SMALL LAYOUT DESIGN

CAR ORDERING & SWITCH LIST USER GUIDE

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CONTINUED...

I'm a small layout designer, owner and builder. I've looked at many of the operating systems available but they all seemed too complex and paperwork intensive for me to enjoy them. I wanted something that was simple, could be handled in Microsoft™ Excel (since I own a copy) and that would do most of the legwork of running a car ordering system at the press of a mouse button. In 2017 I discovered Car Ordering. This seemed to be the ideal system, with optimal flexibility and minimal paperwork. I figured that I could make it work in Excel. The spreadsheet (Car Ordering & Switch List for Small Layouts) and this PDF are the result of all of that work. Simple to set up, run and update, it works well for me. Whether that works for you, is for you to determine. As always, your mileage may vary. Feedback is always greatly appreciated. Creating a work like this can be a lonely and frustrating thing. Feel free to get in touch with issues, improvements and so on.

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INTRODUCTION

The small layouts I design require a different type of operation mindset than that used when designing larger layouts. Modelling first mile/last mile type operations I am not concerned with moving cars from yard to yard, or from one large railroad concern to another, before onward delivery to a customer. My designs are built around customer facilities.

That means I am focusing on customer spurs and the switching of cars into and out of them. This is what first mile/ last mile railroading is. I see myself as the shortline, whether in an end of the line urban setting or business park, my connection to the outside world is the interchange. Which as the Union Pacific Railroad (UPRR) so eloquently puts it is:

> When one railroad hands off your stuff to another railroad to ship on its tracks[1]

I don't care about car routing. My entire car routing as a shortline is from my yard to our interchanging railroad's track in our yard. Routing is simple; it either goes to or comes from the interchange. That's it, and that is all I care about. For small layouts this is ideal.

Small layouts don't have the real estate to model yard trackage, and large interchange yards, mostly these exist only in the mind of the layout operator, existing in the wings, to borrow a theatre term, out of sight of the modelled portion of the layout.

With the operations focus being entirely on the customer's end of the railroad operation, my operating system also had to focus on that. And this is where this car order system derived.

Because I wanted to have an operating layout I could use regularly, at least 3 times a week after work, I needed software that would:

- Simplify the setup and operation of a session
- Allow tracking of work during multiple switching periods over the course a single session (either over multiple days, or several times in one day)
- Provided me with a reasonable facsimile of switching paperwork (conductors work order / switch list), and
- Be easy to update,
- Allow me to finalise a session and generate another.

This spreadsheet is the result of that work. It can be used, with a few changes to meet your shippers and receivers needs. While there are complex formulae built into the spreadsheet that randomise the car ordering requirements of the industries on your layout, these are with a little knowledge easy to understand.

Moreover, they are described herein to allow you to understand what is going on "under the hood" of the spreadsheet. To use the spreadsheet though you don't need to know them, you just need to know what not to touch so that you don't break the spreadsheet's operation

[1] Yes the UPRR actually has this on this webpage: https://www.up.com/customers/track-record/tr120618-rail-lingo-part-three.htm

If you have more knowledge using of Microsoft™ Excel you can hack around under the hood to improve or modify this system for your own needs should you wish to do so. And I urge you to do so. I have modified this current design many times to reach the stage where I am happy with it.

Just remember to make a copy of the original before you make changes. In this way you can always put the genie back in the bottle, should something go awry.

ABOUT THE SPREADSHEET

The Car Ordering & Switch List User Guide file that you've downloaded requires a little work to get started and has a 'small amount' of work that is required to keep it rolling once you have started.

The system is not fully automatic, but it does require less data input and physical paperwork than other car card, car forwarding and other car order systems I've found during the time it has taken to reach this point.

With the focus on switching, this spreadsheet provides everything that you need to operate a small switching layout, using a Conductor's Work order or Switch List, but nothing more.

WHAT'S IN THE ZIP FILE

The ZIP file that you have downloaded contains two files:

- Car Ordering & Switch List for Small Layouts_Andrew Martin_DRAFT_Version_0.99a.xlsm[2], and
- This PDF.

READERS SHOULD NOTE: the spreadsheet contains a MACRO[3] that is required to make the END SESSION button do the work of closing out the session. The Macro is a simple copy and paste routine. If you do not enable Macros in your instance of Microsoft™ Excel (you will get a pop-up warning that MACROS are disabled in Excel). Please note that without trusting the macro the sheet will not function as described in the document.

DEVELOPER FEEDBACK

I've made every attempt to provide a workable system that meets my needs, which will hopefully meet yours with few changes required.

This documentation shows you how to operate the system from start up through to every day operations.

If you find any issues please use the link in the header of page 1 to report the issue to the author: Andrew Martin

You can also find me on Facebook: https://www.facebook.com/AndrewsTrains/ and on YouTube: https://www.youtube.com/@therealandrewstrains

[2] Readers should note that version control of the spreadsheet will be reflected in the documentation as updates occur

[3] The Macro code is provided in the 'References' section, 'Spreadsheet Macro' sub-section on 18 of this document.

QUICK START

RUNNING A SESSION

For each session you, as operator, have to do a little work to update the spreadsheet. This allows the spreadsheet formula to determine the set outs, holds and pickups for the next session. The small amount of work required for your small layout is set out below.

THE FIRST SESSION

I am assuming[4] that you have completed your layout to the point where operations are now possible, or that you have a layout design that you want to test for operational readiness to see if your assumptions hold water.

If this is your first time using the spreadsheet, and:

1) Cars are already set out on the spots on your layout you'll need to:
   i) Input your On-Spot data by:
      (1) Printing a Switch List
      (2) Writing in the car reporting marks for each occupied spot
      (3) Transferring the written car reporting details from your switch list into the spreadsheet's On-Spot column
   ii) Click the End Session button to generate your next session
2) Cars are not set out at any spots on your layout you'll need to:
   i) Click the End Session button to generate your first switching session
   ii) Choose the cars for each spot from the customer ordered car types
   iii) Build your first train in staging
   iv) Print your switch list
   v) Switch to your hearts content
   vi) Transfer the written car reporting details from your switch list into the spreadsheet's On-Spot column, and finally
   vii) Click the End Session button to generate your first switching session

GETTING STARTED

Once you have the spreadsheet open in MS Excel, work through each tab in order and complete the setup required. Complete descriptions are provided for each setting in the each of the sections below. I have provided you with my settings as a start. These ensure I do not get flooded with cars and that there are no off-spot cars on my layout.

SYSTEM SET UP

The first tab of the spreadsheet is for Control Parameters. The parameters are used by the sheet to set attributes such as:

- whether more cars are delivered than available spots,
- whether cars are left on-spot for more than one operating session, and
- how often cars are delivered to each spot

Control parameters may be changed as needed. You should read this section fully to understand how each of the parameters effect the car ordering system designed into the spreadsheet. Each is explained below to assist you in setting up a system that works for your railroad, spots and desired traffic pattern.

[4] It is worthwhile remembering that ASSUMPTION is the mother of all screw-ups

CONTROL PARAMETERS TAB

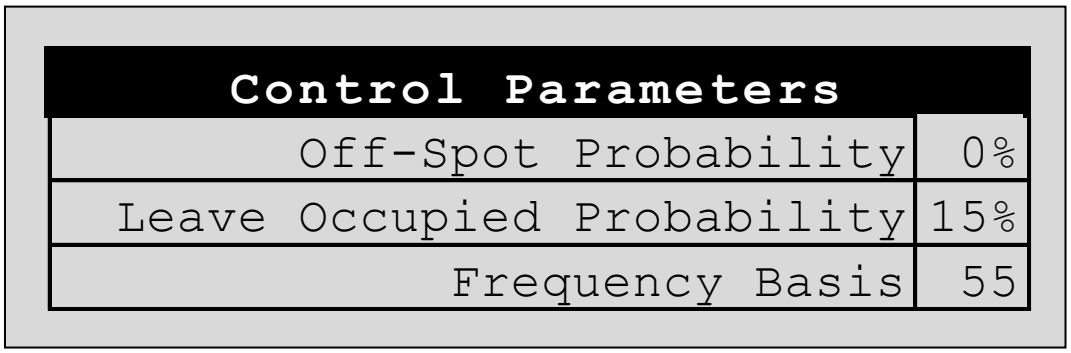

Figure 1: The Control Parameters settings

The three parameters are:

- Off-Spot Probability
- Leave Occupied Probability, and
- Frequency Basis

Each parameter is discussed in the below.

OFF-SPOT PROBABILITY

This setting determines the likelihood of delivering more than one (1) car to a single spot. Usually this is when a customer has ordered a car for Monday and a second for Tuesday but has not yet completed loading or unloading the first car when the second arrives. In railroad terminology, this is called an Off-Spot.

Off-Spot cars are usually stored at a location (a spur or other track) that is NOT at the correct destination spot at a customer's siding. It requires a later, secondary, switch to deliver the car to the industry's correct track and spot.

I have disabled this value set to zero (0) percent probability (explanation below)

If you set an 'off-spot' value greater than 0, you must have a location that can be used to store Off-Spot cars. This is due to all Off-Spot cars needing a location to be stored at until the designated spot becomes available.

I recommend that for small layouts this feature not be changed unless you have a designated Off-Spot location on your layout.

- To enable 'off-spot' functionality type a percentage probability greater than zero (>0). Any number between 1 and 100 may be entered. Higher numbers will ensure more cars are delivered to a customer than spots are available.
- To disable 'off-spot' functionality type zero (0).

A setting of 20% will allow up to two (2) cars to be delivered to a single spot approximately one in every five (5) times cars are delivered. Not to one fifth of all possible spots.

LEAVE OCCUPIED PROBABILITY

This setting controls the probability that a freight car occupying a spot at the beginning of a session will 'HOLD' that spot until a future session.

- To enable the HOLD function set the value between 1% and 100%

- To disable the HOLD function set to zero (0)

Users should note that the probability of a car being left is equal to the percentage you set. That is, when set at 10% the spreadsheet will leave roughly one out of every 10 cars for a later session.

FREQUENCY BASIS

The frequency basis works in conjunction with each spot's Frequency value to determine how often a spot receives a car.

> This setting must have a value greater than 0. Without it the spreadsheet cannot function.

If your switch job runs five trips a week and want to think about deliveries in terms of number per week, you'd enter a "5" here and then a "Freq" of 1 for a once a week delivery for that spot's row in column D$.

Alternately , if you think in terms of percentage of time you'd enter "100" here and then the percentage expressed as an integer (i.e., "45", not "45%") in the column D for that spot. Even if you think in terms of weeks or percentages, this figure may be changed at any time. Increasing it will reduce the number of cars delivered in a given session and decreasing it will produce more traffic.

CONTINUED...

SYSTEM WORKSHEET TAB

System Worksheet									
Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car#	Pick Up	Set Out
Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			
	2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			
	3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3			
White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3			
	2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3			
Scrappy's Recycling	1	14	Gondola			1			
	2	21	Gondola			1			
	3	32	Gondola	Gondola	Flatcar	3			
Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3			
	2	22	Covered Hopper	Tank Car	Boxcar	3			
	3	29	Boxcar	Flatcar	Tank Car	3			
Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3			
	2	12	Covered Hopper	Gondola	Covered Hopper	3			
	3	14	Gondola	Tank Car	Boxcar	3			
	4	16	Tank Car	Boxcar	Loco	3			
	5	18	Loco	Loco	Mechanical Reefer	3			
Sebastopol Shop Loco Facility	1	25	Loco	Loco					
	2	35	Loco	Loco					
Sebastopol Shop R.I.P. Facility	1	15							
	2	10							

Figure 2: The System Worksheet

OVERVIEW

This tab is the operator / layout owner's primary working area.

It is here that you'll define your:

- Customers
- The number of spots on each customer spur, and
- The cars types (up to three types) that customers accept on each spot

You'll also record the cars that are destined to be set out at each spot after the car order is placed by pressing the end session button.

At the end of each session pressing the End Session button will generate the next session's actions.

Notes may be made on specific spots, where for example you, or the customer need to advise the switching crew of car placement requirements, or of temporary out of service notifications, and so on.

GENERAL INFORMATION

Each row has specific functions that allow the spreadsheet to work and perform its function.

Rows may be deleted at will and without consequence for the rest of the sheet. To add new rows, we recommend you insert the appropriate number of rows and then copy an existing row and paste it into the inserted row(s) to maintain functionality for that row. Borders, fill colours and text in modifiable cells may, of course, be changed.

The settings discussed below apply to columns A through G and start from row 3 of the spreadsheet.

> Each location where a single car may be spotted requires its own row. If you have 15 spots on your layout where cars may be spotted you'll need 15 rows of data.

I recommend that if you have enabled the Off-Spot function in the spreadsheet that you create a location where off spot cars are stored between sessions to aid operators in tracking cars not at their final destination by the end of a session

JOB

The job column is automatically copied over from the switch list column of the same name.

INDUSTRY

A descriptive name that identifies the industry, interchange or transfer track or other location where cars may be delivered. It's obviously recommended that an entry be made here to help the operators identify the location, but that's its only function and it won't affect the operation if the field is left blank (as in the case of multiple spots for a given industry).

This field is informational only and has no effect on the operation of the spreadsheet.

SPOT

Used for industries with multiple locations that may receive cars. If the industry requires that cars be placed at specific locations (e.g., "Warehouse Door 4" or "Receiving") that location should be indicated here.

This field is informational only and has no effect on the operation of the spreadsheet.

- Where the industry has only one spot the field may be blank.
- Where the industry has multiple spots, and it doesn't matter which car is set out at which spot, then each spot may use the same label. In this case the operator determines which car will be placed at each spot

FREQUENCY

This field works in conjunction with the Setup Tab's Frequency Basis (see System Set Up/Control Parameters/Frequency Basis on page 7) to determine whether a car will be delivered in the next session.

Again, if you think in terms of deliveries per week, this is the frequency based on how many times a week a delivery will occur. If you think in terms of percentages, this is the percentage (expressed as an integer - "45", not "45%". Leaving this field blank or entering a zero means no cars will be automatically generated for this spot. Entering a number equal to or greater than the Frequency Basis means one or two cars (See Excess Delivery Possibility, 3.1 above) will be generated every time.

CAR TYPE

I have chosen to use three (3) types of cars that can be delivered to any one spot. These are listed as:

- Car Type 1,
- Car Type 2, and
- Car Type 3

These fields identify the types of cars that may be spotted to a given location during a session.

>> (see Freq, item 4.4, above) it has an equal chance of receiving any of the acceptable types. The order does not count, although the fields should be completed from left to right (Type 1, then if necessary, type 2 and, only if three types are possible, Type 3). These fields are used to complete the Deliver Cell (K$) for the appropriate row.

COUNT

> This is a generated field - do not modify

For informational purposes, it is used to make selecting the car type easier for the spread sheet and indicates the number of possible car types for that row.

That completes the Set-up, required at least once The only time you may need to modify any of the above field is to change the performance of the session. For example, where too many or too few cars were generated.

We'd also recommend that you hide columns D-H (Frequency - Count) at this point - or at least before printing the sheets or using the online version during operations. They add unnecessary width for printing and reduce clarity during operations. You can unhide them when you want to change the sheet's operation.

Check the Occupied car data

OCCUPIED (COLUMN I)

Before a session begins an operator should confirm which spots are in use and which are not. Any occupied spot should have car reporting information entered. A non-blank entry indicates to the spreadsheet that the spot is occupied.

Entering the car's reporting information also helps operator's identify the correct car, especially when several spots exist on a spur.

Any non-blank cell triggers the sheet to determine whether the car should be picked up. See *Pick-Up (column J$)* on page 10, below.

PICK-UP (COLUMN J$)

This column tells the switching crew whether a car is to be picked up from an industry track, or left until the next section.

If the field's equals YES, then the car is to be picked up by the switch crew and returned to the yard. If the field's contents equals NO, then the car is to remain on the siding and spot until the next session.

> This is a generated field - do not modify!

This field only becomes active and returns a YES or NO when there is a value in the associated row of the Occupied (I$) column.

Readers should not that cars that are left in place may need to be moved during a session to set out, or pick up other cars on the customer's spur. In this case, the car moved must be placed back in its former location once all switching on the

customer's spur is completed. You can also use blue flags for this operation. See web site for that!

DELIVER (COLUMN K)

> This is a generated field - do not modify!

Based on the parameters set in section 4 above, and the random function of the spreadsheet, this is the list of cars to be delivered and the destinations to which they should be delivered. The sheet generates cars by car type. It will be up to the operator to identify which specific cars are to be used and to assemble the job - either manually in a fiddle yard or as a yard switching job.

Deliver Marking(s) (column L): When a consist is assembled, the operator may note down the car markings for each destination. This step isn't a requirement of the sheet and, indeed, with a limited number of cars arranged in delivery order (especially in scales small enough that reading the markings is difficult), it may be omitted. But for simulating actual operations or for specificity, it's advisable. This field should be completed on the printed copy or in Excel with the calculate function turned off. (The function cannot be turned off in Google Docs), because otherwise attempting to add a comment to an open sheet will regenerate all the calculated fields each time a change is made to any field.

Remarks (M7): This is a place for noting anything that cannot be noted on the sheet. Operators who have to place cars off spot may note here where the car was left (or use one of the empty rows to indicate the car's location and its eventual destination during the next session. Others, operating to set up session may indicate cars that have to be picked up at interchange points in the current session and where they're destined. The use of this field is as varied as the creativity of the operators in overcoming the problems with the sheet as designed.

SWITCH LIST

The switch list tab works in conjunction with the Switch List Drop Down detail

JOB

The job column is provided is included for those that have two or more switching jobs working their layout. For example you have a switch job that runs:

- Able to Foxtrot and shunts trailing points only called SWAF (Switcher Able Foxtrot), and
- Foxtrot to Able doing likewise in the other direction called SWFA (Switcher Foxtrot Able).

Alternately these may be day jobs that run to certain customers on certain days, for example:

- Job 1 switches customer A on Mondays only, while
- Job 2 switches customer B on Tuesday, Thursday and Saturday only.

Where you use multiple operators or want to serve different sets of industries during different sessions the 'Job' value allows you to group industries served during a given session.

> This value is an informational field only and has no effect on the operation of the spreadsheet. If not used it may be left blank

Industry

Spot

Freq

Car Type 1

Car Type 2

Car Type 3

Count

On Spot

Pick Up

Set Out

Set Out Car #

Notes

Switch List Drop Down

Images for use in text

Evans Hollows Industrial Park

A Hunter Valley Lines R.R. Company

Conductors Work Report

Zone: Park West **Assigned Power:** HVLX 27 **Engineer:** John Doe
Assigned Caboose: 15 **Conductor:** Phil McCracken

Job	Industry	Track	Spot	On Spot Car	Pick Up	Set Out	S/Out Car#	Comp?	Date	Notes
Swing	Appliance Distributors		1			40' Hi-Cube				
			2							
			3			50' Hi-Cube	SSR 12345			
Night	White Swan Foodservice		1							
			2							
Day	Scrappy's Recycling		1							
			2			Gondola	UP 113064			
			3			Gondola				
Day	Team Track		1			Boxcar				
			2							
			3							
Swing	Sebastopol Shop Lead		1							
			2							
			3							
			4							
			5				SPFE 41395			

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car	Pick Up	Set Out	S/Out Car#	Notes
Swing	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3			50' Hi-Cube	SSR 12345	
Night	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3					
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3					
Day	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1			Gondola	UP 113064	
		3	32	Gondola	Gondola	Flatcar	3			Gondola		
Day	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3			Boxcar		
		2	22	Covered Hopper	Tank Car	Boxcar	3					
		3	29	Boxcar	Flatcar	Tank Car	3					
Swing	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3					
		3	14	Gondola	Tank Car	Boxcar	3					
		4	16	Tank Car	Boxcar	Loco	3					
		5	18	Loco	Loco	Mechanical Reefer	3				SPFE 41395	
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

Post Session complete
Begin next session

Evans Hollows Industrial Park

A Hunter Valley Lines R.R. Company

Conductors Work Report

Zone: Park West **Assigned Power:** HVLX 27 **Engineer:** John Doe
Assigned Caboose: 15 **Conductor:** Phil McCracken

Job	Industry	Track	Spot	On Spot Car	Pick Up	Set Out	S/Out Car#	Comp?	Date	Notes
Swing	Appliance Distributors		1			40' Hi-Cube				
			2			40' Hi-Cube				
			3	SSR 12345	Yes	40' Hi-Cube				
Night	White Swan Foodservice		1			Mechanical Reefer				
			2							
Day	Scrappy's Recycling		1							
			2	UP 113064	No					
			3							
Day	Team Track		1							
			2			Covered Hopper				
			3			Boxcar				
Swing	Sebastopol Shop Lead		1							
			2							
			3							
			4			Tank Car				
			5	SPFE 41395						

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car	Pick Up	Set Out	S/Out Car#	Notes
Swing	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3	SSR 12345	Yes	40' Hi-Cube		
Night	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3			Mechanical Reefer		
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3					
Day	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1	UP 113064	No			
		3	32	Gondola	Gondola	Flatcar	3					
Day	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3			Covered Hopper		
		3	29	Boxcar	Flatcar	Tank Car	3			Boxcar		
Swing	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3					
		3	14	Gondola	Tank Car	Boxcar	3					
		4	16	Tank Car	Boxcar	Loco	3			Tank Car		
		5	18	Loco	Loco	Mechanical Reefer	3	SPFE 41395	Yes			
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

CONTINUED...

Cars assigned, switching complete, see notes

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car	Pick Up	Set Out	S/Out Car#	Notes
Swing	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube	HVL4005	
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube	HVL 4018	
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3	SSR 12345	Yes	40' Hi-Cube	HVL4002	
Night	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3			Mechanical Reefer	UPFE 10979	
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3					
Day	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1	UP 113064	No			Left on spot per cust request +24
		3	32	Gondola	Gondola	Flatcar	3					
Day	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3			Covered Hopper	SP 31274	
		3	29	Boxcar	Flatcar	Tank Car	3			Boxcar	RBOX 30019	
Swing	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3					
		3	14	Gondola	Tank Car	Boxcar	3					
		4	16	Tank Car	Boxcar	Loco	3			Tank Car	CGLX 12345	
		5	18	Loco	Loco	Mechanical Reefer	3	SPFE 41395	Yes			
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

Scanned switch list
Scan it – hand written notes

Session complete

Rinse and Repeat

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car	Pick Up	Set Out	S/Out Car#	Notes
Swing	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube	HVL 4012	
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3					
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3					
Night	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3					
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3	SPFE	Yes			
Day	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1	UP 113064	Yes	Gondola	UP 112941	
		3	32	Gondola	Gondola	Flatcar	3					
Day	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3					
		3	29	Boxcar	Flatcar	Tank Car	3					
Swing	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3			Covered Hopper	SP 30154	
		3	14	Gondola	Tank Car	Boxcar	3			Boxcar	RBOX 30456	
		4	16	Tank Car	Boxcar	Loco	3					
		5	18	Loco	Loco	Mechanical Reefer	3					
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car	Pick Up	Set Out	S/Out Car#	Notes
Swing	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3	HVL 4012	Yes			
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			50' Hi Cube		
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3					
Night	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3					
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3			Mechanical Reefer		
Day	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1	UP 112941	Yes	Gondola		
		3	32	Gondola	Gondola	Flatcar	3					
Day	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3			Tank Car		
		2	22	Covered Hopper	Tank Car	Boxcar	3			Tank Car		
		3	29	Boxcar	Flatcar	Tank Car	3					
Swing	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3	SP 30154	No			
		3	14	Gondola	Tank Car	Boxcar	3	RBOX 30456	Yes	Tank Car		
		4	16	Tank Car	Boxcar	Loco	3					
		5	18	Loco	Loco	Mechanical Reefer	3					
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

CONTINUED...

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car	Pick Up	Set Out	S/Out Car#	Notes
Swing	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube	HVL4005	
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube	HVL 4018	
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3	SSR 12345	Yes	40' Hi-Cube	HVL4002	
Night	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3			Mechanical Reefer	UPFE 10979	
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3					
Day	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1	UP 113064	No			
		3	32	Gondola	Gondola	Flatcar	3					
Day	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3			Covered Hopper	SP 31274	
		3	29	Boxcar	Flatcar	Tank Car	3			Boxcar	RBOX 30019	
Swing	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3					
		3	14	Gondola	Tank Car	Boxcar	3					
		4	16	Tank Car	Boxcar	Loco	3			Tank Car	CGLX 12345	
		5	18	Loco	Loco	Mechanical Reefer	3	SPFE 41395	Yes			
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

Evans Hollows Industrial Park

A Hunter Valley Lines R.R. Company

Conductors Work Report

Zone: Park West **Assigned Power:** HVLX 27 **Engineer:** John Doe
Assigned Caboose: 15 **Conductor:** Phil McCracken

Job	Industry	Track	Spot	On Spot Car	Pick Up	Set Out	S/Out Car#	Comp?	Date	Notes
Swing	Appliance Distributors		1			40' Hi-Cube				
			2			40' Hi-Cube				
			3	SSR 12345	Yes	40' Hi-Cube				
Night	White Swan Foodservice		1			Mechanical Reefer				
			2							
Day	Scrappy's Recycling		1							
			2	UP 113064	No					
			3							
Day	Team Track		1							
			2			Covered Hopper				
			3			Boxcar				
Swing	Sebastopol Shop Lead		1							
			2							
			3							
			4			Tank Car				
			5	SPFE 41395	Yes					

RUNNING YOUR FIRST OPERATING SESSION

INITIAL SETUP CONDITIONS

The spreadsheet can provide car types for your first operating, which you then provide car numbers for, prior to beginning the operating session; or you can place cars onto spots on the layout and record the car numbers onto the spurs for the beginning of this initial operating session.

GENERATE CARS REQUIRED

SPOT CARS PRIOR TO OPERATING SESSION

On the layout write on the switchlist the reporting marks of cars by spot as they are placed. This can be over several

Back at the computer Fill in the set out car # details for the switch list

Click the "End Session Update" buttom to run the macro and refresh the spreadsheet.

End Session Update

Switch List — Session Start Date: 17/01/2022

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot	Pick Up	Set Out	Set Out Car #	Notes
	Warehouse 1	1	35	40' Hi Cube			1			40' Hi Cube	SP 31360	
		2	40	40' Hi Cube			1					DOOR OUT OF SERVICE
		3	15	40' Hi Cube	50' Hi Cube		2			40' Hi Cube	SP 31349	
	Warehouse 2	1	30	50' Hi Cube	50' Boxcar		2					
		2	35	50' Boxcar	50' Hi Cube		2			50' Boxcar	RBOX 33958	
	Scrappy's Recycling	1	20	Gondola			1			Gondola	UP 12345	
		2	30	Gondola			1					
		3	40	Gondola			1			Gondola	SP 54321	
	Team Track	1	20	Tank Car	Covered Hopper	Boxcar	3					
		2	30	Covered Hopper	Boxcar	Tank Car	3			Tank Car	UTLX 15798	
		3	40	Boxcar	Tank Car	Covered Hopper	3					
	Sebastopol Shop Lead	1	10	Boxcar	Tank Car	Loco	3					
		2	15	Tank Car	Loco	Covered Hopper	3					
		3	20	Covered Hopper	Boxcar	Loco	3					
		4	35	Gondola	Loco	Boxcar	3			Gondola	SP 53210	
		5	45	Loco	Covered Hopper	Tank Car	3			Loco	SP 2347	

Operating Session

Starting Spreadsheet

End Session

System Worksheet

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot	Pick Up	Set Out	Set Out Car #	Notes
	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3			40' Hi-Cube		
	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3					
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3			Mechanical Reefer		
	Scrappy's Recycling	1	14	Gondola			1			Gondola		
		2	21	Gondola			1					
		3	32	Gondola	Gondola	Flatcar	3			Flatcar		
	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3					
		3	29	Boxcar	Flatcar	Tank Car	3			Flatcar		
	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3					
		3	14	Gondola	Tank Car	Boxcar	3			Gondola		
		4	16	Tank Car	Boxcar	Loco	3			Boxcar		
		5	18	Loco	Loco	Mechanical Reefer	3					
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

At completion of the switching, the data from the printed switchlist is added to the System Worksheet Tab

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The data is entered to the spreadsheet tab

End Session

System Worksheet

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot	Pick Up	Set Out	Set Out Car #	Notes
	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube		
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3			40' Hi-Cube	HVLX 401	
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3			40' Hi-Cube		
	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3				SOU 40308	
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3			Mechanical Reefer		
	Scrappy's Recycling	1	14	Gondola			1			Gondola	SP41734	
		2	21	Gondola			1					
		3	32	Gondola	Gondola	Flatcar	3			Flatcar	SP 40607	
	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3					
		3	29	Boxcar	Flatcar	Tank Car	3			Flatcar		
	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3				UP 17710	
		2	12	Covered Hopper	Gondola	Covered Hopper	3				UP 13431	
		3	14	Gondola	Tank Car	Boxcar	3			Gondola		
		4	16	Tank Car	Boxcar	Loco	3			Boxcar		
		5	18	Loco	Loco	Mechanical Reefer	3				SFRD 41793	
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

The End Session Button is pressed and the data is moved across to the On SPOT detail and the next switching session is prepped

End Session

System Worksheet

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot	Pick Up	Set Out	Set Out Car #	Notes
	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3					
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3	HVLX 401	Yes	40' Hi-Cube		
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3					
	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3	SOU 40308	Yes			
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3					
	Scrappy's Recycling	1	14	Gondola			1	SP41734	Yes			
		2	21	Gondola			1					
		3	32	Gondola	Gondola	Flatcar	3	SP 40607	Yes	Flatcar		
	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3					
		3	29	Boxcar	Flatcar	Tank Car	3					
	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3	UP 17710	Yes			
		2	12	Covered Hopper	Gondola	Covered Hopper	3	UP 13431	No	Covered Hopper		
		3	14	Gondola	Tank Car	Boxcar	3					
		4	16	Tank Car	Boxcar	Loco	3			Tank Car		
		5	18	Loco	Loco	Mechanical Reefer	3	SFRD 41793	Yes			
	Sebastopol Shop Loco Facility	1										Locomotive Maintenance 1
		2										Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2

CONTINUED...

REFERENCES

SPREADSHEET MACRO

```
Sub Update_Worksheet_End_Session()
' ================================
' Update_Worksheet_End_Session macro
' copies the set out car numbers
' from column "L" to column "I" and
' then updates the sheet (F9) ready
' for the next operating session.
'================================


    Range("L3:L22").Select
    Selection.Copy
    Range("I3:I22").Select
    Selection.PasteSpecial Paste:=xlPasteValues,
   Operation:=xlNone, SkipBlanks _
        :=False, Transpose:=False
    Application.CutCopyMode = False
    Range("L3:L22").Select
    Selection.ClearContents
    Calculate
End Sub
```


CONTINUED...

SYSTEM WORKSHEET

System Worksheet — End Session

Job	Industry	Spot	Freq	Car Type 1	Car Type 2	Car Type 3	Count	On Spot Car#	Pick Up	Set Out	S/Out Car#	Notes
	Appliance Distributors	1	28	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3					
		2	22	40' Hi-Cube	40' Hi-Cube	50' Hi Cube	3					
		3	15	40' Hi-Cube	50' Hi-Cube	50' Boxcar	3					
	White Swan Foodservice	1	26	50' Boxcar	50' Boxcar	Mechanical Reefer	3					
		2	28	50' Boxcar	Mechanical Reefer	Mechanical Reefer	3					
	Scrappy's Recycling	1	14	Gondola			1					
		2	21	Gondola			1					
		3	32	Gondola	Gondola	Flatcar	3					
	Team Track	1	15	Tank Car	Boxcar	Covered Hopper	3					
		2	22	Covered Hopper	Tank Car	Boxcar	3					
		3	29	Boxcar	Flatcar	Tank Car	3					
	Sebastopol Shop Lead	1	10	Boxcar	Covered Hopper	Tank Car	3					
		2	12	Covered Hopper	Gondola	Covered Hopper	3					
		3	14	Gondola	Tank Car	Boxcar	3					
		4	16	Tank Car	Boxcar	Loco	3					
		5	18	Loco	Loco	Mechanical Reefer	3					
	Sebastopol Shop Loco Facility	1	25	Loco	Loco	Loco						Locomotive Maintenance 1
		2	35	Loco	Loco	Loco						Locomotive Maintenance 2
	Sebastopol Shop R.I.P. Facility	1										R.I.P. Track 1
		2										R.I.P. Track 2