



JMRI Operations

# JMRI Operations

- PC-based Operations for your layout
- Author: Daniel Boudreau
- Included in JMRI 3.x
- Windows, Mac or Linux

# What can it do?

- Track cars on and off the layout
- Assigns cars and locomotives to trains
- Random or scheduled deliveries
- Multi-car "Kernels"
- Customizable switch lists and manifests
- Integrated with Dispatching for real-time control
- Control car spots by type, direction, load, railroad, etc.

# Basic Concepts

- Locations have Tracks
- Routes connect Locations
- Cars have Destinations (location + track)
- Trains are made of cars and locomotives
- Trains follow routes

# Locations

- Yards, industries, interchanges, staging, etc.
- have one or more Tracks for Cars
- Act as a Destinations for Cars
- Direction limits which trains can service

# Types of Tracks

- Each Location has one or more Tracks
- Spurs
- Yard Tracks
- Interchange Tracks
- Staging Tracks

# Cars

- Info: type, length, reporting marks, color, etc.
- Location, Destination, Final Destination, Loaded/Empty, Return To
- Special handling of Caboosees, FREDs, Hazmat, etc.
- Can be grouped in "Kernels"
- Manual or automatic (random) assignment

# Locomotives

- Info: type, model, reporting marks, color, length, location.
- Optional: Weight, horsepower, consist, owner, etc.
- Can pull from JMRI Roster
- Assigned to train by train requirements (manual or auto)



# Routes

- Defines a path a Train follows
- List of Locations in order start to finish
- Has a Direction (or two or three)
- Out/back or point-to-point
- Can control departure time at each Location
- Can control max train length at each Location

# Train Building

- Each Track has a length (in feet)
- Each Car and Locomotive also has a length
- Each car has a Destination (location) and. Final Destination
- Cars allocated to the next train headed in the right direction
- May take several moves to get Car to Final Destination
- Train length limited by available cars and space at stops

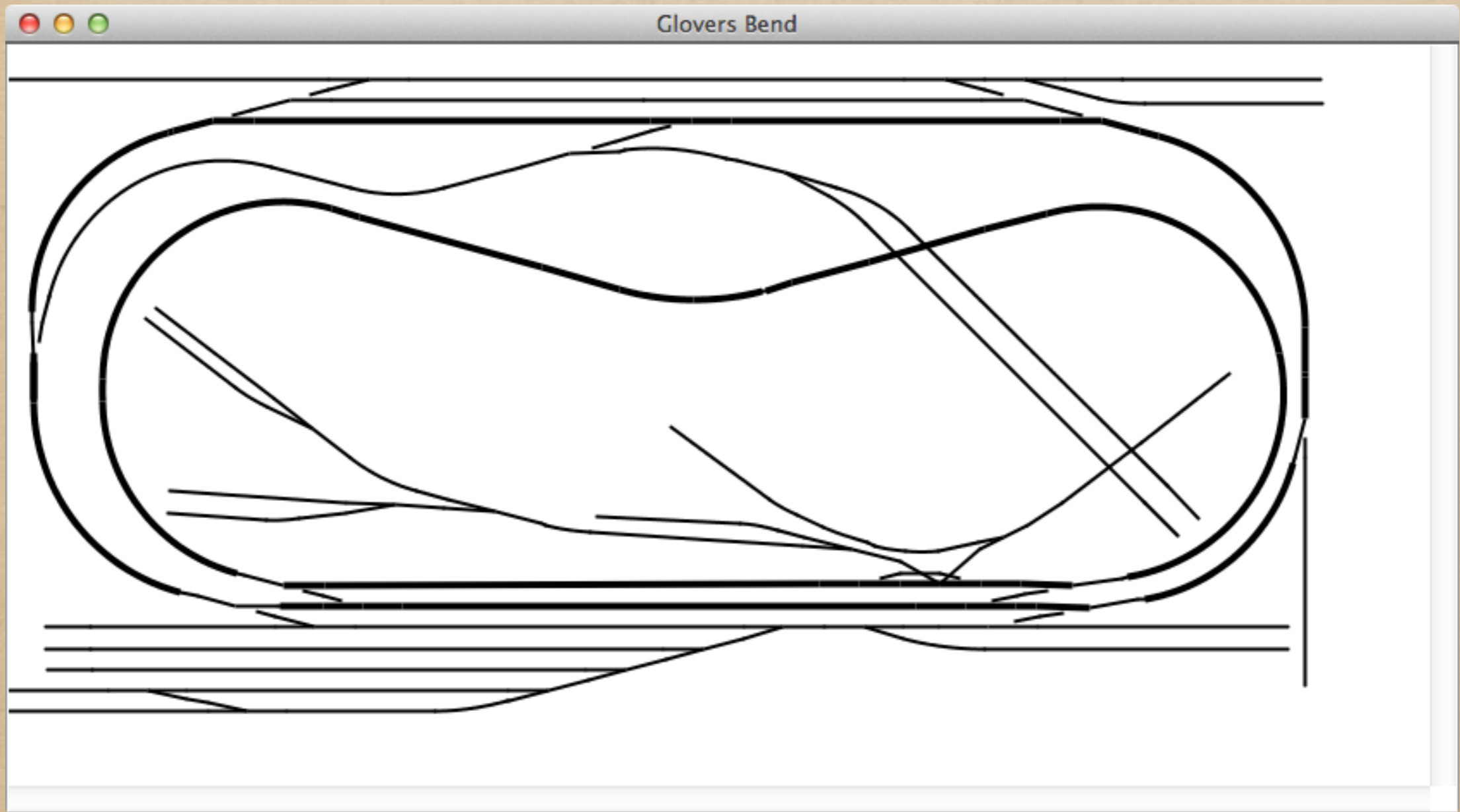
# Manifests and Switch Lists

- Manifests for Train Conductor
- Switch Lists for (switcher) Engineer at a Location
- Customize fonts, logo and other formatting
- Print or Preview on screen
- Alternate "Conductor View"

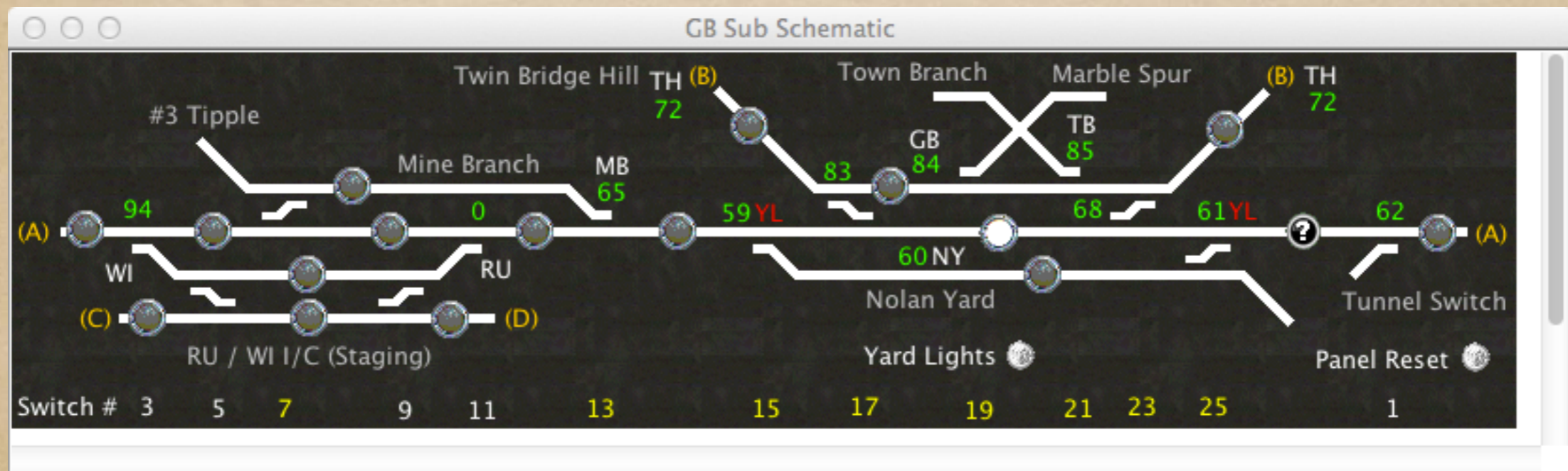
# More Information

- JMRI Website
  - <http://www.jmri.org>
  - Downloads, manuals, help
- JMRI Yahoo! Group
  - <http://groups.yahoo.com/group/jmriusers>
  - Discussions, help, example files, friends!

# Example Track Plan



# Example Schematic



# Example Manifest

Train Manifest Russell-Williamson Through Freight - 1 -

May 5, 2013 5:22 AM

Chestnut Hill & Frost River Railroad

Manifest for train (RU-WI-MFT) Russell-Williamson Through Freight  
Valid 5/1/2013 23:26

Scheduled work at Russell I/C, departure time 08:00

- [ ] Pick up NS 3982 B23-7 from I/C Track 2
- [ ] Pick up RUT 103 Boxcar 40' Yellow E from I/C Track 1 Yellow/Green Rutland Single Door

- [ ] Pick up CP 165114 Boxcar 40' Yellow E from I/C Track 1
- [ ] Pick up GATX 9530 Tank Chem 28' Brown E from I/C Track 1
- [ ] Pick up CP 404255 Boxcar 40' Red L from I/C Track 1

Train departs Russell I/C Southbound with 4 cars, 229 feet, 291 tons

Scheduled work at Nolan Yard, estimated arrival time 08:04

- [ ] Pick up B&O 601824 HopChem 50' Yellow E from Yard Track 2 Chessie 4-bay centerflow
- [ ] Pick up B&O 835128 HopChem 50' Yellow E from Yard Track 2
- [ ] Pick up SP 210990 Boxcar 50' Brown L from Yard Track 3 Weathered
- [ ] Set out RUT 103 Boxcar 40' Yellow E to Yard Track 2 Yellow/Green Rutland Single Door
- [ ] Set out CP 165114 Boxcar 40' Yellow E to Yard Track 2
- [ ] Set out GATX 9530 Tank Chem 28' Brown E to Yard Track 3

Train departs Nolan Yard Southbound with 4 cars, 271 feet, 351 tons

Scheduled work at Williamson I/C, estimated arrival time 08:26

- [ ] Set out B&O 601824 HopChem 50' Yellow E to I/C Track 1 Chessie 4-bay centerflow
- [ ] Set out B&O 835128 HopChem 50' Yellow E to I/C Track 1
- [ ] Set out CP 404255 Boxcar 40' Red L to I/C Track 2
- [ ] Set out SP 210990 Boxcar 50' Brown L to I/C Track 3 Weathered
- [ ] Set out NS 3982 B23-7 to I/C Track 1

Train terminates in Williamson I/C

# Example Switch List

Switch List Nolan Yard

- 1 -

May 5, 2013 5:24 AM

Chestnut Hill & Frost River Railroad

Switch List for Nolan Yard  
Valid 5/5/2013 05:24

Scheduled work for train (NY-LB-MFT) LeBoeuf Branch I/C local run

Visit number 2 for train (NY-LB-MFT)

- [ ] Set out CP 80211 Boxcar 47' Green E to Yard Track 3
- [ ] Set out IC 245102 Gondola 50' Black L to Yard Track 3
- [ ] Set out N&W 318661 Boxcar 50' Brown L to Yard Track 3

No car pick ups for this train at this location

Scheduled work for train (RU-WI-MFT 3982) Russell-Williamson Through Freight

Departs Russell I/C at 08:00 expected arrival 08:04, arrives Southbound

- [ ] Pick up B&O 601824 HopChem 50' Yellow E from Yard Track 2 Chessie 4-bay centerflow
- [ ] Pick up B&O 835128 HopChem 50' Yellow E from Yard Track 2
- [ ] Pick up SP 210990 Boxcar 50' Brown L from Yard Track 3 Weathered
- [ ] Set out RUT 103 Boxcar 40' Yellow E to Yard Track 2 Yellow/Green Rutland Single Door
- [ ] Set out CP 165114 Boxcar 40' Yellow E to Yard Track 2
- [ ] Set out GATX 9530 Tank Chem 28' Brown E to Yard Track 3