



Traction Action

Roger C. Parker



A Visit with Bill Brandt and His Popular Traction Module

For me, Bill Brandt's traction modules have always been one of the highlights of events like the Boston Trolley Meet. The action is both riveting and continuous, the scenery is pleasing, and the modules are at a comfortably high level for viewing the trolleys. I'm never alone as there are usually several other modelers and photographers gathered around.

Bill was kind enough to respond to my questions and provide me with details about the background, construction, and operation of his layout. Although the layout is deceptively simple, I was surprised by the complexity of many elements, such as the electronics.

The Beginning

Although Bill had some Lionel equipment when he was growing up, it wasn't until his first son was three that Bill began modeling in earnest. His first serious layout was a 3' x 5' HO trolley layout intended for his son's room. By the late 1970's, Bill was displaying the layout at local hobby shows.

Joel Lovitch offered Bill a couple of O Scale end modules that he had. They were just bare wood with cork and track: no overhead, no scenery, no wiring. About this time the HO module got damaged; so instead of fixing it, he switched completely to O Scale.

As Bill puts it: "Two end loops is not much of a layout, even if it's modular! So, I built a straight module with a pair of side tracks and a crossover between the two mainlines. I named it 'Yard'. At a local show, a fellow looked at the layout with the three modules and asked if I was looking for company. I said 'sure,' and he built a module or two, both straights, to go in the lineup. We did a number of shows before he was transferred to Dallas, Texas. About this time, the end modules got scenery; one as a city block called 'Town,' the other as country called 'Remote Loop' which became 'Arlop'". Although Bill was following East Penn standards in most cases, he desired an increased layout height. Having obtained 2x2s in 8-foot lengths for legs, he decided to cut them in half and reduce them later, if necessary. He found, however, that a lot of folks liked the 51 inch level. Bill noted, "I think mine was the first modular layout with the higher height."

Layout description

With several more modules built, the layout evolved to what is referred to as the standard configuration: about 23 feet long and ranging in width from 16 inches to 6 feet. There are seven modules in this loop to loop configuration, with a long section of double track and a short section of single track between the loops. All overhead wire is phosphor bronze, one size for the contact wire and a finer size for the span and pull-off wires. From left to right (viewer's reference) the modules are named.

Rinks

The most complex module and the base of operations, Rinks is a two part module covering about 4 x 7 feet. It is modeled after a location on the Lehigh Valley Transit system in Norristown, PA. It was designed from photos using Cadrail. Bill never visited the actual location until after the module was built. The LVT freight station and the apartment house are scratchbuilt, including doors and windows. The model shop building uses wall castings for an enginehouse with windows and freight doors cut into the castings. Street and sidewalks are Durham's water putty, carved and painted. The tree is Scale Trees. The background fence is from Berkshire Valley.

Because there would be a lot of in-street trackage, no ties were used. Thin double sided circuit board was cut in strips and glued to the plywood. Then code 100 rail was soldered to the circuit board. This kept the pavement to about 1/8 of an inch in thickness. Despite this, the module's weight is still marginally too heavy. Switches are handlaid single point, each one made for a specific location. All four are activated by Tortoise switch machines with a spring linkage. Line poles are three piece brass rod and tubing. Electrical sections are in the track to avoid the ugliness that a lot of insulators in the overhead wire would create.

Esses

Esses is a variable width module four feet long, which adapts the non-East Penn single track interface of Rinks to the two track East Penn modular standard. It has the electronics for controlling the entry into the single track section (more on this later). The track layout was also done using Cadrail and is handlaid, using Clover House PC and wood ties with code 100 rail. The switch is a handlaid two point spring switch controlled by an HO Scale Caboose Industries groundthrow. Line poles are made of one brass rod and two pieces of brass tubing so that they look like the stepped steel poles commonly used in cities. On Bill's layout the overhead is designed for pole only use.

The shelter was a kit whose manufacturer is long forgotten. Figures are from miscellaneous sources. The street and sidewalk are Durham's water putty, carved and painted. The bank building is a Les Lewis background printed sheet that was cut apart and pasted on layers of poster board. The front steps, cut walls, and roof are added.

Ecks

Like Rinks, Ecks uses code 100 rails on PC board, three part line poles and very plain scenery. It was designed using Cadrail to layout the curves needed in moving from one distance to the front to the other and to get the switch correct.

Rocky Ridge

Rocky Ridge is a short straight double track three foot long

module started by Bill's sons and finished by Bill. Rocky Ridge utilizes sectional track with code 128 rail. Line poles are wood dowels with double side arm supports of brass rod, brass castings, and wire.

Kingston Point

Kingston Point is a 5-6 foot straight double track module also modeled after a real location: the trolley stop shelter located in Kingston Point Park in Kingston, NY. This was once the location of an amusement park, which could be reached by the Kingston trolley system, by the Ulster and Delaware (U&D) railroad, and by Hudson River boats. Bill created the shelter from scratch, using measurements made on the still existing (at that time) shelter. Kingston Point uses Atlas flextrack again, without cork roadbed. The line poles are of 1/4 inch welding rod with brass castings on the overhead. Figures are Circus Craft and other, cars are by Ertl. Road is of Durham's Water Putty, scribed and painted to be like concrete. Wood timbers in the road crossing are also of water putty.

Arlop

Arlop was one of the first two modules. The track is old Atlas flextrack with code 148 rail and was on cork roadbed. Line poles are wooden 1/4 inch dowels. No brass castings were used at the beginning on this module; some are on the module now as a result of later changes.

A construction style suitable for poles and pantographs is used. This was based on observation of the prototype overhead on the Key System. Block insulators are a piece of perfboard with a hole drilled out to 0.060" diameter. Wires are bent up and through the hole and then separated with a piece of toothpick, followed by CA glue. (This method was learned from Dave Cooper, who used it in HO Scale modules.) The trees are from Woodland Scenic, and others.

Yard

Yard was an early build to give some straight running, along with car storage space and a crossover to allow for reversing the cars without handling. It uses old Atlas code 148 flextrack and switches and no cork roadbed. A small control panel gives route-oriented, pushbutton-control of switches. Line poles are dowels. Overhead uses brass castings instead of wire to hang the contact wire from the supporting wires. On the two sidings, wooden platforms at track level are used. This makes the placing of cars on the track easier - just slide them sideways till the flanges drop into the flange ways.

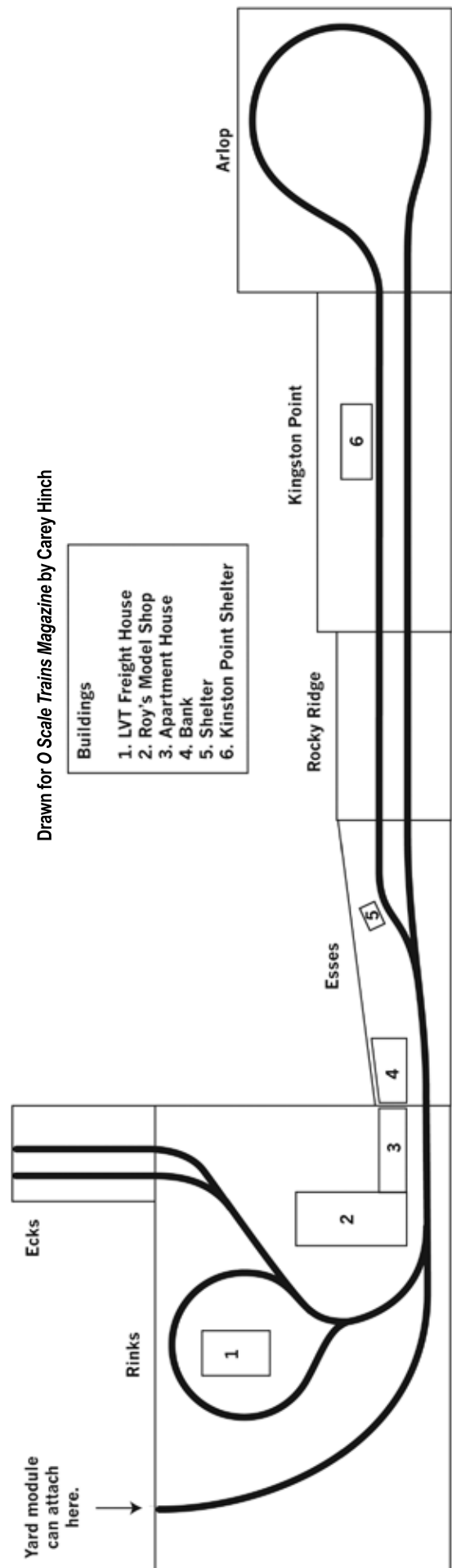
Electrical and 5-car Operation!

The electrical and control system on the modules are basically to East Penn standards. The control panel is located on the Rinks module. A dual power pack is used; one for the mainline, and one for the loop on Rinks (this is not a dual cab system). Switches on the panel control various blocks and the position of the track switches.

Because the standard layout is a loop to loop with some single track, there is a possibility of cornfield meets, and only a single car could be run without paying very close attention. An automatic stopping circuit was devised and is located on the Esses module. It uses three Bruce Chubb current detecting circuits on three blocks on the module. When a car goes onto the single track block it picks a relay that removes power from the block of track in front of the shelter. This relay stays picked while the car is in the Rinks loop. When the car comes back onto Esses and clears the single track block, the relay is dropped and a car at the shelter can proceed.

With this circuitry, two cars can be run automatically and not collide. If a third car is placed on the track, it may come up behind a car stopped at the shelter and collide with it. To allow still more cars to be automatically run, East Penn standard block stopping circuitry was added to both the inbound and outbound tracks on Rocky Ridge, Kingston Point, and Arlop modules.

This created six additional places where cars can be stopped. These operate by using one rail as a signal rail, and when it is shorted to the





April 1982: the first two O Scale Modules. The nearer module becomes "Town" and the far module "Arlop".

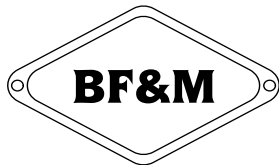
other rail, a relay is picked that opens the connection to a section of overhead. Now up to five cars can be run safely and not collide; the operator can talk to visitors. When this many cars are run at one time, there is a lot of starting and stopping as one car at a time moves up into the next block emptied by the preceding car. But only one car is in the Rinks loop and single track at any one time.



December 2002, the Albany Train Shop: the standard configuration of modules.

Because modern technology (DCC) can make cars all run at the same speed where regular DC cannot, DCC was added to the system a few years ago. A Lenz system is used with the ability to control up to eight cars at one time. The layout is easily switched from DC to DCC and back. This is useful since most guest cars are still DC, while many of Bill's cars now have decoders in them and are used at non-meet shows.

No problems have been found with the Chubb detectors or the East Penn circuits with the use of DCC. Note that these are the original Chubb circuits and not the newer optimized ones for DCC. The next time you're at a traction meet, be sure to visit Bill's layout, and—perhaps—introduce yourself as an *O Scale Trains Magazine* reader. ♦

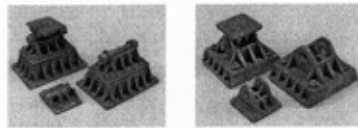


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