



**PARTS, SERVICE
and SUPPORT**

- CUSTOMER CARE
- WARRANTY
- MCI PARTS STORE
- SERVICE CENTERS

TECHNICAL SUPPORT

- Technical Training Institute
- Service Bulletins
- Maintenance Tips
- Preventive Maintenance
- Quick Reference Charts
- Publications

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- Emergency Roadside Assistance
 - Locate a Service Center
 - Locate your Customer Solutions Team
 - Parts Credit Application



MAINTENANCE MATTERS

Amping it up: Becoming a good electrical troubleshooter, one volt at a time

Electricity is invisible. You can't see, hear or feel it (at least not at the lower voltages we deal with in automotive use). To truly understand it, one must study it.

Traditionally, many in the coach and automotive industry have taken a casual approach to learning about electricity. Take two hypothetical technicians, "Joe" and "Sam." Joe doesn't know much about electrical stuff but thinks he can fix almost anything based on his hands-on experience and various electrical repairs he's made over the years. Sam has a good grasp of electrical theory and thinks he can fix anything as long as he has diagrams and test equipment — but he doesn't always grasp the intricacies of coach operation, i.e. why there are unloaders on the A/C compressor or why there are pressure switches to activate them.

With their respective limited knowledge, neither Joe nor Sam can possibly keep up with all the changes in coach technology, and both will have to resort to a lot of expensive, time-consuming trial and error. Both need to know there's a better way.

The key to becoming successful in solving electrical problems is developing a broad general knowledge of mechanical theory, electrical theory and skills simultaneously. The rub is that one can see and experience mechanical workings more readily than electrical workings.

What to do? In a word, "study." Learn about electrical theory; perhaps not with the same amount of detail that an electronics engineer does, or as fast as an engineering student does, but you do have to understand the basics concepts of volts, amperes and Ohms, and their relationship with one another (Ohm's Law). You also need to gain an understanding of the flow and control of electrical current. Additionally technicians need to recognize and understand the electrical components that are encountered in the vehicle being worked on.

How do people learn all this? They learn it by going to a class, reading about it in a book, or both, one bit at a time. Once each small concept is understood, the careful student can apply that knowledge until it becomes yesterday's news, and then build upon it with each next little step. This requires no small amount of persistence and a great deal of interest. A great place to start the quest is with one of the electrical classes offered by [MCI's Technical Training Institute](#). This is a lifelong pursuit, and the results and rewards are cumulative.

The FYI from MCI editorial staff values your feedback. Please e-mail any suggestions, comments, or ideas for future articles to fyi@mcccoach.com.