



# Model Railroading in the Computer Age

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# Model Railroading in the Computer Age



- Introduction
- Research & Information Sharing
- Software
  - JMRI (DecoderPro, PanelPro, OperationsPro)
- The Details and Scenery
- Creating Passes, Timetables, etc.

# Introduction



- Model railroaders have been trying to figure out how to integrate computers into the hobby since they first appeared in the mid 70s
- The Internet makes finding and sharing information far simpler than in times past
- A wide range of software products are available to aid in designing, dispatching, and controlling layouts

# Research



Since the advent of the Internet research has become both simpler and more complex

- Simpler because information is more readily available
- More complex because you have to know where and how to find it

# Research



- Google, Yahoo, and Bing are the most common search engines ([www.google.com](http://www.google.com), [www.yahoo.com](http://www.yahoo.com), [www.bing.com](http://www.bing.com))
- Don't limit yourself to just using one search engine try your search on several search engines because the results will vary
  - Use descriptive words in your searches
  - Railroad name; City location; division; engine type; etc.
- Places to look:
  - Yahoo Groups
  - Railroad Historical Societies
  - Railroads Companies
  - Government/State Agencies
  - Google Maps/Google Earth
  - Message Boards
  - Model Railroad Clubs
  - Magazine Publishers
  - College Libraries on-line
  - Wikipedia

# How to find information



- Select a search engine
- Enter a search phrase
  - Search phrases can be simple or complex
  - Simple: Missouri Pacific
  - Complex: Missouri Pacific, St Louis Division
  - Use descriptive words to narrow the search
- Prototype pictures Rail Pictures Net  
<http://www.railpictures.net/>
- Demonstration

# Information Sharing



- Create electronic archives of information you've collected and distribute on CD-ROM or create a web site
  - Share research and information you've obtained.
  - Include pictures of prototypes or models
  - Articles you've written
- Show off your layout
  - Pictures
  - Layout drawings
  - Layout history and evolution
  - Story behind the layout

# Model Railroading Software



- Software applications can help with multiple task
  - Program decoders
  - Operate your layout
  - Maintain equipment inventory
  - Design layouts
  - Scenery
  - Design and build structures



# Software



- JMRI OperationsPro is a must for DCC users  
<http://jmri.sourceforge.net/>
  - Programing decoders
  - Generates manifest and switch list
  - Automate layout
    - Build computer displayed control panels
    - Track detection and signaling
    - Create routes and set switches with one click
    - Use your cellphone for a throttle
- Best part, it's **free!**

# Do You Know What You Own?



- Ever by a box car just find you already owned the exact same car with the same number?
  - Keep track of your inventory and consult it before buying
- Create a spreadsheet customized to your needs
- You can download a free version from Easy Model Railroad Inventory

<http://easy-model-railroad-inventory.rclsoftware.com/>

# Track Planning



- Designing a layout is a challenge
- Computer Aided Design (CAD) software can help if you're willing to put in the time to master the software



# Layout Planning Software



- XTrackCAD is freeware and very well documented. Can't beat the price and it interfaces with JMRI  
<http://www.xtrkcad.org/Wikka/HomePage>
- CADrail (\$129 in the box; \$89 as a download)  
<http://www.cadrail.com>
- 3<sup>rd</sup> Planet (\$124 - \$159)  
<http://www.trackplanning.com/>

# Details, Structure, & Scenery



- Using Image editing software you can create:
  - Paper structures
  - Backdrops
  - Car and structure interiors
  - Signs
  - Decals
  - Control panels

# Backdrops



- Create backdrops using pictures from the real world
- Digital camera or scanner
- Image editing software to clean up the image (adjust color and contrast, crop/delete unwanted elements)
- Print image on a color printer or take to photo printing shop



# Building and Car Interiors



- Create: floors, ceilings, wall paper, signs
- Use pictures from the real world or drawings you've created on your computer
- Edit with imaging software
- Print or take to photo printing shop



# Signs



- Create custom signs for your layout
- Window
- Exterior building
- Billboards
- Street/Highway



# Decals



- Need a custom decal?
  - Rare hard to find
  - Non-prototype railroad?
- Use photo editing software to create custom decals
- Photo Shop elements or Paint Shop Pro are good choices (\$80 - \$100)
- Decal paper is available from internet sources, some hobby shops and Hobby Lobby

# Making Decals



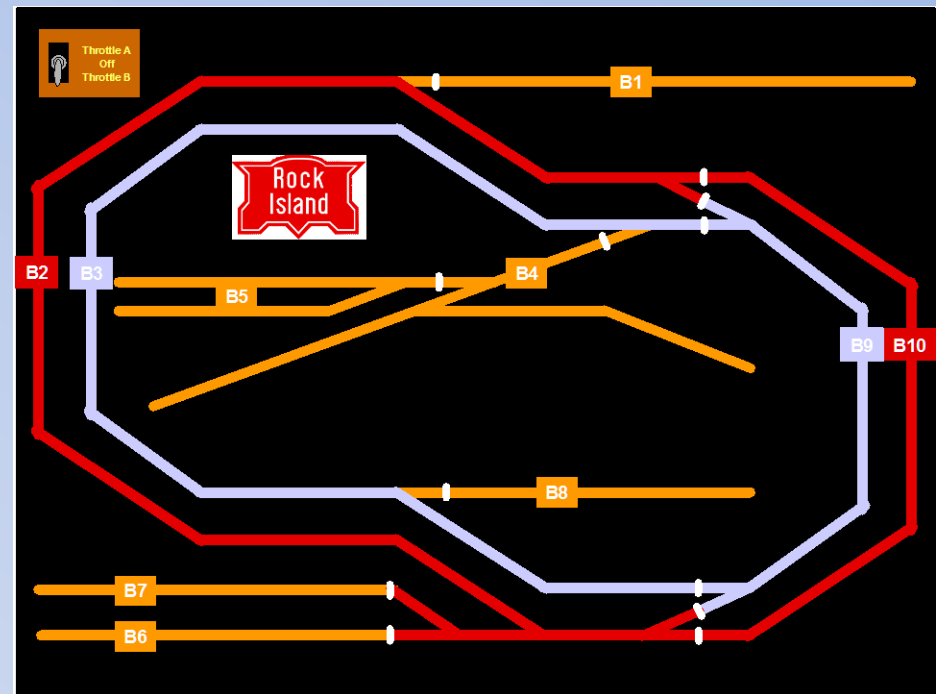
- Produce quality decals using image editing and layout software and a color inkjet printer
- Edit/modify/size with photo editing software
- Use photo editor or drawing software to create custom images and lettering
- Layout decal sheets in drawing or presentation software



# Control Panels



- Need a control panel face
- Use drawing or presentation software to create
- Print on slide film, cardboard, photo paper, or take to photo printing shop



# Creating Passes, Timetable, etc.



- Many layout operators have created passes, timetables, business cards, signs and some have gone as far as to create stock certificates and letter head
- Today's software applications make it ease to create just about anything you want
- Software doesn't have to be expensive  
(Open Office: <http://www.openoffice.org>)

# Examples



Stock Certificate



Rail Pass

Examples courtesy: North River Railway  
Gateway Division NMRA Website

# Form Examples



Use word processors, spreadsheets, or presentation software

St. Louis District—Kirkwood to Jefferson City										
Station Numbers	Miles from St. Louis	Time Table No. 44	TRAINS WESTWARD							
			FIRST CLASS			SECOND CLASS			THIRD	
			15 Pgr	11 Pgr	19 Pgr	61 Red Ball Freight	71 Merchdse	77 Red Ball Freight	91 Local Freight	
STATIONS			Daily	Daily	Daily	Daily	Daily	Daily	Daily ex. Sun	
---	---	St. Louis Union Station	9 00 A	2 02 P	6 40 P	11 00 A	7 30 P	10 30 P	12 01 A	
13	13.48	CS KIRKWOOD WT	9 26	2 28	7 05	11 50	8 10	11 20	12 50	
36	34.84	P PACIFIC gWY	9 52	.....	7 32	.....	.....	.....	2 45	
54	54.93	CS WASHINGTON WCY	10 20	3 20	7 56	3 40	9 10	12 12 A	4 00	
125	125.33	N JEFFERSON CITY gWCTY	12 10 P	4 44 P	9 48 P	5 40 P	10 57 P	2 25 A	9 00 A	

Time Table

FORM <b>19</b>	<b>MISSOURI PACIFIC LINES</b>	FORM <b>19</b>
ORDER NUMBER _____ DATE _____, 19____		
TO: C&E _____ AT _____ C&E _____ AT _____ C&E _____ AT _____ C&E _____ AT _____		
MADE: _____ TIME: _____		
OPERATOR: _____		

Train Order