

My Quest for Master Model Railroader

My 7th AP Certificate: Model Railroad Engineer – Electrical

article and photographs by Jim Wanlass, MMR

If you have been following this series, you already know it is about my Quest to become a Master Model Railroader. If you have read the requirements in the Achievement Program, you will also know you need at least seven certificates out of 11 different subjects and at least one from each of the four categories. Seeing that this is the seventh article, you can see I have done it! When I began writing the first article, I had not yet finished, but because I had this deadline and very little left to do, I knew I could do it, and I did!

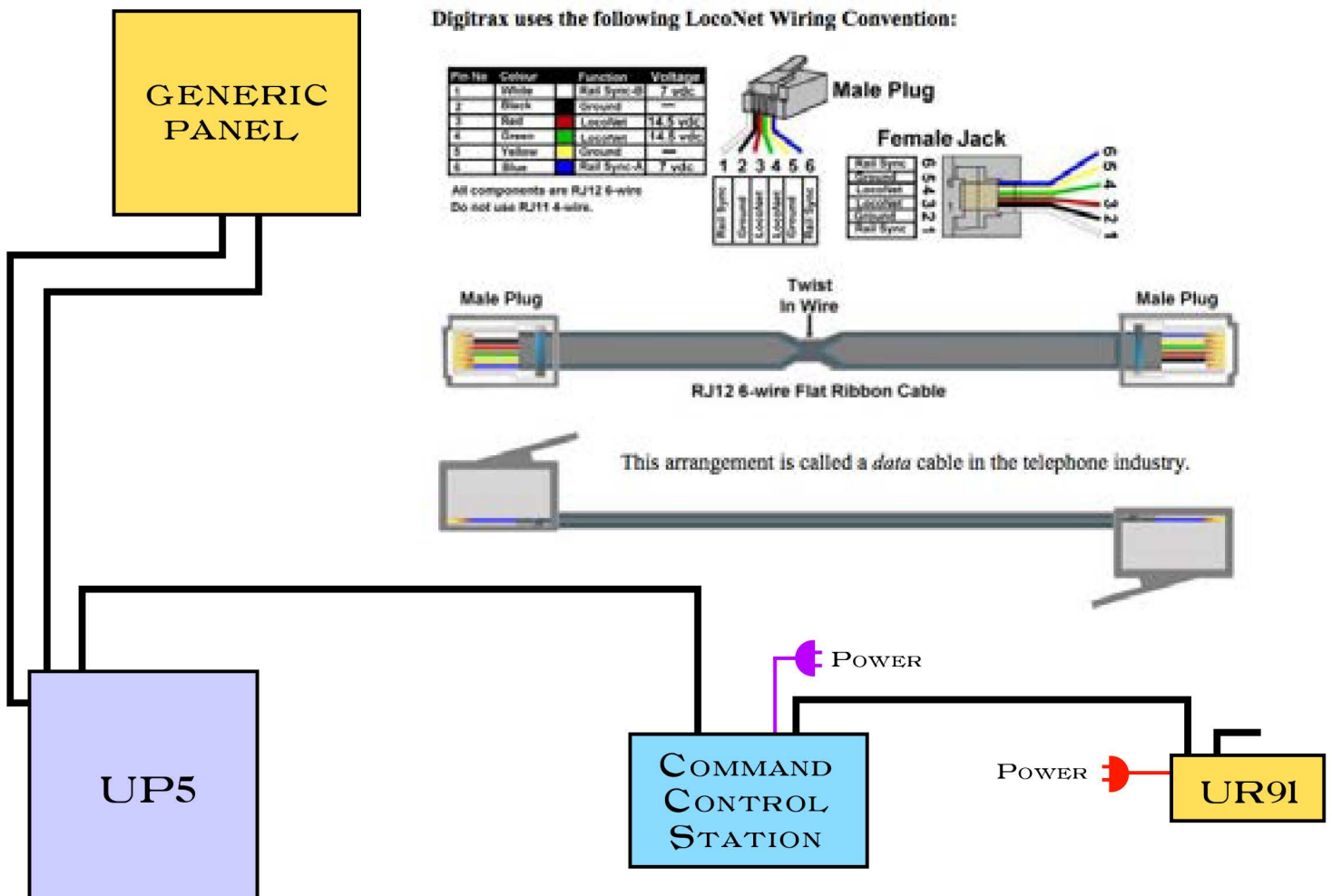
Looking back 17 years to when I first heard about the AP seems so long ago, and I

remember it being a goal for “someday.” Five years ago, after getting my Golden Spike Award and deciding to actually start working toward MMR, seems like only a short time ago. I hope that in sharing what I have done, you can see it isn’t anything super-extraordinary that others cannot do. I have taken it one step at a time and built things I have already wanted to build anyway. I have projects completed that I have wanted to finish for years. I have a small railroad that runs very well, and I enjoy railfanning it and switching the yard. I have been able to expand my skillset and get better at some

things and try out new techniques. It has been a lot of fun.

To those who don’t know if they’d like to try it, I say, “Go for it!” Expand your horizons. Most of the items are things you would want to do anyway if you are working on a layout or building models for a model railroad. I know some don’t care to get the recognition. It doesn’t have to be about that. For me, I have learned so much, and the extra interaction with others has been a big benefit.

When I earned my Eagle Scout, I didn’t want an Eagle Court of Honor but decided to have one when I was told it was about



COMMAND CONTROL THROTTLE BUS LINE SCHEMATIC

more than just me. I was now an example to the younger Scouts and what they could achieve. It was also for my leaders and parents, to thank them for all they did to help me. As my Division AP Chair, I am trying to help as many as I can. Sure, the end goal for most is MMR, but the short-term goals I see are more about improving one's self along the journey and the interactions we share. It is great to see someone bring back a model they reworked when it was just short of a Merit Award, with the improvements we suggested, so that it could now be worthy to earn a Merit Award!

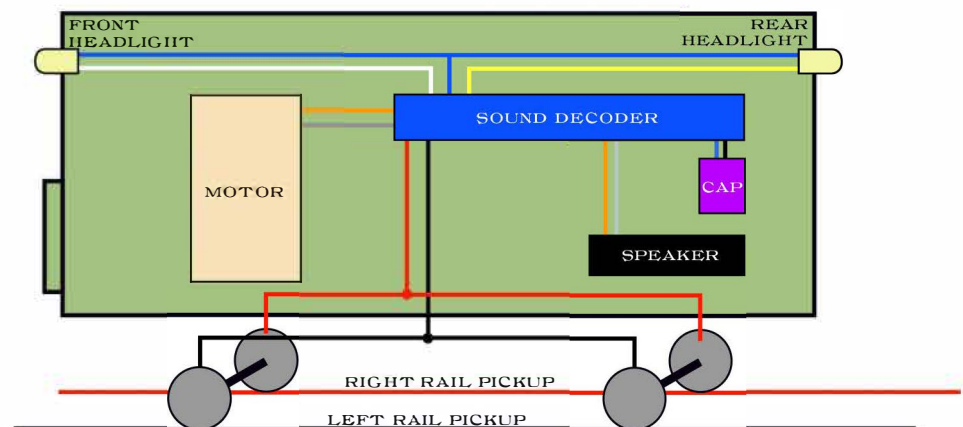
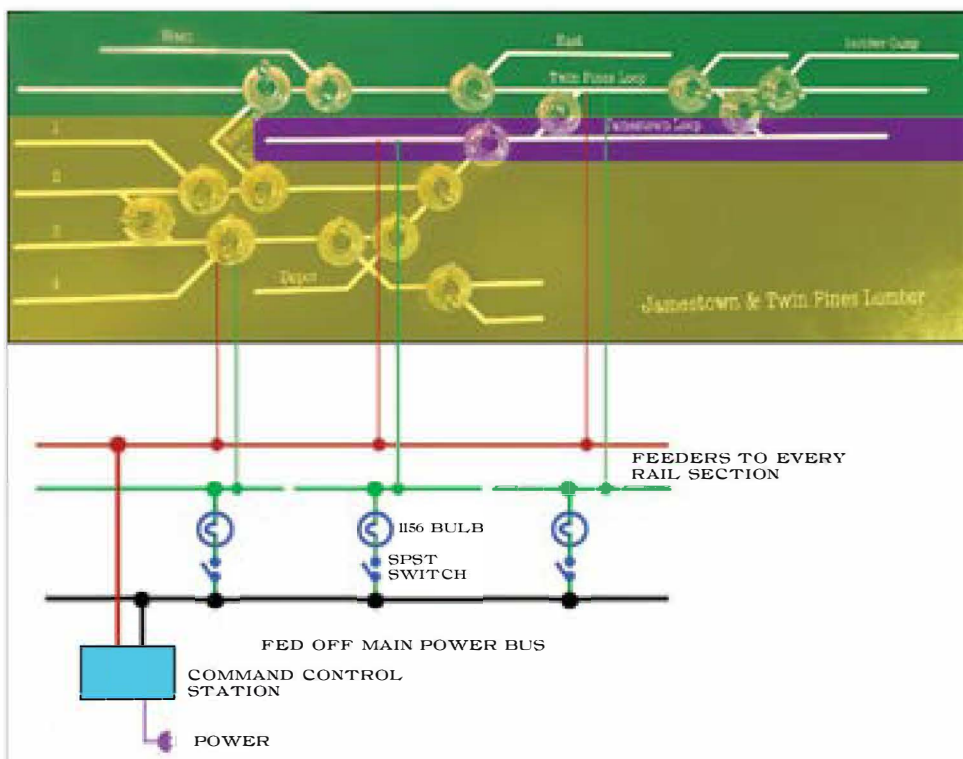
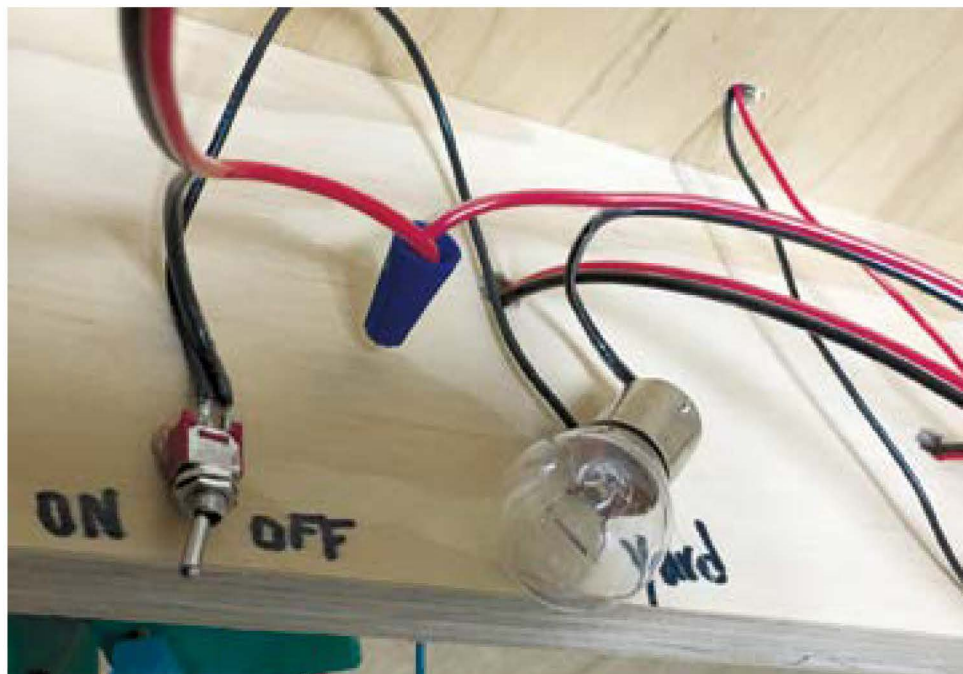
In last month's article, I mentioned how the Civil and Electrical are complimentary certificates. As an example, much of Section A & B for Electrical had already been done to pass Civil. I also mentioned I was close to the Motive Power Certificate. I already had one locomotive done, and I had started to scratchbuild another. The third locomotive was one I had planned for one of the Electrical requirements, so that's why I was debating on which certificate to finish first. I figured if I finished the third locomotive on my list now, and the rest of the Electrical Certificate requirements, then I could finish the scratchbuilt locomotive later for an eighth AP Certificate without too much more effort.

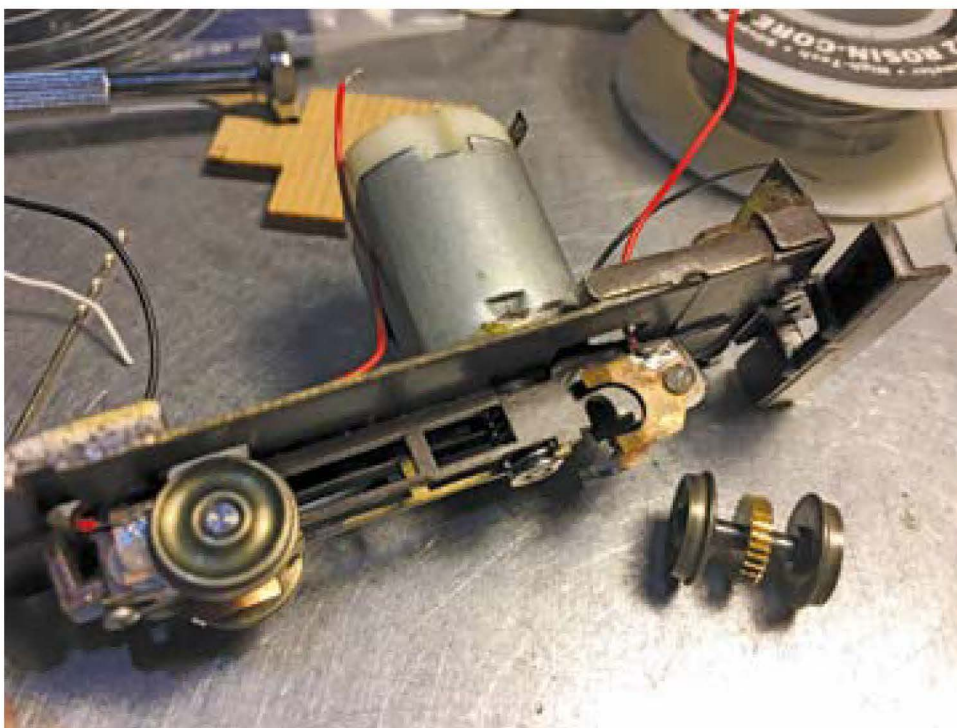
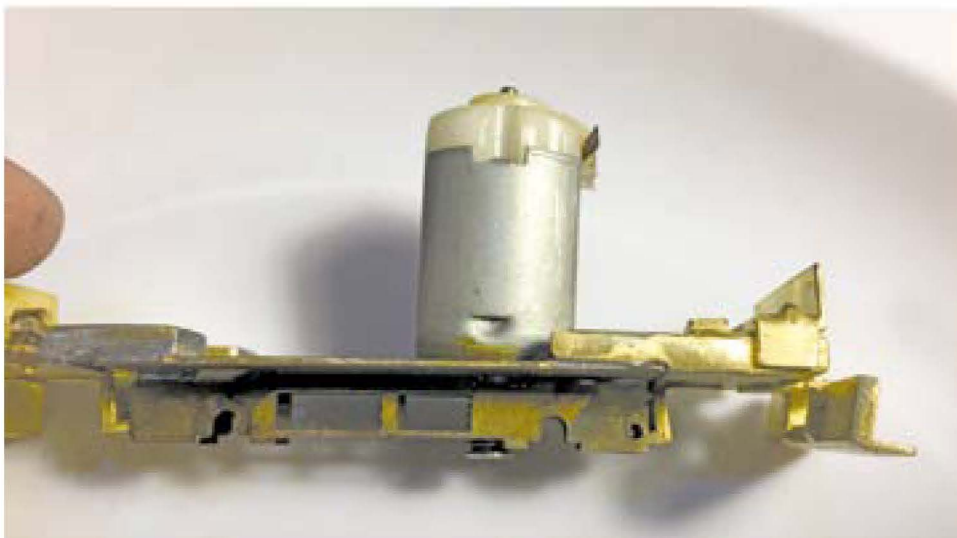
Having decided to finish the Electrical Certificate, I made a list similar to what I had done for the Civil Certificate. Again, in a couple of the sections, there are a number of items to choose from to complete the certificate. My decisions were based on a combination of which ones I thought might take the least amount of time and what I was actually interested in doing. I figured if I chose something just to pass for the certificate but wasn't really interested in doing it, I might never get it done, even if it might be quicker to do than another item.

Upper right: The layout is divided into three blocks that can each have its power turned off by flipping a SPST switch. If there is a short in one of the blocks, an 1156 tail light bulb will come on indicating which area has the short and taking the extra load so that the other blocks can keep running. Jim first learned about this idea from one of Joe Fugate's videos years ago.

Middle right: A photo of the control panel was used with colors overlaid to show how the layout was divided electrically. The simple schematic shows how the 1156 tail light bulbs and SPST switches were integrated into the wiring of the layout.

Lower right: Simple schematic showing how Jim wired his HO_{n3} speeder. The kit only had wires going from the motor to one set of wheels. Jim added power pick-up to all wheels to ensure better contact with the rails because he also added a DCC sound decoder with a speaker and both front and rear lights. Seeing a visual schematic can make it easier to understand as well as aid in troubleshooting should an issue arise.





I didn't really know how long some items would take until I got started doing them, so time wasn't really a main factor. I narrowed the long list down to the items I was most interested in doing. I researched the top items I was considering and eventually checked them off the list once finishing them. Keeping track of what I did — and taking pictures along the way — helped to complete the paperwork when the time came.

One item I decided to do was to run a DCC throttle buss line around the layout. With a smaller layout like it is, do I really need that? After all, how many years did I have it running without adding extra locations to plug in the throttle? It turns out I don't really need it, but it is much better with it, and I learned some lessons by doing it! Until then, I could only run from one location, which worked. I had a really long cord on my throttle, but it was still a little inconvenient. One thing I also did while installing the other jack locations was to hook up the wireless system I purchased many years ago. *Wow!* It sure is more convenient.

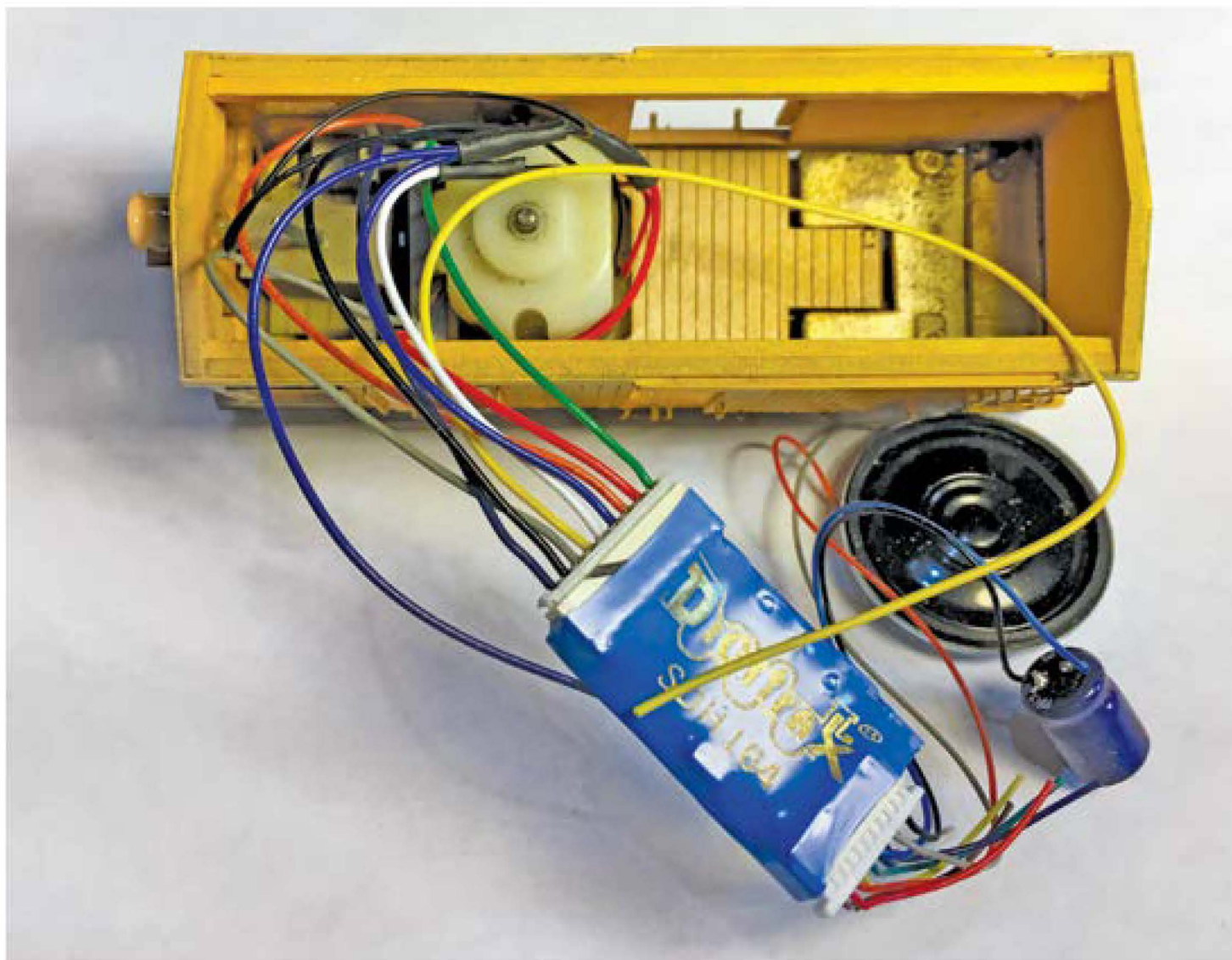
I can also run trains with my iPhone now, which is also a lot of fun! I didn't have to make my cables, but I did. I had the material on hand already, so I made the cables the exact length needed to run to each of the jacks. Doing the research to get things right was a valuable exercise too. I kept having an issue with one cable, and it turned out, after some further testing, it was a defective jack head! The experiences I learned doing the wiring on the smaller layout has prepared me so that when I'm ready to expand, I can use the lessons I've learned to make it easier to get the job done.

An additional aspect of the Electrical Certificate is including the schematic drawings for your electrical work. In general, I understand and can read schematics, but if you find drawing your own a bit challenging, I suggest looking at examples on the internet. It doesn't have to be fancy, but since I know how to use graphics programs,

Upper left: After years of having the little HO_n3 speeder "mostly done," Jim finally completed it with the help of having a self-imposed deadline to finish it for the Electrical AP Certificate. With the door open, one can barely see the speaker. Modeling clay was used to create a seal behind the speaker.

Middle left: At one point, Jim had the speeder running but there was an issue with the decoder, and it had poor pickup. Wanting to make sure it ran well, Jim completely disassembled the model to ensure each item was completed as it should be.

Lower left: After every step, Jim tested the motor and pickup making sure new holes drilled and wires added did not cause any issues. It now runs extremely well and is fun to watch it go down the tracks.



that's what I used. You can see my packet on my website JamestownTrains.com for an example of what I did. Don't overcomplicate it. If you are having troubles, contact your Division AP Chair, and that person can help you figure out what to do.

In the end, after getting my Civil, it only took one more month to complete my Electrical requirements. As I have stated in other articles, I have been working on these two for the last five years a little bit at a time while earning my other certificates. I was closer to finishing Civil, so I finished it off first. I wanted to get it done so that I could then focus my attention on Electrical. Some people complete them at the same time, but I really didn't want to wait. I felt that by competing Civil and then Electrical I could better see the progress I was making. At that point, I was so close to finishing what was needed for MMR that every little accomplishment I could see helped.

Like I've said with all of the AP requirements: If you are working on your layout or

a club layout, most of the items required to achieve Master Model Railroader are things you would be doing *anyway*. Sure, there may be a few items you would not otherwise do, but for me, those are the things that have helped me to grow and learn more in this hobby. Model railroading truly is "The World's Greatest Hobby!" There is so much to learn and do.

Becoming Master Model Railroader #585 is an exciting accomplishment that I have looked forward to for years. Does it make me better now that I have achieved it? I believe so because I have learned new skills and improved upon existing ones. Does it make me better than others? Absolutely not! I know there are still many things I have to learn and can continue improving the skills I have. One of the best things I can say is, "I can do it!" because I have. I know I can set goals and finish them. There is no rush either. This hobby is there when you want and will wait for you if you need a break, or more important things come

Above: While there appears to be a lot of space in the little speeder, it quickly gets filled when you add a speaker, decoder, extra details to add more weight and, of course, all the wires to go along with it. The decoder was able to be put completely in the roof of the speeder so that the doors could be left open to see details inside and let the sound from the speaker escape.

up. Being able to set goals takes my "train time" from just puttering around to actually getting things done and having something to show for my time while I'm having fun!

What is there now for me to do? Is there more to come? There are more certificates. I know I want to do scenery for my layout, and there's an AP Certificate for that. As my Division AP Chair, I have been helping others with getting their Merit Awards and AP Certificates. I hope you say "Hello" when you see me at the 2019 NMRA National Convention in Salt Lake City, Utah. There are many of you I've just met online, and I look forward to meeting you in person, so you can tell me how your Quest is going. That way, we can

enjoy the journey together! 🚂