Tanner Declaration Exhibit A

WinLok 1.5 Brings Your Computer Into the Train Room

by Larry Puckett

In 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 to power locomotives and some type of "memory" to literally 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 TannerSoft.

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 describe 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 DB100 booster LocoNet connector was equally easy. I made up my own connector 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 about 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 damned 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 did have one question concerning the pin assignments on the connector cable that was answered within one day by the owner of Digi RR via a CompuServe 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 your computer is used 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 stop, direction and functions. Each controller can be set up to control up to three decoder-equipped locomotives in MU lashups. Programming differs slightly depending on the type of decoders you use (Lenz, Märklin, Arnold, Trix, ZIMO or Digitrax). In the case of the Digitrax decoders, you can select 14-, 28-, or 128-speed-step 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 MultiDrive that can be used to simultaneously control all of the different types. Point-and-click mouse data entry makes programming a lot easier than the usual method of trying to hold down two buttons on the Digitrax CTL 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 turnouts from the computer and sensor modules 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 gangs of Atlas turnout 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 preset routes that can be set in a manner similar to using a diode-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 layout 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 controls are through the computer -- that means that walk-around control is out. This is reflective of the European heritage of WinLok where everything is commonly 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-speed-step programmability is not supported. Otherwise, the program was easy to use, and although it could use some editing and grammatical tidying 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 BI-directionally through the LocoNet system with their locomotive and stationary decoders. Most importantly, it will allow us to use the DT200 or BT2 "Buddy" throttles 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 automate train routes. Once version 2.0 and the new Digitrax LocoNet driver and stationary decoders are available, I'll do 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, Märklin, Arnold, Trix, ZIMO, System One) I would like to say at this point, I realize that we have
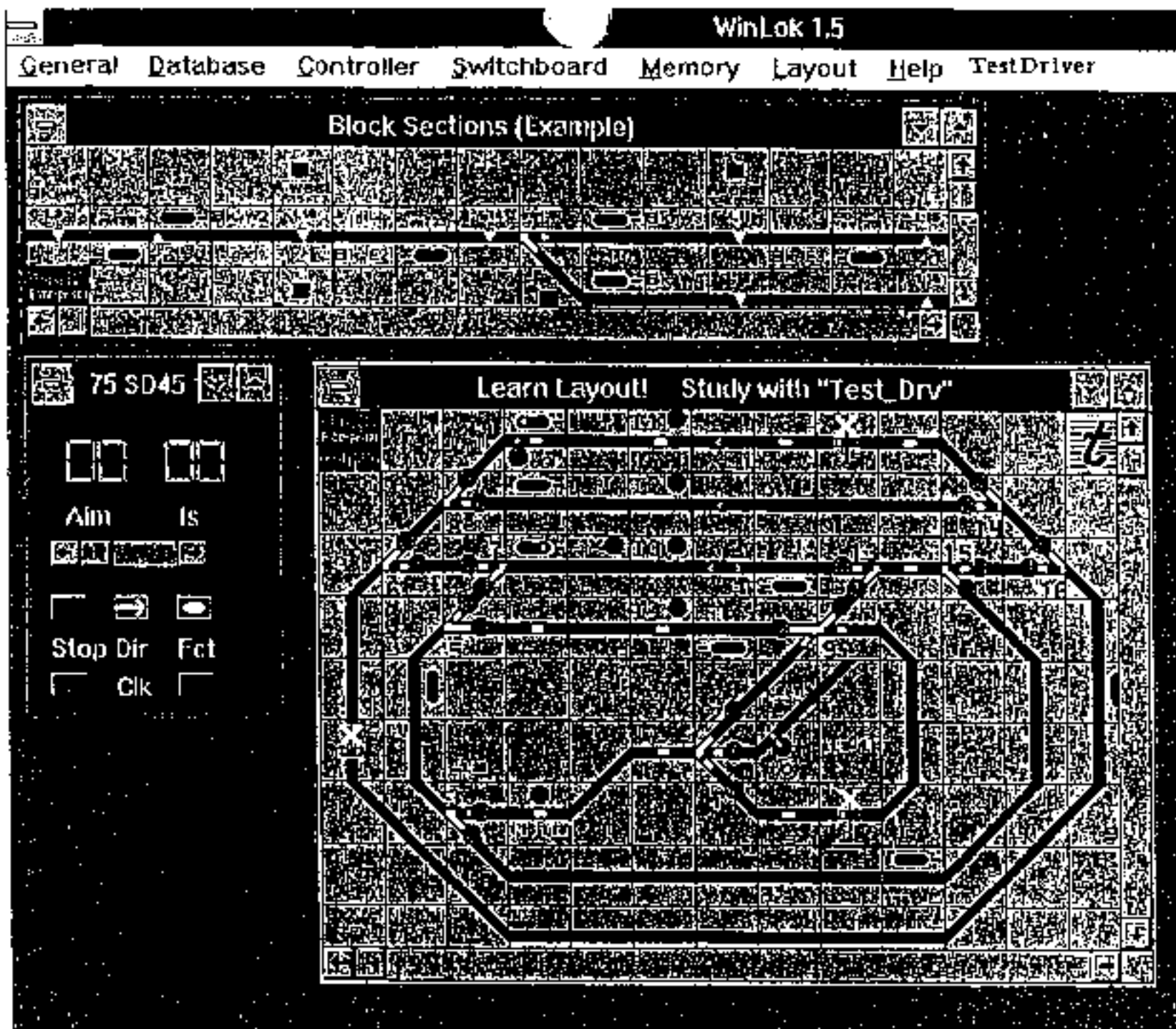
been giving Digitrax a lot of attention, not necessarily because it is the best or cheapest system available, but because they have been very cooperative in providing the materials necessary to do these tests. I would be more than willing to evaluate other manufacturers' systems and compatibility with programs like WinLok.

Several folks I have talked with about the capabilities of WinLok and DCC systems question the need or desirability of automating layout controls. My answer to that is, the flexibility of the system will allow us to automate as much or as little of our layout operations as we desire, while making it a lot easier and cheaper through standardization. For example, the simplest use of automation might be to control hidden staging yards, whereas it could get as complex as automating a display layout. For operations, the computer could run the passenger and through freights, while you and your operators could run the locals or any combination you desire. No matter what, you'll still be in control — having the turnouts connected to the computer need not eliminate local control from a fascia-mounted push-button switch, or automation could be limited just to mainline turnouts.

Basic system requirements are a 386 or better PC running Windows 3.0 or 3.1, mouse, 2.8 Mbytes of disk space, and 2 Mbytes RAM. WinLok retails for $139.95 and a demo disk is available for $30 which can be credited toward the purchase of the full version. A combination package including the full version of WinLok, a Digitrax DB100 booster, two decoders and instructions to build the Loconet-RS232 cable is

priced at $329.90. For those of you on CompuServe the manual can be downloaded from the Trainnet library — look for the WINLOK.ZIP file. For a complete price list with the most up-to-date price information contact Digi RR Enterprises, 10395 Seminole Blvd. #E, Seminole, FL 34648 or you may call them at 813-397-5110.

Now for the rating (1-5, 5 is best):

Documentation	4
User Friendly	4.5
Technical	4.5
Application	4
Value	4
Level	2-5

That's all for this session. Until next time, stay on the right track and don't run out of steam. Send your comments, questions, and programs to: Larry Puckett, 9618 Dublin Dr., Manassas, VA 22110. For those of you on CompuServe my userid is 71064,22 — feel free to leave me a message. If you submit a public domain or shareware program for review in this column please indicate whether or not you are willing to provide copies for interested readers and the conditions for that exchange.   I