

It seems like every Winter I finally have the time to work on my layout's wiring. I probably have the most sloppy wiring of any layout in Colorado. Part of the problem is that I'm a computer software person, not a hardware guy, so I never had a college course in Basic Electrical Engineering.

But the real problem is my desire to model complicated track work and signalling practices like you might find on the East Coast. At one time I figured I had over 50 powered switches on the layout. I've cut that down recently by changing my main yard back to manual switch throws. This will be an ongoing project, but I still need the mainline to have powered switches. Someday I would like to have a full CTC Panel for my Dispatcher.

And I should also mention that I made a lot of these decisions before DCC became practical. I have a sizable investment in CMRI (Computer Model Railroad Interface) and use the older non-distributed boards which means I have a single computer interface under the layout (which is about 24' x 24') and run all circuits from there.

I probably don't hate wiring as most model railroaders do; I just hate laying on my back under the layout getting soldered splattered on me!

So I've come up with two major resolutions:

- 1. All complex wiring will be done on portable modules so that the work can be performed on the work bench sitting down.***
- 2. No soldering will be done under the layout (as much as is feasible).***

And there's a third requirement that came down from above:

Don't spend a lot of money!

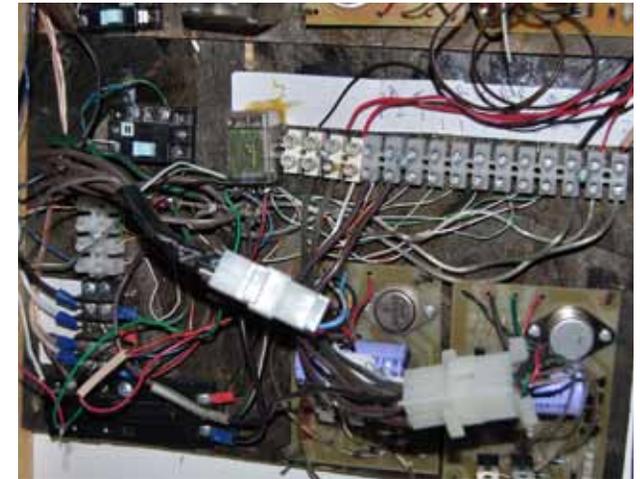
So the following photographs show how I'm trying to follow these desires. I offer them only as suggestions, and I don't proclaim to be any kind of expert on these matters.



I had been using Radio Shack's "Solder Type Terminal Strips". They are relatively inexpensive and in some cases are perfect for connecting wires. But they require soldering. So I came up with the above "Bus Bar" to connect multiple wires to a power source. This uses 1/2" x 1/8" brass bar stock available from Ace Hardware. Each bar has several holes drilled and tapped for 4-40 screws spaced 3/8" apart. All my ground wiring is now connected together in one spot with solder-less crimp connectors.

I'm also old fashioned and use solenoid-type switch machines. Converting to Tortoise machines would be nice, but a lot of work at this point. Being an N-scaler, I mostly use Peco "Electro Frog" turnouts which have the ability to have an auxiliary electrical switch. These are needed to report the turnout position or power the turnout frog. However I've found that after a couple years the contacts become unreliable and basically fall apart.

So now I use an Atlas snap relay in parallel with the switch motor. To throw switches from a computer, I use the CMRI SM1 card; again ancient but paid for. Setting this stuff isn't complicated, just takes a bit of wiring. Wiring I don't want to do on my back under the layout. So this is where I do it all on a 8" X 10" "module" (a fancy name for a piece of plywood painted black). These are built on the workshop and "plugged into the layout using Molex connectors.



I've gone through several iterations of turnout controls. As I visit and operate on other layouts, it has become very apparent that having something right at the turnout on the fascia is preferred. That way you don't have to lean over and push the button on a local control panel. Especially if another crew member is intently working in that area and you don't want to bother them.

I tried making up a simple control panel with a computer graphics panel and gluing it to a piece of plexiglass. But after a year the colors faded (thanks to the glue I used) and started to peel apart. I wanted to do something simple, so this time I found an old metal "blank switch plate" I bought at Home Depot. Using

some masking tape and black paint, and now I have a simple local control panel that I can mount right on the fascia.

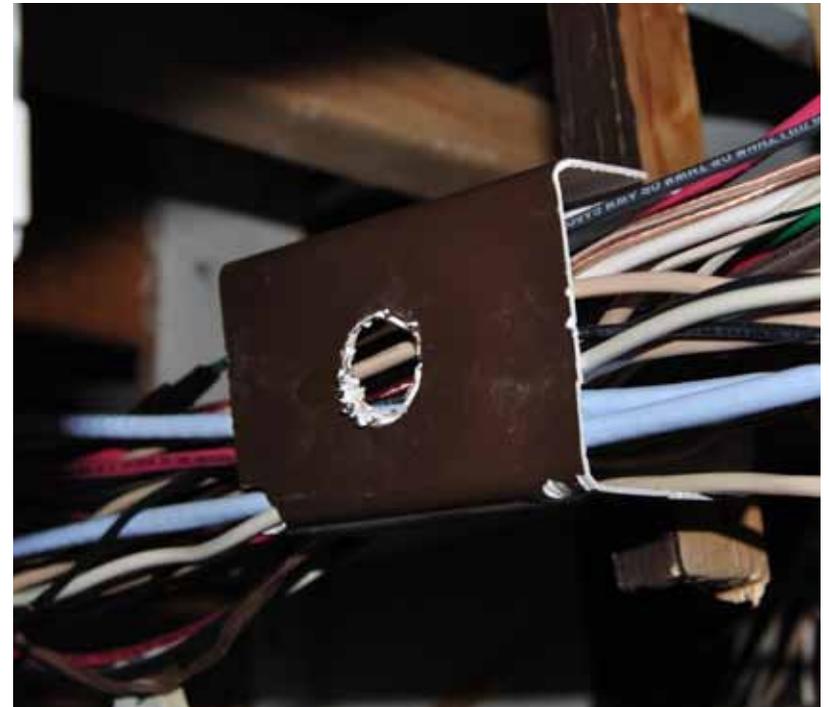
I might also mention that one of the things I've found operating on other's layouts is that when you are following signal indications, most signals will "bleed" the signal color and by looking at the side of the signal, you can see what color it is.

So I've got all this wiring on the layout and with wires constantly coming and going, how do I string it around the layout?

I've tried a couple things; like drilling holes in the bench work; taping it underneath the cross pieces, and building a cable tray integral with the bench work. I must say that I never thought about making the wiring accessible from behind the fascia so it could be worked

Depot has doesn't work as well as it is too flimsy.

And I'll end this with a warning that if you have a layout tour, I'll be looking under your benchwork to see what ideas I can get from your layout. In fact I was at a friends operating session last month and he saw my legs sticking out of the aisle and almost called 911. He thought I had fallen, but I was only crawling under his layout to see how he did his wiring. So if you see my



That's great for a railroad using color lights. But what about those PRR style position lights where all lamps are the same amber color? You almost need to be looking at those lights from directly in front of the signals.

.Not a problem when you are sitting in the locomotive, but when you are in the aisle, sometimes you can't tell what you got. So I have decided to install signal repeaters on some of my switch controls. We'll see if this helps!

from the aisleway. But for now I need to deal with the wiring underneath in a way that wires can be easily added and removed.

A magazine article once suggested using plastic pipe. I did that better by finding some old plastic downspouts I saved after we got our rain gutters replaced. By cutting a slit on one side, the plastic is flexible enough to bend open and close tight. Too bad I got these from the old Builders Square chain 15 years ago; the stuff Home

legs sticking out from underneath your layout, don't get excited! **I**

On page 16 there is a picture of one of the boards under the Greeley Freight Station Museum layout. Obviously they knew what they were doing!