

Creating an Operating Session

by Byron Henderson

Operating a model railroad in a fashion that resembles the real thing is a growing part of the hobby. But many people feel that it's too complex or too elitist and are intimidated. But operations *need not be* pressure-packed and officious, only purposeful. That sense of purpose makes it fun and challenging.

This brief handout highlights some of the topics discussed in the clinic, but for detailed instructions on how to set up your first op session, the references below are excellent places to begin. David Popp's February 2005 *Model Railroader* article is especially useful as a "quick-start" guide.

The very basics of operation

There are basically three major components to the movement of railcars and trains in operations in the real world or on the model:

- **Distribution** of railcars to- and from industries
- **Transportation** of railcars in trains from place to place
- **Control and Communication**

Approaching each one of these in turn offers a very easy way to get started in operating. One of the key tenets is to start simply, have fun, and move on to more complexity when you're ready for more realism and challenge. And if you're having so much fun along the way that you don't feel like adding complexity, great! You've found the sweet spot for you.

The best advice I can give and have followed is: *operate early, operate often*. You'll learn more from a few early sessions than from months of study.

Creating car movement

To **distribute** cars to industries and collect them from industries, you'll need some way to generate car movement. Many people recommend deciding what commodities are shipped to- and from each industry on your layout first. That's a good method, but it can be daunting to try to figure all of that out at first.

It's much easier to simply specify the car movements themselves to- and from each industry. There are many approaches, but a couple of simple ones work well. The first is using car-cards-and-waybills, the simple card in a pocket scheme that has been used for about 40 years. In the typical system, each waybill has four sides and each side can be used to define one car movement. When that movement is complete, the waybill is turned to the "next" cycle.

I think one key for operations realism is to suggest that the visible movements on the layout are to- and from unmodeled destinations "somewhere else". This is the essence of real-life transportation of goods.

If you have staging, it may serve as the "somewhere else". A simple example of movements:

- From east staging to industry A
- From Industry A back to west staging
- From west staging to Industry B
- From Industry B to east staging

Note that this returns the car to the beginning position and the cycle can continue forever without any further input. Check marks or a paper clip on a single 3X5 card can simulate movement in a similar way.

Another approach is to manually write switchlists for each train that you would like to run. Switchlists simply define where cars should move. These may be manually written up before each session. (There are computerized systems to create switchlists as well, but they are not recommended for beginners.) Here's a switchlist created with a spreadsheet program:

Western Pacific RR						
SWITCH LIST						
6th St Job	Car		Date		Sep. 3, 1955	
	Initials	ID	Type	From	To	Track
1	SFRD	346	RS		Mayfair Fruit	Spot 32
2	DRGW	224	XM		Mayfair Whse	Spot 1
3	SN	625	XM		Mayfair Whse	Spot 3
4	ART	Yellow	RS	Mayfair	SP	
5	FGEX	Yellow	RS	Mayfair	SP	
6	UP	Brown	XM	Mayfair	SP	
7	SP&S	Brown	XM	Mayfair	William St	
8	GN	Red	XM	Canco	William St	

Switchlists might be the easiest way to create car movement (distribution), but they are typically not re-usable as are car-cards and waybills.

Yet another method uses color-coded tacks or tabs on the tops of cars to define where cars are to be delivered. Many modelers object to their unrealistic appearance, but it *is* very simple.

All of these methods are simply ways to create purposeful car movement.

Transportation in trains

Once you've decided on a way to create demands for car movements, the next step is to organize these movements into trains -- to provide **transportation**.

The most basic types of trains include:

- Locals (deliver and pick-up cars at industries)
- Through freights (move cars between locations with few or no stops en-route)
- Passenger trains (move people between locations with few or many stops en route)

To define the types of trains you'll need, start simply. One or more locals will be needed to serve each of your industries, unless they can be served by a crew stationed in a nearby yard. Distances between towns and the track configurations in each will help you

decide if these locals should be a "turn", which runs out and back to the location from a yard or staging; or a local that begins in one place and ends in another.

Once you've got the locals defined, think about where they will be starting and ending their runs. That's the place that they will need to pick-up or deliver the cars headed to- or from your industries. The through trains can provide the "long distance" hauling of cars between these locations, whether they are visible yards or staging.

To begin, just define a couple of trains of each type. Add a passenger train or two if you like. Starting simply with just a few trains, each moving a moderate number of cars, is a great way to get your feet wet and to *have fun* while learning. There, you've developed a transportation plan without breaking a sweat!

Yard work -- in the layout room?

The car movement connection between through trains and locals often takes place in a visible yard, where cars are classified by destination. This is a simple matter of sorting cars by destination. If you have a large visible yard, you may want to assign a dedicated crew for this job. Otherwise, the locals and through trains can do a lot of this work themselves.

Control and Communication

Now that you've got trains moving, you'll want to define in what order and direct the crews. A simple sequence timetable is a very good way to start. With the sequence timetable, **control** of each major train movement is keyed from an earlier movement. For example, when the local departs from east staging, the eastbound passenger might run. After the local has arrived in the yard, one of the through trains might start. This simple system lets you balance crews, work, and track access in the early days of your op sessions.

It may be easiest at first to have everyone working informally -- looking to the next town to see if the track is clear before proceeding and **communicating** verbally with other crews already in town to arrange getting their work done. As you progress to more formal sessions, a dispatcher and some more sophisticated method of train control may be in order, but keeping it simple in the beginning makes it more fun for the crew *and* the layout owner.

Documentation and Operator Aids

Another aspect of communication with crews is providing them with easily-understandable printed information for reference. This can be in the form of signs and maps posted on the fascia or backdrop, or printed handouts that travel along with car card packs or on a clipboard.

One important key: provide only the minimum information need and offer it only where that info is

needed. Crews likely will not read (or remember) long manuals – provide only what they need for the task at hand and *keep it simple!*

Fun and challenge is the primary goal

Start small, have fun, then learn more. Adding complexity and structure as you and your crew are ready for it keeps things from growing stale (or becoming overwhelming!). And just because it's purposeful, it doesn't have to be *too* serious.

References

(References are dated, but still useful).

Operations SIG -- www.opsig.org

Layout Design SIG -- www.ldsig.org

Articles (alphabetical by author)

"Operations 201, 202, 203" by Bill Kaufmann; *Railroad Model Craftsman*, February-April 2005 (in-depth, highlights atmosphere of operations)

"The Basics of Operation" by Bill Kaufmann and Jim Providenza; *Railroad Model Craftsman*, August 2002 (thorough overview, including track warrants)

"Moving Freight and Making Names" by David Popp; *Model Railroader*; February, 2005 (excellent illustrated concise step-by-step guide)

Books (alphabetical by author)

Track Planning for Realistic Operation by John Armstrong (Kalmbach, 1998)

How to Operate your Model Railroad by Bruce A. Chubb (Kalmbach, 1977 -- out of print)

Realistic Model Railroad Operation by Tony Koester (Kalmbach, 2003)

Suppliers

Blank Car Card and Waybill forms are available from Micro-Mark -- www.micromark.com
340 Snyder Avenue; Berkeley Heights, NJ 07922

Waybill generating software is available from Shenware –

www.shenware.com/waybills.html
1304 Paradise Pond Road, St. Augustine, FL 32092

Computerized software to automate layout operation and create switchlists is also available, but I don't usually recommend it for beginners. Contact me for more information (see below)

For more information ...

My web site: www.layoutvision.com