

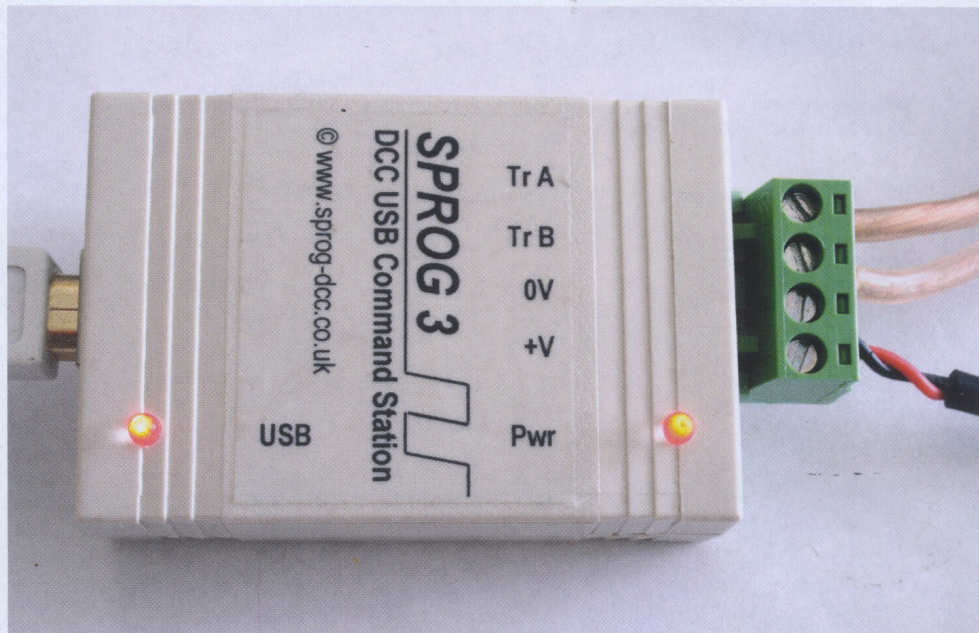
A Simple DCC System

article and photographs by Mark Juett

Three of us met for supper one evening prior to our monthly NMRA Division meeting. While waiting for our food, Bob Myers asked me if it was possible to set up a simple DCC system using JMRI and his cell phone as a throttle. I thought for a second and replied that it should be possible with the addition of a serial communication device between his computer and the railroad. I recalled that SPROG 3 could be used as a command station. Bob already knew this — he had been doing some research of his own. Bob is a great guy, a member of our NMRA Division, and one of our regulars on my railroad. I quickly promised Bob that I would design a simple DCC system for him. If you have a smaller railroad and have not yet adopted DCC, follow along as we implement a low-cost DCC system, which can also apply to a portable or modular railroad.

I have used the SPROG 3 with Decoder Pro for quite some time now. It is my preferred way to configure DCC decoders. I can't say enough positive things about both of these products. I selected the SPROG because of its reputation to change CVs on sound decoders effectively without a booster, which has been an issue with some devices. The fact that SPROG 3 would serve as a command station never was a factor in my decision. However, given that it does work as a DCC command station is a bonus. The information on the company's website states that you can use as many as 15 throttles — more than enough on most model railroads.

Previously, I have used my iPhone with the WiThrottle APP to run trains on Jack Rodkey's railroad. He used JMRI (DecoderPro and OperationsPro) and connected the WiThrottle portion of JMRI to his Digitrax command station by means of



a PR3. I have reports of others with NCE systems doing the same, but information is limited on the specifics. If you have experience applying WiThrottle to NCE, share your experience with us. As of this writing, I have not yet set up this hardware and WiThrottle application on my railroad. We are using Digitrax throttles, both simplex and duplex. As such, I was looking forward to using this aspect of JMRI and learning something new. In addition to DecoderPro, I have been using the operations section of JMRI to create switch list for our operating sessions. Both work very well.

The components that we will need are:

1) A computer that will run JMRI. Most of us have one available that will work. See the July issue of this column for details on computer hardware requirements and available versions of JMRI.

2) A wireless router. Again, most of us have one. You may want to set up a second router separate from your home network if you are concerned about security. If you do not have a spare, you can buy a new router for less than \$20.

3) A cell phone (smart phone) or two. Most households have at least a couple.

Above: The amazing SPROG 3 acts as a command station and can be used with DecoderPro. The small device can access and manage up to 15 throttles. The USB cable to the computer is on the left-hand side of the box; the track and power inputs are on the right. Two LEDs indicate the function of the SPROG.

Also, your operators who come over will likely have one on them. If they have not yet installed a throttle application, it is easy and inexpensive.

4) An APP to use the phone as a throttle. iPhone needs WiThrottle. The Android needs Engine Driver. Both are available for free in a reduced version. The full-function version is available for \$10. That makes a pretty inexpensive throttle.

5) SPROG 3 is sold through most model railroad hobby stores, online, or contact <http://www.sprog-dcc.co.uk/> or <http://www.bbmgroup.com/sprog/shop.html>.

6) JMRI is a free download at <http://jmri.sourceforge.net/>. A copy on CD is included with the SPROG 3.

Now that you have gathered the above components, we can begin installation and setup. I suggest starting with a wireless router if you do not have one. It is a simple matter of plugging in a LAN cable from the router to your computer, con-