JMRI – Remote Layout Control

Getting Started

Feb 6, 2016

George Sinos

Back in the Hobby Again


The Christmas Train

October 28, 2013

HO Switcher with Christmas train in tow.

I decided to run a train around the base of a small Christmas tree this year. Rather than wait until the Christmas rush, I stopped by a local hobby shop and picked up enough track to make a small circle of the appropriate size this weekend. The newer tracks are much nicer than what we had when I was kid. The solid roadbed is built in and the
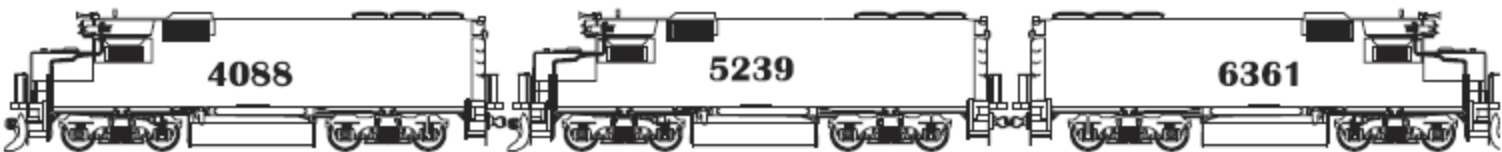
One Thing Leads To Another…
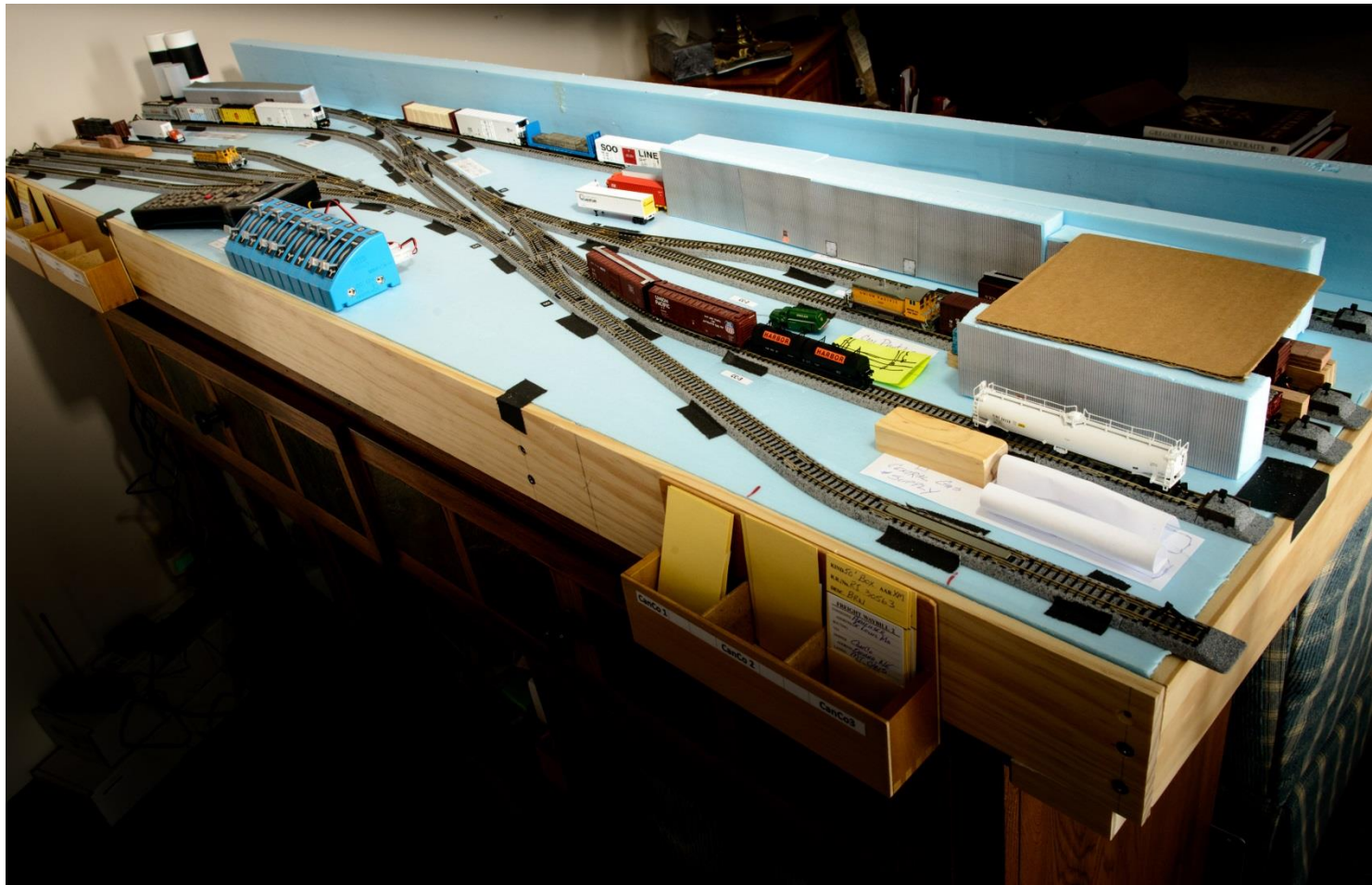
JMRI - DecoderPro

Lead Unit

Trailing Unit

Forward

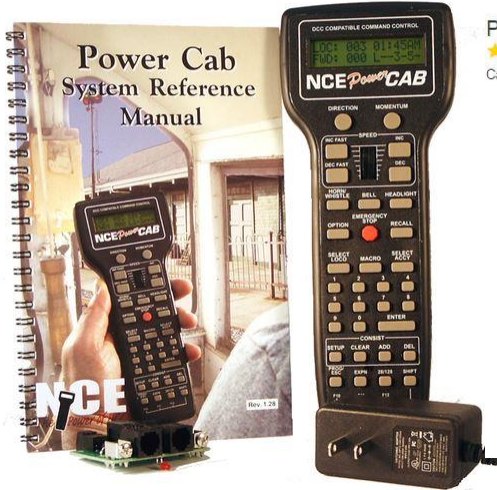| Engine Address	4088	5239	6361
Direction	Normal		
CV 19	40		
CV 21	139		
CV 22	1		

DCC and JMRI

Power Cab Starter Set with 110/240V US Power Supply
★★★★★ 1 Review
Category: Store > DCC Systems

USB Interface for Powercab
★★★★★ 1 Review
Category: Store > Cab Bus Accessories
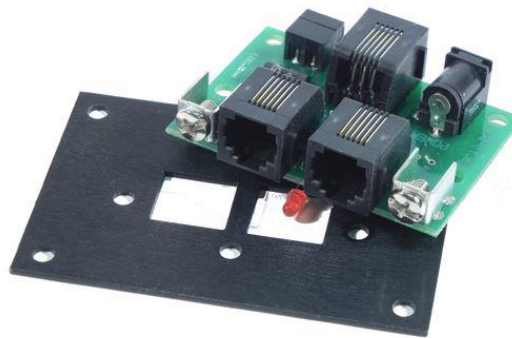
PCP - Powercab Connection Panel
★★★★★ 1 Review
Category: Store > Jacks and Panels
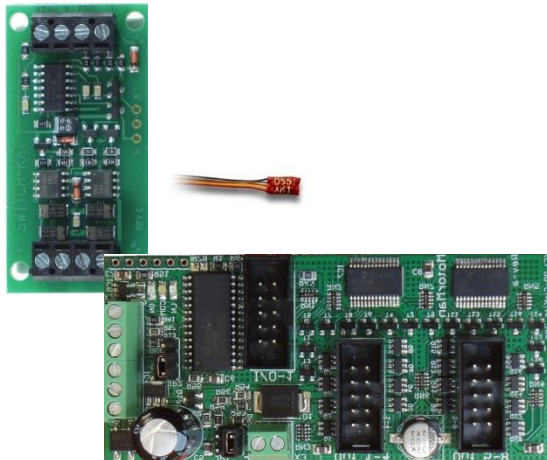
DCC and JMRI - Software
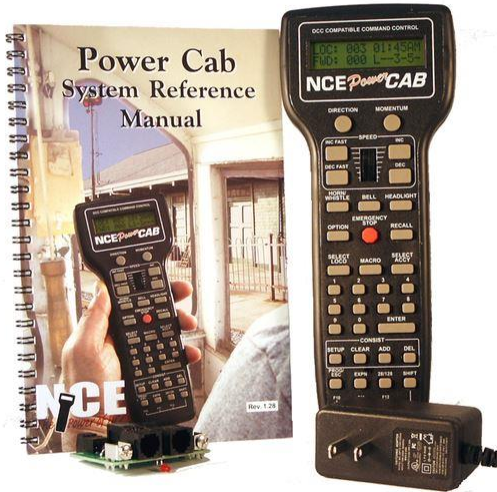

https://www.java.com/en/download/

http://jmri.org/

DCC and JMRI - Hardware

Power Cab Starter Set with 110/240V US Power Supply
★★★★★ 1 Review
Category: Store > DCC Systems
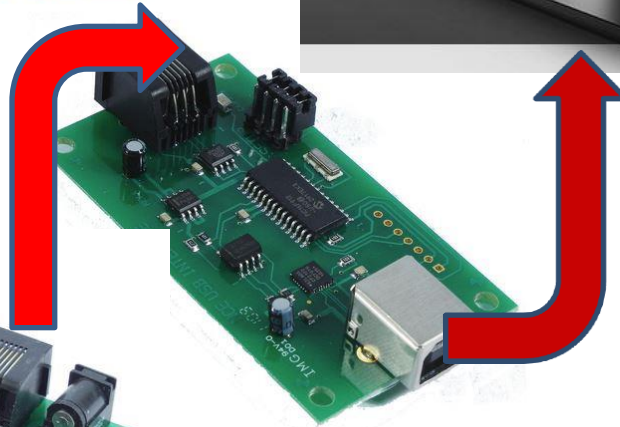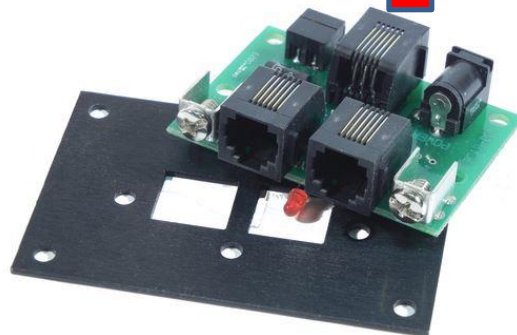
USB Interface for Powercab
★★★★★ 1 Review
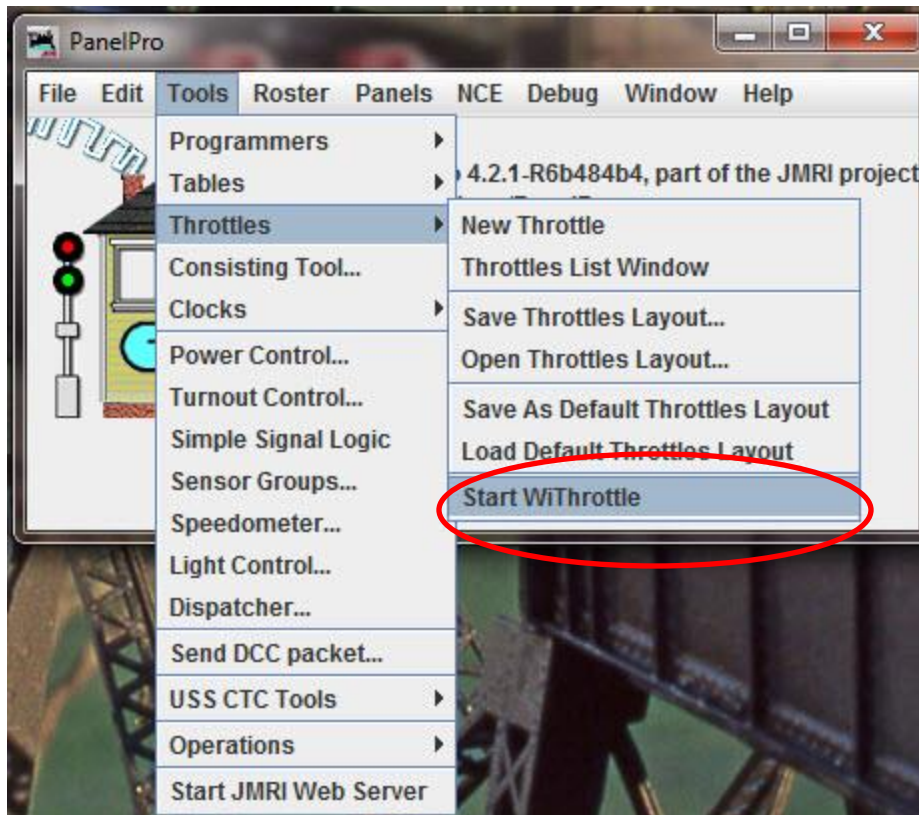Category: Store > Cab Bus Accessories

PCP - Powercab Connection Panel
★★★★★ 1 Review
Category: Store > Jacks and Panels

JMRI – WiFi - Throttles
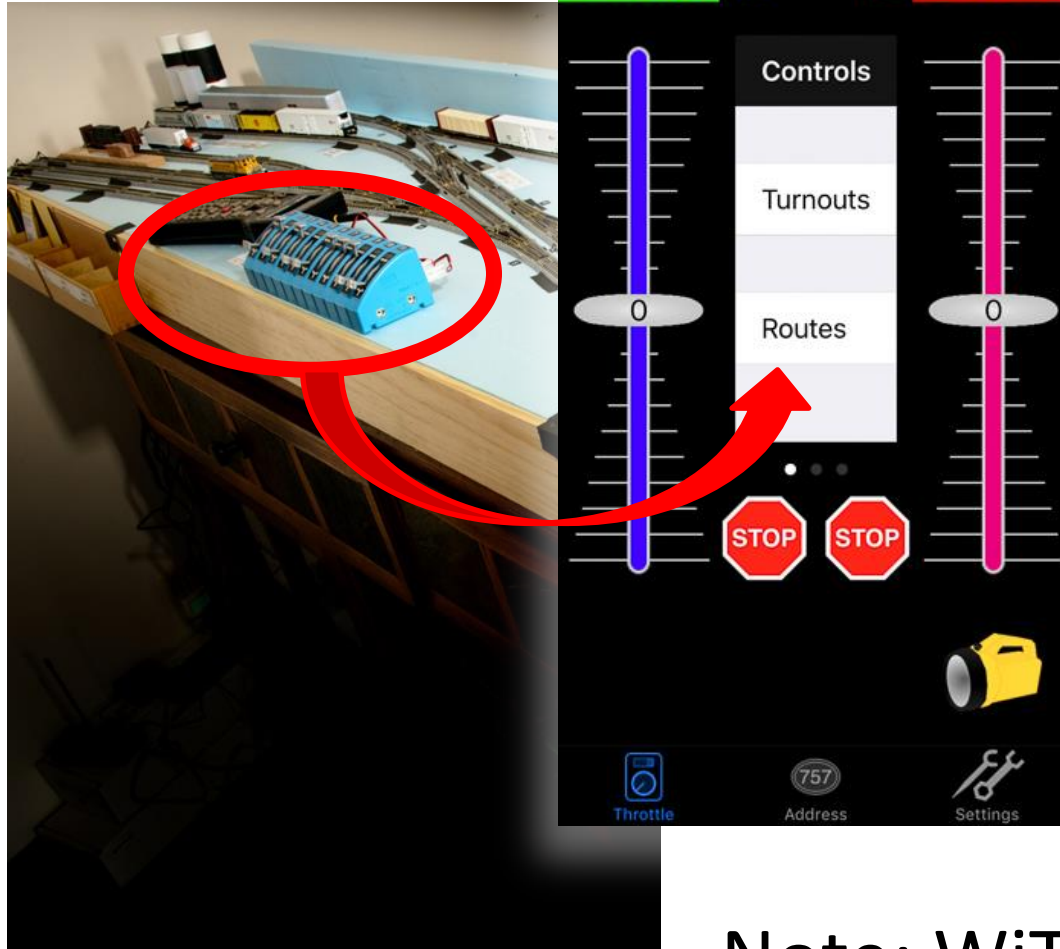
Layout Control

Note: WiThrottle Lite

JMRI - PanelPro

search JMRI: [   ] go

PanelPro™
Panel Editor
Layout Editor
FAQ
User's Layouts
Modular Layout Example
Display a Panel File
Advanced Icons
JMRI Setup

Other Apps
DecoderPro®
DispatcherPro™
OperationsPro™
SoundPro

Tools
JMRI provides powerful tools for working with your layout.
Turnouts
Lights
Sensors
Throttles
Consisting
Blocks
Reporters
Memory Variables
Routes
LRoutes
Sections
Logix
Fast Clocks
Speedometer
Audio

JMRI: PanelPro, an application to make Control Panels

The JMRI libraries contain the PanelPro application for creating simple control panels. This page describes the application, and how to use it.

PanelPro provides two separate ways to create Control Panels:

- The **Panel Editor** lets you graphically draw a Panel exactly the way you want it, and then animate parts of it to show the status of your layout and let you click to control it.
- The **Layout Editor** provides tools to make a smart schematic of your layout while constructing the logic for signals, etc. This constrains how the panel appears a little, but it can save significant time when first bringing your layout up.

Which to use: Layout Editor or Panel Editor?

The Layout Editor builds a "Layout" which is a *logical description* of your entire layout. You only have a single Layout, otherwise it is not possible for the software to connect track elements together across the boundaries between multiple Layouts. A Layout, built with the Layout Editor, can be used for directly controlling elements such as Turnouts and Signals; indeed many users find it very suitable for this task. But, it is primarily designed for automation and semi-automation within JMRI. For example, you can use the Layout Editor to construct a description of your track and its blocks and signals. The software can automatically work out how to set your signals based on the position of turnouts and whether blocks are occupied, and the rules appropriate to your railroad (ie. select the signal rules based on different company practices!, and no need to know how to create the rules to link your signals to the state of turnouts, blocks and other signals !). In addition, the Layout description of your railway can be used by scripts such as AutoDispatcher2 to automatically control your trains. There are many other tools within JMRI which require a description of your railroad and the description comes from the Layout built in the Layout Editor. The Layout Editor has many rules built into it about how track is connected, the naming of blocks, etc.. In order to function, there are constraints on the appearance of track elements and how they are used.

The Panel Editor builds *graphical* control Panels. You can have as many Panels as you like, covering as much or as little of your railway as you like, with overlaps in area or functionality if required. Panels might be diagrams showing the state of the track and signals, or they might be prototypical signaling and dispatcher panels. Or anything else you find useful to control your railroad; you have total flexibility over their appearance. There are several standard graphics sets distributed with JMRI, but it is often necessary to make some of the elements in an external graphics package to be imported as GIF or PNG files. These might be the Panel Background, or the icons to attach to active elements (switches, levers, track state, signals, etc.) which are then placed on the Panel.

Many people use both, with the Layout Editor creating schematic panels to handle the actual configuration for signals and Panel Editor providing exactly the appearance desired. For example, Bob Bucklew has prepared a three part **tutorial** that describes how Panel Pro and Layout Editor can be used together.

Please see our **Gallery page** for examples of how model railroaders have used this on their own layouts. There's also an example of using PanelPro for **modular layouts**.

Rodney Black's **CATS** application is another tool for creating modern-style Control Panels.

The Panel Editor

Recording of December 8 Hangout – "Intro to Panel Pro"

Panel Pro Demonstration Starts at the 40 minute mark

https://youtu.be/APl0NsmIA3U

Three Amigos

Editor Types

Type	Images	Unique Features	Track styles	Signal Control	Train Automation
Layout Editor	Vector based track images and raster based background images	Captures the full connectivity of your layout as you draw it. Only single instances of each vector Item are allowed. Predetermined look and feel.	Vector based items may show both animation and occupancy.	SSL Logix Masts	Uses **Dispatcher** and **Transits.**
Panel Editor	Raster Images used for both track and background images	Multiple instances of any Item are allowed. Uses both supplied and custom images as required for panel visual fidelity.	Raster Images used to show animation. Occupancy info possible, but difficult, to show using track colors.	SSL Logix Masts	None other than by **Scripting.**
Control Panel Editor	Raster Images used for both track and background images	Multiple instances of any Item allowed. Uses both supplied and custom images as required for panel visual fidelity.	Raster Images to show animation. Occupancy and automated train status info shown.	SSL Logix Masts	Uses **Warrants**, **OBlocks**, and **Portals**. Use of **Masts** allows automated trains to operate at signal indicated speeds. Train recording supported.

Video - https://youtu.be/UOfoU_uFv-8

Configuration for Practice
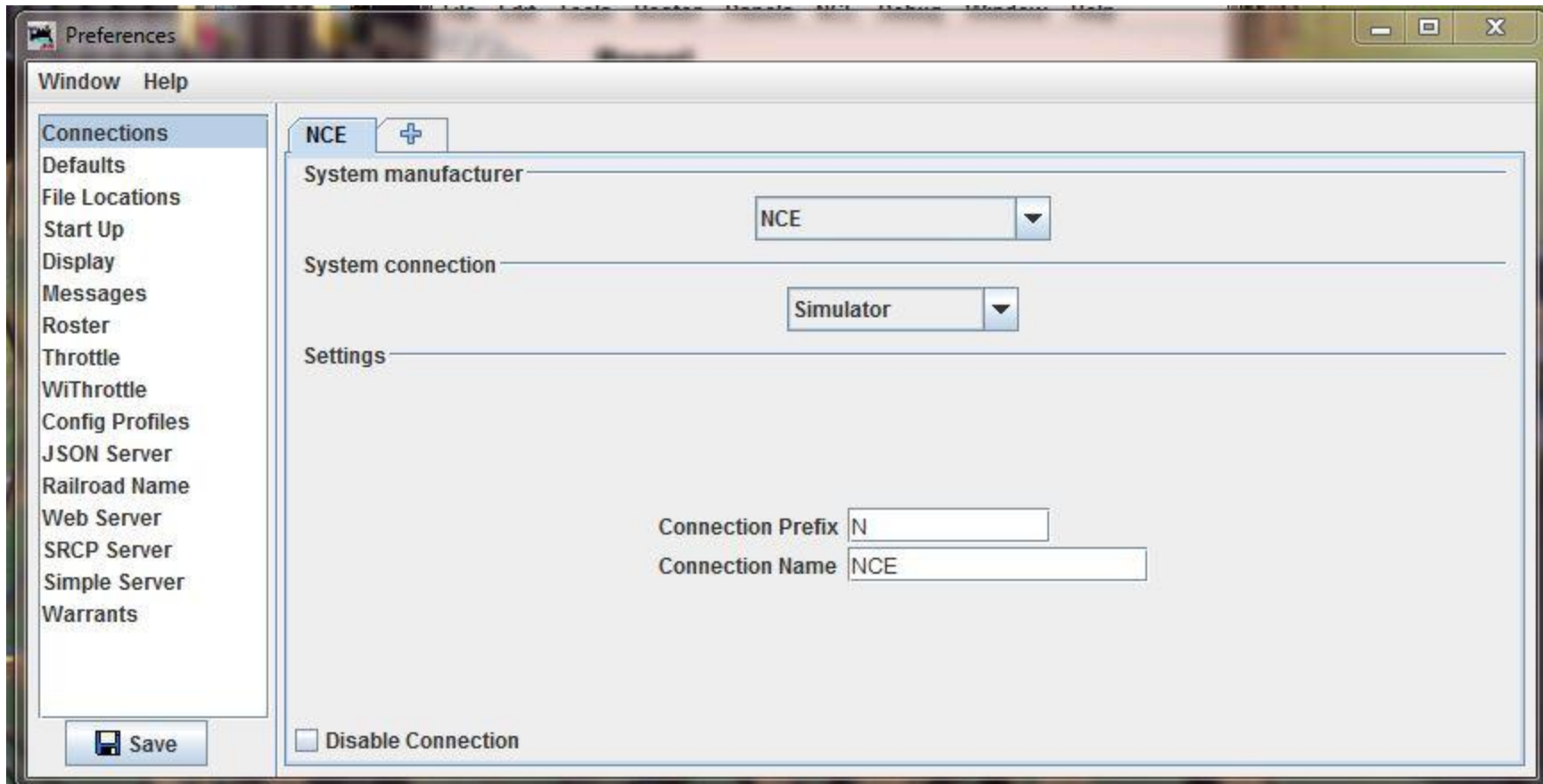
Turnout Decoders

- Power?

- Address (Range 1-2044)
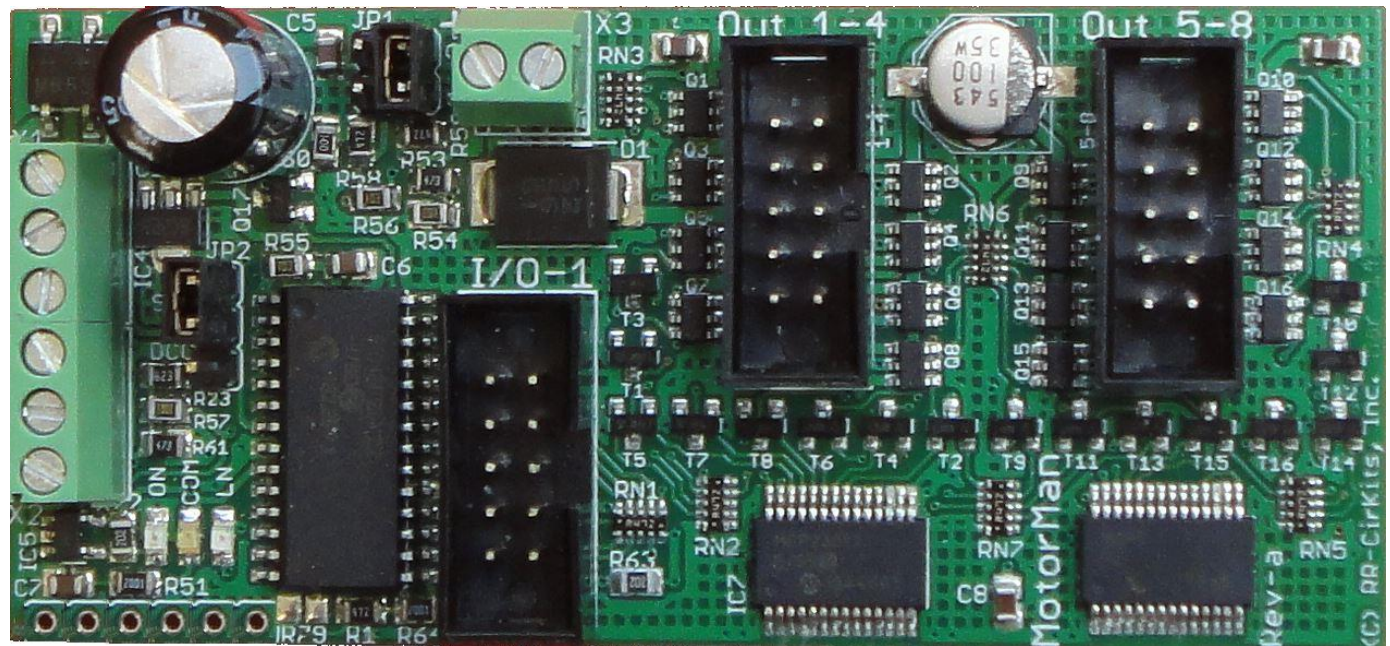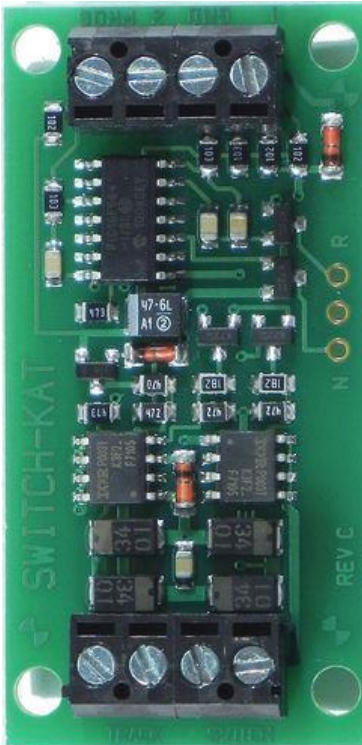
Omaha N-trak
New Passenger Station Modules

Turnout Table

<<< Yellow Main

East XVR
East Bypass
East Station
Station Track 1
Station Track 2
Red Main >>>
West Station
West Bypass
West XVR

1   2   3   4   5   6
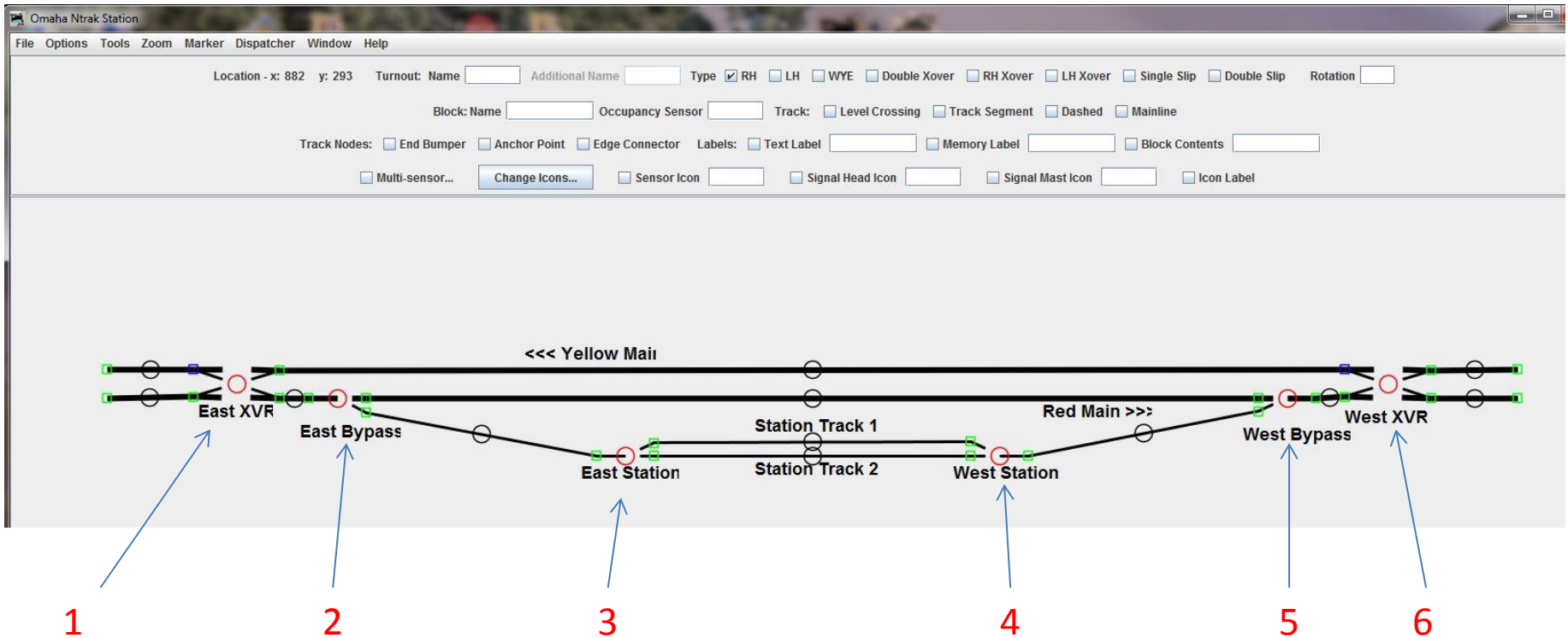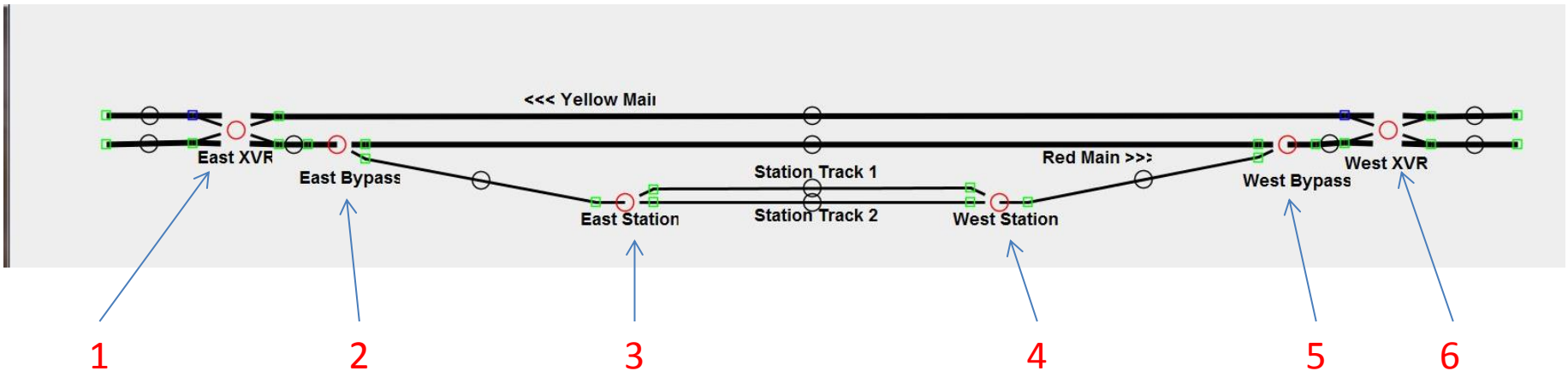
Turnouts

File   View   Automation   Speeds   Window   Help

Turnouts | All | NCE | Internal
Sensors
Lights
Signal Heads
Signal Masts
Signal Groups
Signal Mast Logic
Reporters
Memory Variables
Routes
LRoutes
Logix

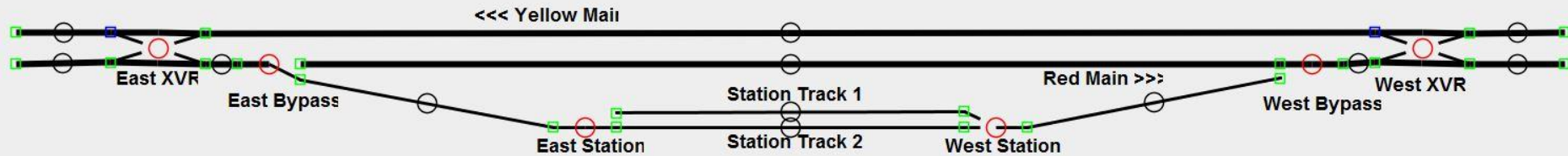| Syste... /	User Name	Cmd	Comment		Inverted	Locked	
NT1	East XVR	Unknown		Delete	☐	☐	Edit
NT2	East Bypass	Unknown		Delete	☐	☐	Edit
NT3	East Station	Unknown		Delete	☐	☐	Edit
NT4	West Station	Unknown		Delete	☐	☐	Edit
NT5	West Bypass	Unknown		Delete	☐	☐	Edit
NT6	West XVR	Unknown		Delete	☐	☐	Edit

WiThrottle Turnout Menu

Routes

Routes – Main Through

Normal = Closed
Reverse = Thrown

Routes – Main Through
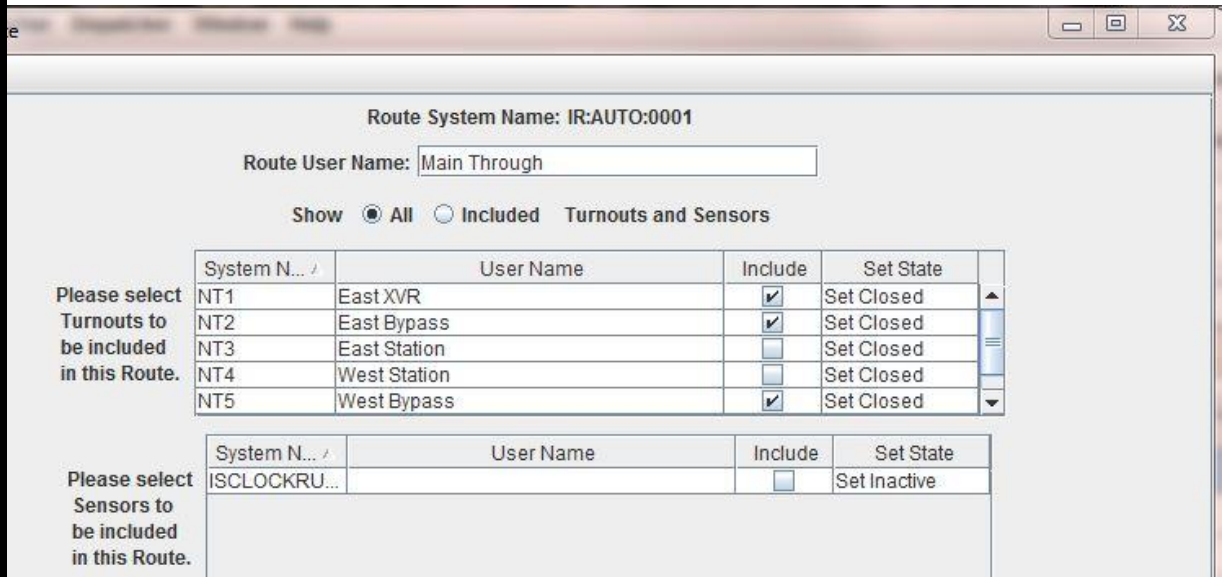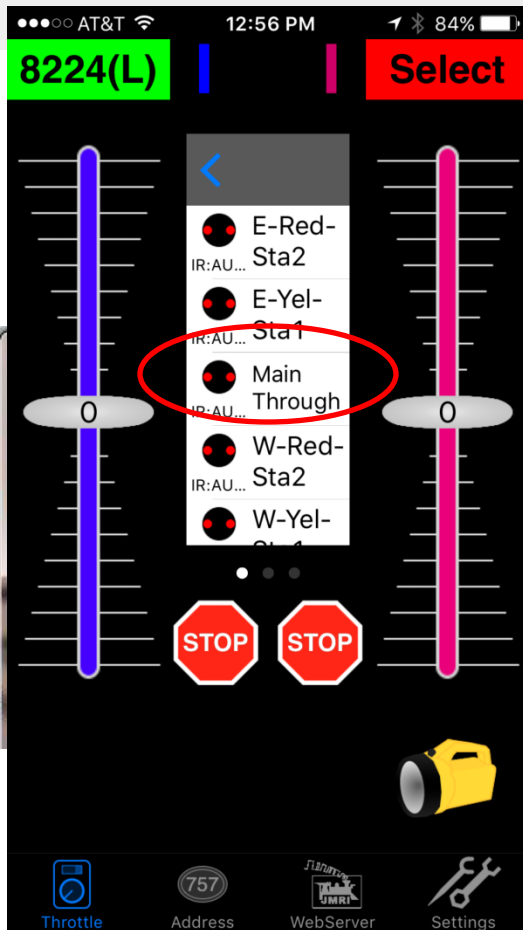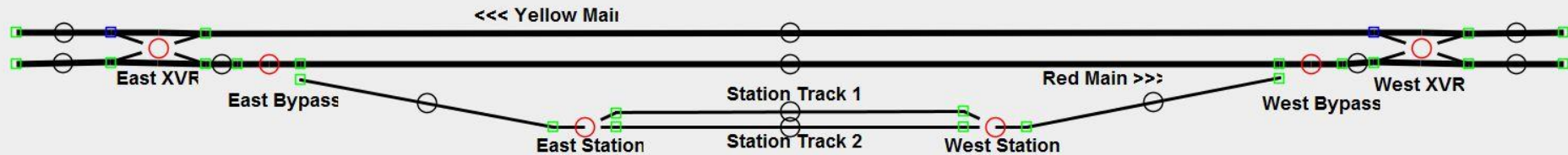
Routes – Red to Station Track 2 (East)

Routes – Red to Station Track 2 (East)

<<< Yellow Main

East XVR
East Bypass
East Station
Station Track 1
Station Track 2
West Station
Red Main >>>
West Bypass
West XVR

Add/Edit Route

Window   Help

Route System Name: IR:AUTO:0002

Route User Name: E-Red-Sta2

Show   ● All   ○ Included   Turnouts and Sensors

	System N... /	User Name	Include	Set State
Please select Turnouts to be included in this Route.	NT1	East XVR	✔	Set Closed
	NT2	East Bypass	✔	Set Thrown
	NT3	East Station	✔	Set Closed
	NT4	West Station	☐	Set Closed
	NT5	West Bypass	☐	Set Closed

	System N... /	User Name	Include	Set State
Please select Sensors to be included in this Route.	ISCLOCKRU...		☐	Set Inactive

Routes

File   View

Turnouts
Sensors
Lights
Signal Hea
Signal Mas
Signal Grou
Signal Mas
Reporters
Memory Va
Routes
Routes

Routes – Red to Station Track 2 (East)

Video - https://youtu.be/NRNqvZwjwu8
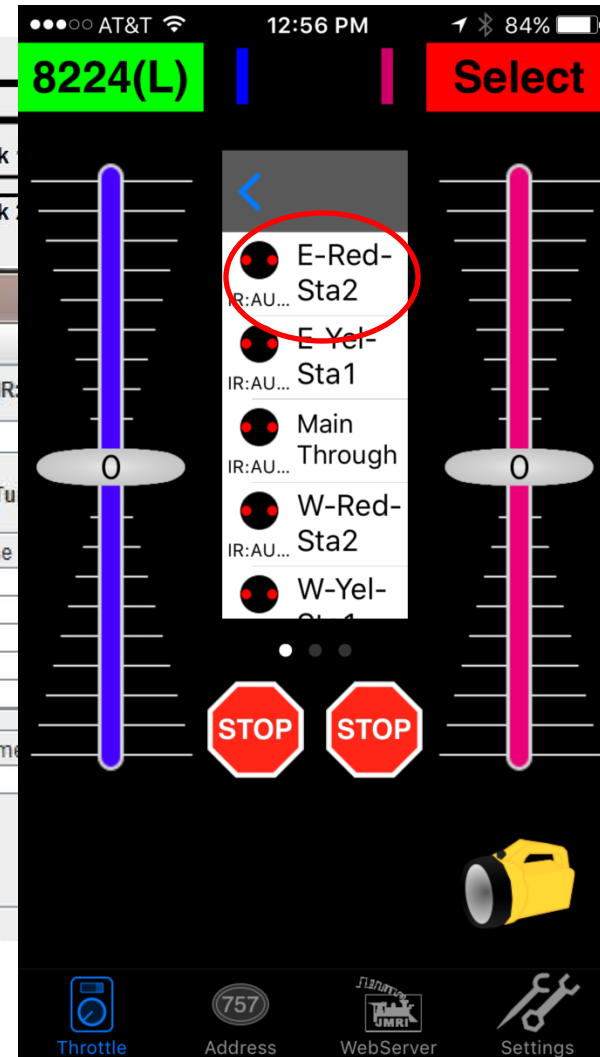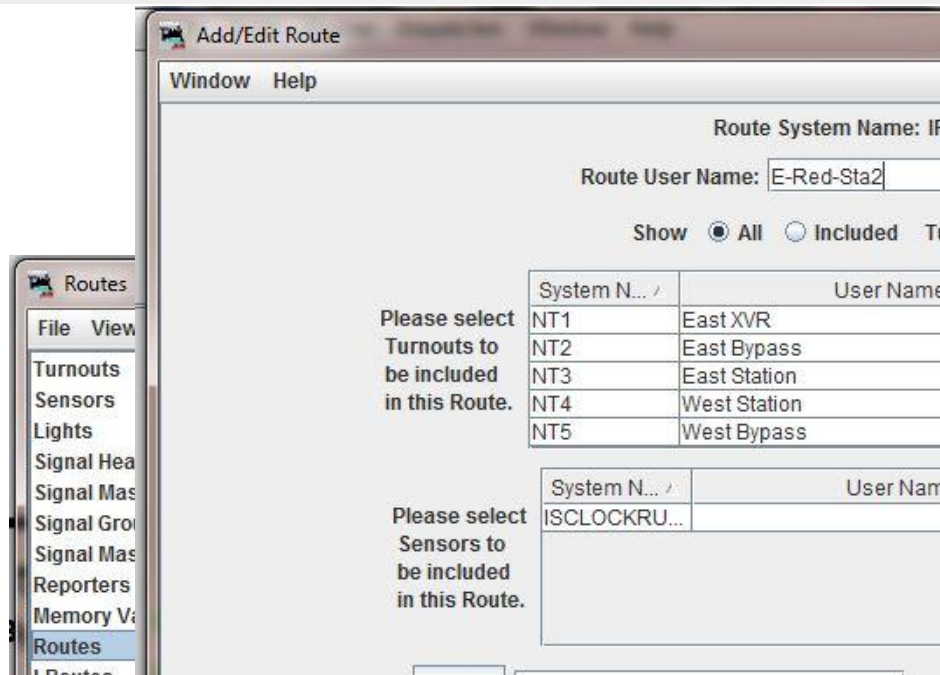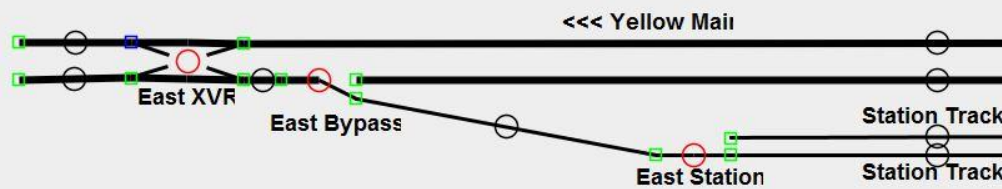
Remote Panels on WiFi - Throttles
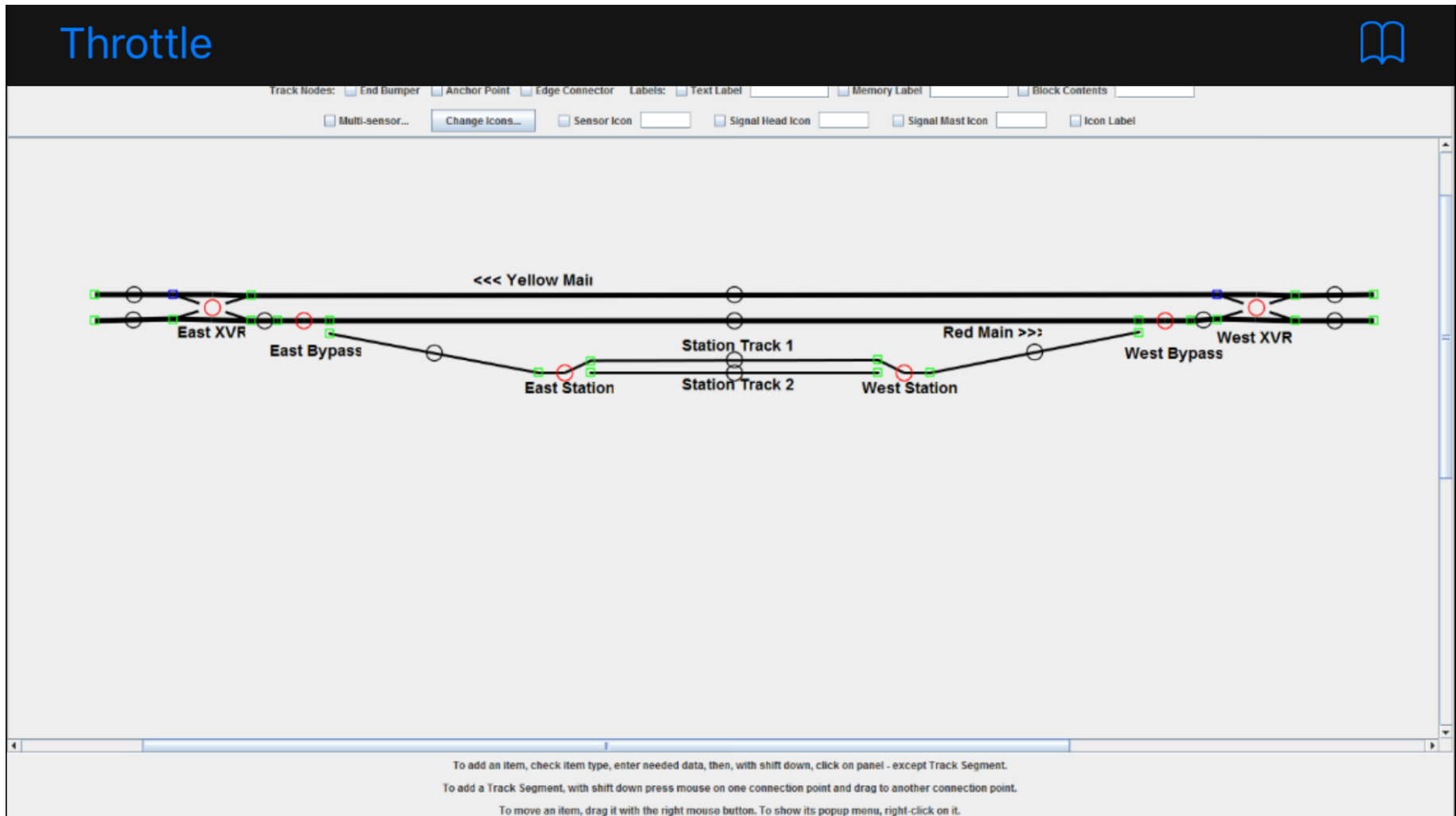
JMRI Web Server
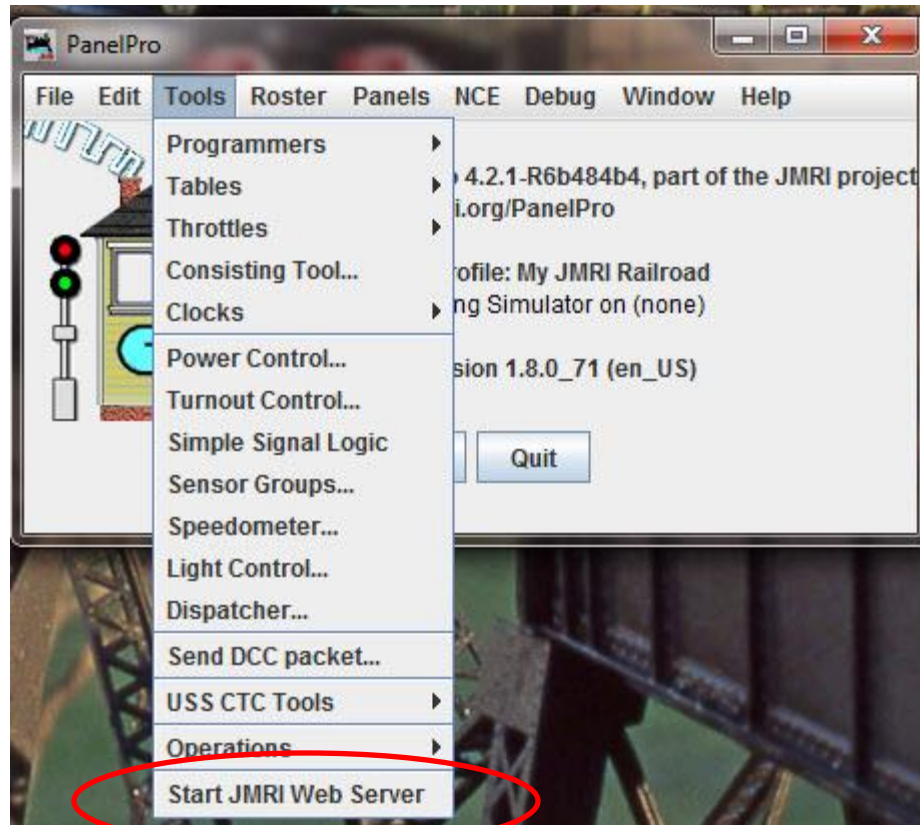
Remote Panels on Throttles

Panel Editor Example

Control Panel Editor Example

Quaker Valley Virtual Signals

https://youtu.be/5-J2mbamdhY

http://model-railroad-hobbyist.com/magazine/mrh-2015-06-jun

Video - https://youtu.be/UOfoU_uFv-8