Tanner Declaration Exhibit A
WinLok 1.5 Brings Your Computer Into the Train Room

by Larry Puckett

I n the January column I promised that this month I would give you an introduction to the future of using your computer to run your model railroad using off-the-shelf components. In the last few months there have been a number of ads in the hobby magazines for computerized layout control systems that are based on conventional cab-type blocking with routing being handled by the computer. These systems use conventional 12V DC power locomotives and some type of "memory" to digitally memorize your layout and route trains over it. What these systems fail to offer is the flexibility of a command-control system like the new NMRA DCC. At present I am only aware of two computer systems that interface with DCC systems—Engine Commander from Kamm and WinLok from ThaneSoft.

First, let's take a look at WinLok's capabilities, then discuss its shortcomings and finally gaze for a moment into the crystal ball for a look at what enhancements the near future will bring. WinLok is designed to provide two basic functions: 1) layout control through Digital Command Control (DCC) stationary sensors and decoders, and 2) locomotive control through mobile decoders. First I want to talk about using WinLok to control locomotives, then I'll discuss the layout control functions and finally get to the crystal ball gazing.

Setting WinLok up is really straightforward—it is self installing. Data entry follows the usual Windows drop-down menu and point-and-click mouse entry. Connecting the computer to the Digitrax DC100 booster/LocalNet controller was equally easy. I made up my own controller cable following the instructions provided and materials purchased from Radio Shack. If you're reluctant to try out your electronic skills, pre-built cables are available for what the parts would run you. I did run into trouble getting the decoder out of 14-speed step mode, but finally I went through the setup steps EXACTLY like the manual says and darned if it didn't work—when all else fails read the manual! Speed control was just as smooth with WinLok as I have gotten with the Digitrax DT200. I had one question concerning the pin assignments on the connector cable that was answered within one day by the owner of Digi RR via a ComServe message.

To keep this simple, let me say that locomotive control is basically the same as I've described in previous discussions of the Digitrax DCC system. The big difference here is that you control the computer to generate the DCC signal instead of the DT200 or the DB100. Within WinLok a locomotive controller is set up for each locomotive/decoder address. The controller is an on-screen representation of a hand-held throttle containing a slider bar to control speed, a digital readout that displays an approximation of locomotive speed, and control buttons for step, direction, and functions. Each controller can be set up to control up to three decoder-equipped locomotives in MU or layup mode. Programming differs slightly depending on the type of decoder you use (Lenz, Marklin, Arnold, Trix, ZIMO, or Digitrax). In the case of the Digitrax decoders, you can select 14-, 26-, or 138-step speed mode, acceleration and deceleration rates, and the initial, midpoint, and maximum voltage settings. Different drivers are provided for all the decoder types, along with a MultiDriver that can be used to simultaneously control all of the different types. Point-and-click mouse entry makes programming a lot easier than the usual method of trying to hold down two buttons on the Digitrax GT4 or DT200. Also, because all configurations are stored on your hard disk, you never have to re-enter locomotive assignments.

Layout control is accomplished using stationary decoders to throw turnout from the computer and sensor module that monitor block occupancy. All of the decoder (both stationary and mobile) addresses and information, along with locomotive information are entered into their respective databases. The information in the databases is used to set up switchboards that look sort of like the old gongs of Atlas turntable controls. The advantage of these is that up to 16 switches can be controlled by clicking on its number on the switchboard. The memory board allows you to combine control of several switch machines simultaneously into several routes that can be set in a manner similar to using a dumb-matrix control system.

Another neat feature of WinLok is the ability to build a schematic of the layout or section of track to be controlled, along with switches, signals, and routes. In use, the mouse cursor can be used to activate switches and select routes by clicking on them or the switchboards I described earlier. Basically the computer display can replace the normal control panel and you or a dispatcher can control the layout from the computer. The really important thing to realize here is that all of these switches and sensors are accessed through the serial (or a parallel) port replacing all those wires that normally have to be run between the switch and sensor modules and a CTC board.

There are a few limitations in WinLok 1.5. First, all controllers are through the computer—that means that walk-around control is out. This is reflective of the European heritage of WinLok, where everything is computer run from a central control panel, much like was done in this country 20 years ago. It also effectively limits you to a single operator since the mouse cursor or keyboard is used for control. Another holdover from the European version is the German language headings in the help file. I've been assured that these will be changed in the version 2.0 release. With respect to decoder functions, the 28-step speed programmability is not supported. Otherwise, the program was easy to use, and although it could use some editing and grammatical tidy up, the manual was better than many I have seen. To make it easier to get an idea of how it all works, demo versions of all the functions are provided along with a tutorial explanation.

Now let's look into the future a bit. Version 2.0 of WinLok promises to alleviate the limitations I just mentioned. It will allow Digitrax users to communicate 34-functionally through the LocalNet system with their locomotive and stationary decoders. Most importantly, it will allow us to use the DT200 or DT72 "puny" decoders with the computer giving us a complete walk-around system. The computer will be able to sense the position of turnouts and control them, and a new level of programming will allow you to autotrace trains. Once version 2.0 and the new Digitrax Locomotives decoder and stationary decoder are available, I'd be a complete test of the combined system to automate a portion of a layout. In anticipation of receiving letters from fans and manufacturers of other types of DCC equipment (Lenz, Marklin, Arnold, Trix, ZIMO, System One), I would like to say at this point, I realize that we have...