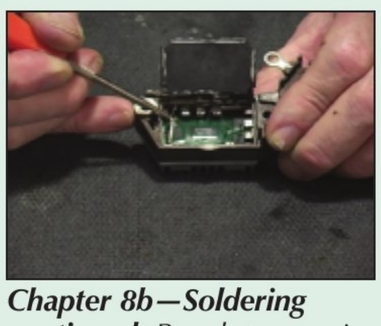
Chapter 7a—Re-soldering: *Re-soldering 3G rectifiers.*



Chapter 7b—Re-soldering continued: *Repairing/resoldering armatures.*



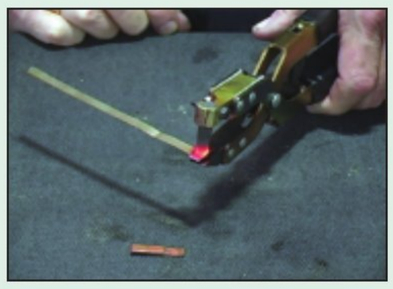
Chapter 8a—Soldering: *Soldering copper brush leads to aluminum field coils; Soldering copper to copper; Soldering copper to aluminum; What makes a good connection; and How to tell if a connection looks good.*



Chapter 8b—Soldering continued: *Regulator repair using repair circuits; and Soldering regulator repair circuits.*



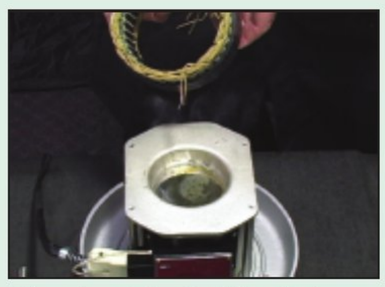
Chapter 9—A Third Hand: *How to make an insulated soldering clamp using high temperature sleeving.*



Chapter 10a—Silver Soldering: *Silver soldering copper-to-copper (field coil repair); Proper ways to use ribbon silver solder; Elements of a good connection; Temperature advantage of silver solder; and Silver soldering brush leads together (flexible repair).*



Chapter 10b—Silver Soldering continued: *Using silver solder paste; Proper use of the resistance soldering tool (cycling); and Replacing brush leads inside a field case.*



Chapter 11—Solder Pots: *Selecting the proper solder; Using a solder pot for tinning; Preparing slip ring repair sleeves; Preparing armatures for dipping; How to keep solder off selected areas; How to dip an armature; and Solder pot safety and ventilation.*



Chapter 12a—Spot Welding: *Miller welder setup; Controlling pressure; Controlling time; Importance of tip lubricant; Tip maintenance; Types of tips; and Specially shaped tips.*



Chapter 12b—Spot Welding continued: *Attaching brush leads to brush plates; Attaching brush leads to field coils; Pitfalls of spot welding aluminum; Attaching solenoid ground wire to steel; and Attaching copper to steel.*

ERA e-Training:
- **What you want,**
- **When you want,**
- **Where you want,**
- **As often as you want,**
- **As much as you want.**