Setting Up Car Shipments and Trains for Operations

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When you are setting up for Operations, you should get a good book on operations from one of the companies that publish model railroad magazines. This will have detailed information in it that will show you exactly how to proceed and what you need to do. The following information that I have written below is not as detailed as you would find in a good book on operations, but it will let you see some of the basics involved.

One of the first things that you would normally do after you have decided that you want to set your layout up for operations is to determine where your cars will go, or car movements that are logical. This would normally hold true for any of the popular operating systems such as Car Cards, JMRI Ops, ProTrack, Ship-It, or RailOp.

Lets assume that we are working with a medium size layout that has several industries, Loco facilities for both steam and diesel, a moderate size freight yard, a small passenger terminal with some service tracks, and another yard somewhere that will act as staging or interchange.

So to get started, we need to list all of our industries, then what they ship, and what they receive.

Industry	Ships	Receives
Team track	- Packaged and solid goods delivered by truck	
Oil Terminal	- Oil	- Oil
Propane dealer	- none	- LPG gas
freight station	- Packaged and solid goods delivered by truck	
Grain Elevator	- Grains	- none
Widget Mfg.	- Widgets	- Metal, wood, machine parts, Barrels
Bakery	- Bread	- Flour, sugar, salt, boxes
Box & barrel Works	- boxes & Barrels	- Wood, cardboard, paper
Electric Gas Works	- ???	- ???
REA Terminal	- Packaged and solid goods delivered by truck	
Truck Terminal	- Packaged and solid goods delivered by truck	
Pass. Commissary	- Trash	- Bread & other foods
Pass. Sleeper Servc.	- Trash	- Cleaning supplies, linens
Sand facility	- none	- Sand
Both Ash pits	- Loco Ashes	- none
Coal tipple	- none	- Coal
Diesel fuel	- none	- Oil
Diesel Repair fac.	- Scrap	- Repair Parts
B&O Interchange	- Everything	- Everything
Union Pacific Int.	- Everything	- Everything
Staging Train	- Everything	- Everything

If we were going to use Car Cards as our means for Operations, then we would make up a 'Waybill" card for each commodity that our industries ship and receive. This waybill may have two or four sides per card depending on how many stops the car will make. Each side would be labeled with a number from One through Four. The first number would show where an empty car goes that has been ordered by a customer. The next side or number is where the car gets sent to once it is filled. The third side

shows where the car goes next, and so forth. The industries that the car goes to on its journey is determined by the above list. For example; If a carload of bread was needed at the dining car commissary, a car would be sent to the Bakery and loaded with bread. Then it would be picked up by a train and taken to the yard where it would be classified for the next train going to work the commissary siding. The next train would pick up the car with the others on its Route and deliver it to the commissary.

Also, if we were going to use Car Cards as our means for Operations, then we would also make up a Card for each car that has a pocket in it (This IS the Car Card). The information on the card would be the Car Type, Color, and car Number. These cards would stay with each car and follow it around the layout from place to place. Hooks or boxes are usually placed around the layout at each place a car or group of cars can be spotted. If the car is there, then it's Car Card is to be there also. If the car has a load or destination, the the "waybill" card is put in the pocket of the Car Card.

Each time a car is moved, it goes to the destination that is showing on the waybill. After each operating session, the waybill is turned around to the next number. When the next operating session starts, that car is then available to be moved again. If there is a car with a waybill that shows the destination as the industry that the car is presently at, the car is NOT available for movement.

Next, we determine the frequency of car flow and how many cars can be situated at each industry at one time: (If 'nothing is shipped or received, an empty car still has to be moved.)

Industry	Ships	Receives	No. Cars
Team track	- once per week	- once per week	- 2 boxcars.
Oil Terminal	- twice per week	- every two weeks	- 3 tankers.
Propane dealer	- once per week	- once per week	- 2 tankers.
freight station	- each day	- each day	- 1 boxcar.
Grain Elevator	- twice per week	- twice per week	- six covered hoppers.
Widget Mfg.	- twice per week	- twice per week	- 1 boxcar.
Bakery	- each day	- each day	- 1 boxcar.
Box & barrel Works	- twice per week	- twice per week	- 1 boxcar.
Electric Gas Works	- ???	- ???	- 4 cars of whatever it takes.
REA Terminal	- each day	- each day	- 2 Express cars
Truck Terminal	- three per week	- three per week	- 2 Boxcars
Pass. Commissary	- once per week	- once per week	- 1 Boxcar
Pass. Sleeper Servc.	- once per week	- once per week	- 1 Boxcar
Sand facility	- once per week	- once per week	- 1 gondola
Both Ash pits	- once per week	- once per week	- 1 gondola ea.
Coal tipple	- once per week	- once per week	- 4 hoppers.
Diesel fuel	- once per week	- once per week	- 2 tank cars.
Diesel Repair fac.	- once per week	- once per week	- 1 boxcar
B&O Interchange	- each day	- each day	- 8 cars all types
Union Pacific Int.	- each day	- each day	- 8 cars all types
Staging Train	- each day	- each day	- 8 cars all types

The next thing is to make up our Trains List. These would be the trains that serve the industries we have. Each train has a Route that it runs on the layout. Each Route is different because different trains go to different places. Since not all industries need cars moved every day, all stops may not be needed each day, but the Train should run and serve the required industries.

So here is the initial set up. (This set up is just for a test run and can be changed later.)
* Your train length will be eight cars plus an engine and caboose.
* We will assume that there is a four track yard somewhere that will be for staging and an interchange. The four track yard (4TY) will use two tracks as interchange tracks, and one track as a staging track for a through freight train. (The 4TY will represent the two ends of the Railroad.)
1- B&O interchange (BOI). (Put a mix of any eight cars here)
2- UP interchange (UPI). (Put a mix of any eight cars here)
3- Through Freight Staging (TFS). (Put a loco, a mix of any eight cars, and a caboose here facing either direction.)

* We will use four main yard tracks, each designated for a specific train route. You will also need to designate one track as an Arrival / Departure track if you don't have one. This track can be the one next to the mainline with the yard lead extending from it.
Trk1- Through freight (TF). (Put a mix of any eight cars here.)
Trk2- Interchange route. (Put two cars here, a hoppers and gondola.)
Trk3- Facilities service route. (Put 2 hoppers, one sand gondola, 1 empty gondolas, and 1 tank car. No box or covered hoppers.)
Trk4- Local freight. (Put a mix of four cars here. No hoppers or gondolas.)
Put some type of tags on the tracks so can remember what they are to be used for. Use the first few letters, Such as, TF, BOI, and UPI for the four track yard, and TF, IR, FS, and LF for the main yard tracks.

* Spot some cars at all the industries:
Team track - 2 boxcars.
Oil Terminal - 3 tankers.
Propane dealer - 2 tankers.
freight station - 1 boxcar.
Grain Elevator - six covered hoppers.
Industrial district - 1 boxcar per industry.
Electric Gas Works - 4 cars of whatever it takes.
Sand facility - 1 gondola
Ash pit - 1 gondola.
Coal tipple - 4 hoppers.
Diesel fuel - 2 tank cars.
For right now, remove all other freight cars from the layout temporarily as they will get in the way. (Except what is at the passenger station, passenger yard. We won't be working with these tracks for now.)

Now to run the trains:
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- Train 1 - Through Freight. Run the Through Freight (TF) into the Arrival track from staging. Using a Yard Switcher (YS) pull all cars from it. Then take all the cars from the TF yard track and put on the TF departure track behind the loco. Tack the caboose back on. Then run the TF back to staging. (Either direction will do for now.)
- Train 2 - Yard Class. Take the cars that just came in on the TF and classify them to the yard tracks as follows: Divide up the cars to the yard tracks but make sure that track 4 is full. Pay attention to what tracks get or don't get what type cars. Also, no more than eight cars to a track. Only put cars on track 1 if they can't go anywhere else.

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- Train 3 - Westbound Local Freight make up. Pull all 8 cars from track 4 and put them on the Departure track. (NOTE - The departure track and the Arrival track are the same track.) Tack on a caboose and locomotive. The train should be facing west.
- Train 4 - Westbound Local. Run westbound. Drop off boxcars at the manufacturing district (Widget Mfg., Bakery, and Box & Barrel) and pick up the same number; Drop off tankers at the propane dealer, oil terminal, and team track and pick up the same number; Drop off covered hoppers at the farm and pick up the same number; Drop off cars at the manufacturing district and pick up the same number. HOWEVER - Do not drop off any cars that you have PICKED UP from another industry on this run. Continue on westbound and bring the train back to the yard and into the Arrival track. Take the loco to the service area. (The RailOp program will tell you what cars to drop off and pick up at what industries when we get to it.)
- Train 5 - Yard Class. Take the cars that just came in on the LF and classify them to the yard tracks as follows: Divide up the cars to the yard tracks but make sure that track 2 is full. Pay attention to what tracks get or don't get what type cars. Also, no more than eight cars to a track. Only put cars on track 4 if they can't go anywhere else. Put the caboose on the caboose track.
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- Train 6 - B&O Interchange make up. Pull all 8 cars from track 2 and put them on the Departure track. Tack on a caboose and locomotive. The train should be facing East.
- Train 7 - B&O Interchange Eastbound Turn. Run eastbound to the B&O interchange. Go past the 4TY and BACK into the B&O Interchange track (BOI). Uncouple the locomotive and go to the other end of the 4TY and pull into the BOI track and couple up. Uncouple the caboose from the cars that you just brought, and depart westbound with the new cars and caboose. Go to the main yard and pull into the Arrival track. Take the loco to the service area.
- Train 8 - Yard Class. Take the cars that just came in on the B&O Interchange run and classify them to the yard tracks as follows: Divide up the cars to the yard tracks but make sure that track 3 is full. Pay attention to what tracks get or don't get what type cars. Also, no more than eight cars to a track. Only put cars on track 2 if they can't go anywhere else. Put the caboose on the caboose track.
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- Train 9 - Facilities Service Train make up. Pull all 8 cars from track 3 and put them on the Departure track. Tack on a locomotive or use the yard switcher. The train can be facing east or west.
- Train 10 - Facilities Service Train. Run the train around in the Loco Service facilities dropping off and picking up cars at the ash pits, loco sand facility, coal tipple, and diesel fuel tanks. HOWEVER - Do not drop off any cars that you have PICKED UP from another industry on this run. Return to the Arrival track.
- Train 11 - Yard Class. Take the cars that just came in on the Facilities Service Train and classify them to the yard tracks as follows: Divide up the cars to the yard tracks but make sure that tracks 1 & 2 are full if possible. Pay attention to what tracks get or don't get what type cars. Also, no more than eight cars to a track. Only put cars on track 3 if they can't go anywhere else.
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- I didn't run a set of Union Pacific interchange trains, but you could. Just pull the cars from track 2 in the yard and use them just like you did for the B&O Interchange run, but run the train Westbound instead.

Now, for the next session (pretending it was the following day on the RR) you would run the same trains again in the same order, but they may have different cars in them. You pretend that the through freight has finished it's run, swapped out cars at it's faraway location and is coming back through. You would also pretend that the cars at the interchange have been picked up and different cars set out by their respective railroads. For staging and the interchange tracks, you could actually "Fiddle" these

tracks and swap out cars by hand, also known as the 0-5-0 switcher. (Thus the term "Fiddle Yard")

If the yard tracks are long enough, you could designate two trains for each track. Track 1A and track 1B on track 1, and so on. That is what I do on my RR.

The above list of trains may be what the RR would run each day. (And we can add to the list if we want.) And that was only for the freight routes. We can do the same thing for passenger trains. Plus we haven't built a train that switched cars to the REA, Truck Terminal, Commissary, and Sleeper Car service buildings yet.

Industries that you don't have on your RR are simulated (pretend) by the Interchange and Staging tracks. As an example. You bring in loaded tank cars to fill your oil terminal. From your oil terminal, tank cars go to your diesel fueling tanks, and trucks take oil to some of your buildings as heating oil and other uses. Empty tank cars go to staging or the interchange via trains from the main yard. Then when the tankers come back, they are full again. The same would be the case for coal hoppers, sand and ash gondolas, grain hoppers, and some boxcars and reefers.