

SWITCH LIST CREATOR

W/ ADDED FORMAT

JMRI

VERSION 1.3 12/17/14

LEFT-CLICK ONE OF THE BUTTONS



CREATE
SWITCH LIST

SWITCH LIST
PREFERENCES

SWITCH LIST
LOGO

PRINTERS AND
FILE LOCATIONS

EXIT
PROGRAM

Switch List Creator Add On To JMRI

with Location List Creator

Version 1.13

01/21/18

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Switch List Creator - Introduction

Switch List Creator (SLC) is an add-on application that may be used with output generated from JMRI Operations Train Build feature. This application is written in Visual Basic for Applications (VBA) within Microsoft Excel. SLC is NOT part of JMRI, but is used in conjunction with JMRI. The basic function of SLC is to produce a Train List (TL) (optional), a Switch List (SL) for each Location with work to perform, and Train Order (TO) documents. **Figure 1** through **Figure 5** show a sample set of output from SLC. **Figure 6** is the JMRI Manifest for the same Train. All switch lists were originally designed for a half sheet of paper (4.25x11). These can be grouped together and given to the crew at the start of their run or they can be placed at the different locations on the layout. Once the crew arrives they would have to find “their” work and proceed with the switching at that location. The format of the various forms are fully customizable. With the RiverRail group, which I worked with on implementation, the Peoria Western, Milwaukee Road, and the Great Northern all prefer the lists be printed on a wider piece of paper, and theirs are around 5” wide. By making modifications to the MASTERS, (described later in this document) you can customize the “look” to suit your fancy.

Below is the paperwork created for train 311. The Train Orders (TO), **Figure 1**, with Header modified to TRAIN INFORMATION, would be the top page for the crew, followed by the Train List (TL), **Figure 2**, BURMAN QUARRY’s Switch List (SL), **Figure 3**, YARDLEY’s SL, *Error! Reference source not found.*, and the HAUSER’s SL, **Figure 4** This train is a turn from HAUSER to YARDLEY and back. HAUSER has a yard crew stationed there and they receive a Location List (LL) for this train, so they know what cars to pull for departing trains, **Figure 13**, below, and where to place them when 311 returns, **Figure 14**.

TRAIN INFORMATION for 311		
CONSIST NO	DEPARTS	AT
#2371	HAUSER	15:15
Route Comment		
West local works everything to Yardley and back		
HAUSER	Switch List	
Sound units have delays to match the prime mover.		
Pickup Loco BNSF 2371 Track Engine Service		
Pickup Loco BN 3513 Track Engine Service		
IRVIN	No Work	
BURMAN QUARRY	Switch List	
YARDLEY JCT	No Work	
YARDLEY	Switch List	
Be sure dispatch places you on the westbound track heading back into Hauser so your engines can be routed into the yard.		
YARDLEY JCT	No Work	
IRVIN	No Work	
HAUSER	Switch List	
Setout Loco BNSF 2371 Track Engine Service		
Setout Loco BN 3513 Track Engine Service		
Train Terminates		

Figure 1: Train Information (TO) for Train 311
Created 11/10/2014 7:37:27 PM

BNSF				
				
TRAIN LIST at 12/18/2000 19:39				
BNSF Kootenai River sub				
Hauser Yardley turn				
TRAIN NO		TIME	STATION	
311		15:15	HAUSER	
ROAD	CAR NO	TYPE	CONTENTS	DESTINATION
Yardley				
BNSF	585026	FM	equip.	YARDLEY
GATX	40001	T	chem.	YARDLEY
GATX	40257	T	chem.	YARDLEY
GATX	40636	T	chem.	YARDLEY
OCE	12065	XM	parts	YARDLEY
BNSF	724331	XM	parts	YARDLEY
CPAA	204523	XM	parts	YARDLEY
UO	1524	XM	empty	YARDLEY
BNSF	713086	XM	empty	YARDLEY
SSAM	25148	XM	empty	YARDLEY
NS	450665	XM	empty	YARDLEY
WC	177549	XM	empty	YARDLEY
BNSF	511476	GB	scrap	YARDLEY

SWITCH LIST				TRAIN: 311			
BURMAN QUARRY				11/10/2000 19:20			
PULLS				SETOUTS 12/3/2014			
Road	Number	Type	Destination	Road	Number	Type	From
loading				loading			
ATSF	76640	GH	HAUSER	ATSF	82882	IO	HAUSER

Figure 3: Switch List (SL) - BURMAN QUARRY

SWITCH LIST				TRAIN: 311			
HAUSER				11/10/2000 19:20			
PULLS				SETOUTS			
Road	Number	Type	Destination	Road	Number	Type	From
Sandpoint				Sandpoint			
				BNSF	724395	XM	YARDLEY
Spokane				Spokane			
				ATSF	76640	GH	BURMAN QUARRY
				ATSF	76646	GH	BURMAN QUARRY
				ATSF	76648	GH	BURMAN QUARRY
				GATX	43212	T	YARDLEY
				DRWX	1951	XM	YARDLEY
				BN	247253	XM	YARDLEY
				BNSF	714268	XM	YARDLEY
				BNSF	713987	XM	YARDLEY
Troy				Troy			
				BN	435658	LO	BURMAN QUARRY
Kettle Falls				Kettle Falls			
				BN	244490	XM	YARDLEY
off spot				off spot			
				BN	430316	LO	YARDLEY
Created with 2017 HAUSER							

Figure 5: Switch List (SL) - YARDLEY

NOTE: With the release of Version 1.1 and Version 1.2, the last two lines of the TL and SW have been modified. A new line has been added providing Train Consist Information and the File Number has been added to the last line to aid in sequencing the documents in their proper order should the need arise. Please refer to Appendix B for both the explanation of the modifications and sample TL and SL. These changes have not been reflected in the various examples in this document. There is no specific reference to them in the documentation.

Figure 6 is one of the ways JMRI would print the paper work for train 311.

BNSF Kootenai River sub

Manifest for train (#311) Hauser Yardley turn

Valid 11/10/2000 18:56

West local works everything to Yardley and back

SCHEDULED WORK AT Hauser

Sound units have delays to match the prime mover.

Use	BNSF	2371		*26Engine Service	#2371	
Use	BN	3513		*26Engine Service	#2371	
Pull	ATSF	82882	LO	empty	*22BNSF Sand	Burman Quarry
Pull	BNSF	585026	FM	equip.	*10Yardley	Yardley
Pull	GATX	40001	T	chem.	*10Yardley	Yardley
Pull	GATX	40257	T	chem.	*10Yardley	Yardley
Pull	GATX	40636	T	chem.	*10Yardley	Yardley
Pull	OCE	12065	XM	parts	*10Yardley	Yardley
Pull	BNSF	724331	XM	parts	*10Yardley	Yardley
Pull	CPAA	204523	XM	parts	*10Yardley	Yardley
Pull	UO	1524	XM	empty	*10Yardley	Yardley
Pull	BNSF	713086	XM	empty	*10Yardley	Yardley
Pull	WC	177549	XM	empty	*10Yardley	Yardley
Pull	SSAM	25148	XM	empty	*10Yardley	Yardley
Pull	NS	450665	XM	empty	*10Yardley	Yardley
Pull	SP	401545	LO	sand	*10Yardley	Yardley
Pull	BNSF	581596	GB	scrap	*10 Yardley	Yardley
Pull	BNSF	511476	GB	scrap	*10Yardley	Yardley
Pull	BNSF	100232	NE		*23Caboose	Hauser

DEPARTS Hauser Westbound with 17 loads, 0 empties, 954 feet, 1,462 tons

Irvin

SCHEDULED WORK AT Burman Quarry

Pull	ATSF	76640	GH	ballast	loading	Hauser
Pull	ATSF	76646	GH	ballast	loading	Hauser
Pull	ATSF	76648	GH	ballast	loading	Hauser
Pull	BN	435658	LO	sand	loading	Hauser
Spot	ATSF	82882	LO	empty	loading	

DEPARTS Burman Quarry Westbound with 20 loads, 0 empties, 1,086 feet, 1,687 tons

Yardley jct

SCHEDULED WORK AT Yardley

Be sure dispatch places you on the westbound track heading back into Hauser so your engines can be routed into the yard.

Pull	BN	630843	FM	empty	*01Jordan Imp.	Hauser
Pull	GATX	43212	T	empty	*02Copher Chem	Hauser
Pull	DRWX	1951	XM	engines	*07B&S motors 5	Hauser
Pull	BN	247253	XM	engines	*08B&S motors 6	Hauser
Pull	BNSF	714268	XM	lumber	*11Roggensack 1	Hauser
Pull	BNSF	713987	XM	lumber	*12Roggensack 2	Hauser
Pull	BN	244490	XM	empty	*05B&S motors 3	Hauser

Figure 6: JMRI Manifest

Switch List Creator – A JMRI Perspective

Before beginning please be certain that you have placed all required files in their proper directories as described in the Read Me First Document.

You have seen an example of what this Switch List Creator program will generate for you. There are a few things you need to do before you can achieve this style of paperwork. The documentation is all right here. You just need to remember, the computer only does what you tell it to. So if you want this style of paperwork for your crews to use, let's get started.

The journey to this paperwork started with a need, and a very gracious individual that accepted the challenge to create Switch List Creator. Dan Foltz created Manifest Creator for all of us to use. It gave us something different as far as JMRI's paperwork goes. I started using it and liked the results.

However, there is a fellow layout owner in this RiverRail area that models the Milwaukee Road and he was hand generating his switch lists for his sessions, and that took him 6 hours to do. He would consider using a computer to do this for him, but the paperwork that was available at the time was not to his needs. He wanted something a bit more prototypical. I asked Dan if he would consider doing this for us and with some arm twisting, he agreed. A very big THANK YOU goes to Dan Foltz for the many hours and hours he gave to creating this program for all of "us" to use.

So let's get started. Here is where you start to help Switch List Creator, (SLC), create the switch list style of paperwork. The computer only does what we tell it so let's create a switch list for this location.



Figure 7: Portion of KRID Industrial District

On my freelanced BNSF Kootenai River sub layout, I have a location called KRID, **Figure 7**, which is short for Kootenai River Industrial District. It is a work in progress and it takes up this entire side of the divider plus what you cannot see on the left. But as you can see from the above photo, it is important to have a switch list that is organized. By that I mean, SLC4JMRIDoco-Ver11.3.docx

the crew assigned to work this complex needs a list that is organized in such a manner that the spurs are in location order. It is not logical to place a spur on the list that is located at the far end of this complex on a line above the overhead crane. SLC will do this for you but you need to help it.

Let's take a look at what we need to do on the JMRI side of things. Later in this document we will explain Switch List Creator and the "MASTER" files that come with it. For now, on to JMRI considerations.

NOTE: You will notice that most of the examples of TLs, SLs, and LLs shown in this document use AAR Codes rather than Car Names. These codes fit the space provided for Type better than Car Names when using the default 4.25" wide MASTERS. If you intend to make your TLs, SLs, TOs, and LLs wider than 4.25", then you can create more room for Car Names in the Type field. Either will work in the supplied MASTERS however.

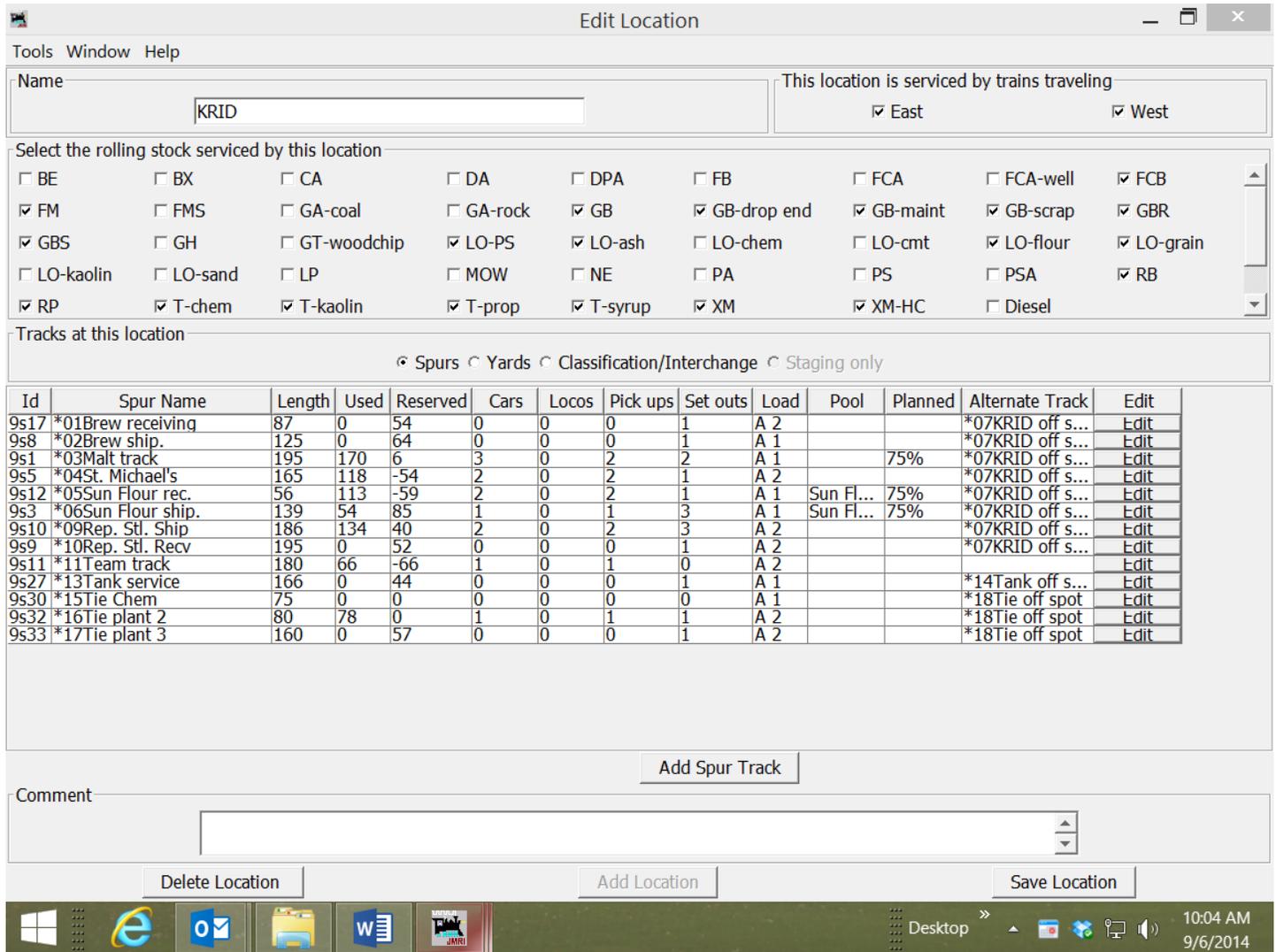


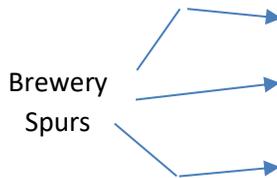
Figure 8: KRID Spurs with Sequence Numbers

It is important to update to the latest version of JMRI before starting this installation.

Figure 8, shows this Location in JMRI. The Brew receiving, Brew ship., and Malt tracks are all on the far end of this photo and Republic Steal is on this end. So to have SLC arrange the paperwork logically, we need to help it. Notice the *nn before each spur at this Location. I also have off-spotted cars sitting here and those tracks are designated "yard" tracks and they also have a *nn in front of their names. SLC will print this Location's work in the order I have the spurs identified. It drops the *nn and just prints the spur's name on the switch list. Also when entering this information in

JMRI, there is no space between the *nn and the spur name. By the way, spurs *07, *14 and *18 are yard tracks used for off spotting certain car types, spurs 13, 15, 16 and 17 are not in this photo. It is important that you provide the leading zero (0) in numbers less than 10 as shown in *Figure 8*.

SWITCH LIST				TRAIN: 1000			
KRID				11/10/2000 18:18			
PULLS				SETOUTS			
Road	Number	Type	Destination	Road	Number	Type	From
Brew receiving				Brew receiving			
MRL	20020	XM	KR INTG				
Brew ship.				Brew ship.			
FGMR	12646	RP	SPOKANE				
Malt track				Malt track			
BNSF	424424	LO	KR INTG	BNSF	421649	LO	KR INTG
BNSF	414823	LO	KR INTG	USLX	1363	LO	KR INTG
BNSF	473017	LO	KR INTG	AFEX	103	LO	KR INTG
Britt's Publishing				Britt's Publishing			
KCS	759183	XM	SPOKANE				
Sun Flour rec.				Sun Flour rec.			
CNW	490032	LO	KR INTG	BNSF	402064	LO	KR INTG
Sun Flour ship.				Sun Flour ship.			
CNW	69911	LO	KR INTG	BNSF	401026	LO	KR INTG
GACX	42830	LO	SPOKANE				
KRID off spot				KRID off spot			
BN	439452	LO	Sun Flour ship.	BN	413353	LO	SPOKANE
BN	566185	GB	Rep. Stl. Ship				
UP	54550	FM	Rep. Stl. Ship				
UP	905280	FM	Rep. Stl. Ship				
Rep. Stl. Ship				Rep. Stl. Ship			
JEFX	1995	GB	KR INTG				
BNSF	580596	GB	SPOKANE				
BN	566193	GB	SPOKANE				
Rep. Stl. Recv				Rep. Stl. Recv			
NYC	752600	GBS	KR INTG				
Team track				Team track			
				MLLX	97277	LO	SPOKANE
Tank service				Tank service			
BADX	1006	T	KR INTG	GATX	27494	T	KR INTG
ACFX	78071	T	KR INTG	GATX	43228	T	KR INTG
Tie plant 2				Tie plant 2			
BN	625571	FCB	SPOKANE	TTZX	87698	FCB	SPOKANE
Tie plant 3				Tie plant 3			
BNSF	512044	GB	SPOKANE				



Created 11/10/2014 6:19:03 PM

Figure 9: Switch List - KRID

Figure 9 shows how SLC printed the Switch List (SL) for this job. All of the destinations that are capitalized are LOCATIONS on this layout where the cars are going to. Destinations in lower case are local moves within this location. So all the cars that are in off spot at KRID have lower case destinations, meaning these cars are going to be moved to a spur here at KRID. Notice all the spurs located at the brewery are grouped together and there are no *nn in front of the spur names. Republic Steel is on this end. The last spurs on this list are on the other side of the aisle not in this photo. Arriving cars have their spur locations and where they came from, and departing cars have their destinations all shown on this half sheet of paper.

The process is fairly simple. SLC is easy to use and pretty automatic as far as creating something that a lot of us felt was needed for computerized car movement programs. SLC creates a piece of paper, in this case a switch list that is close to prototypical, and once set up properly within JMRI, is pretty easy to use.

Time	Build	Function	Name	Description	Route	Departs	Terminates
00:00	<input checked="" type="checkbox"/>	Build	#X31	Extra West loaded grain train	G-SNPT-SPO	Sandpoint	Spokane
00:00	<input checked="" type="checkbox"/>	Build	#X702	East loaded coal drag	C-SPO-SNPT	Spokane	Sandpoint
00:00	<input checked="" type="checkbox"/>	Build	#X711	Extra Power plant coal turn	C-SNP-TRY turn	Sandpoint	Sandpoint
00:00	<input checked="" type="checkbox"/>	Build	#X901	Extra West to Spokane MOW	X-West MOW	Sandpoint	Spokane
00:00	<input checked="" type="checkbox"/>	Build	#X902	Extra East to Sandpoint MOW	X-East MOW	Spokane	Sandpoint
15:15	<input checked="" type="checkbox"/>	Build	#311	Hauser Yardley turn	L-HAU-YRD turn	Hauser	Hauser
15:15	<input checked="" type="checkbox"/>	Build	801	Potlatch Mill job	Potlatch Mill job	Potlatch	Potlatch
15:20	<input checked="" type="checkbox"/>	Build	#102	Hauser KR turn	L-2340	Hauser	Hauser
15:25	<input checked="" type="checkbox"/>	Build	#503	West MRL manifest	SNPT-SPO-(MRL)	Sandpoint	Spokane
15:25	<input checked="" type="checkbox"/>	Build	#X33	West loaded grain train	G-SNPT-SPO	Sandpoint	Spokane
15:45	<input checked="" type="checkbox"/>	Build	#335	West local to Spokane	L-SNPT-SPO	Sandpoint	Spokane
15:50	<input checked="" type="checkbox"/>	Build	#340	Extra Spokane to Hauser	X-SPOHAU	Spokane	Hauser
16:00	<input checked="" type="checkbox"/>	Build	#8	Eastbound Amtrak	8-Amtrak	Spokane	Sandpoint
16:15	<input checked="" type="checkbox"/>	Build	#1000	UP turn to Kootenai River	L-SPO-KR UP turn	Spokane	Spokane
16:20	<input checked="" type="checkbox"/>	Build	#202	East Z	Z-SPO-SNPT	Spokane	Sandpoint
16:30	<input checked="" type="checkbox"/>	Build	#510	MRL local turn	L-SNP-FOS turn	Sandpoint	Sandpoint
16:40	<input checked="" type="checkbox"/>	Build	#48	East manifest	M-SPO-SNPT	Spokane	Sandpoint
16:45	<input checked="" type="checkbox"/>	Build	#377	Local Sandpoint to K. Falls	L-SNPT-KF	Sandpoint	Kettle Falls
16:50	<input checked="" type="checkbox"/>	Build	#376	Kettle Falls east local	L-KF-SNPT	Kettle Falls	Sandpoint
18:00	<input checked="" type="checkbox"/>	Build	#310	Hauser-Northwest grain turn	L-HAU-NWG-turn	Hauser	Hauser
18:00	<input checked="" type="checkbox"/>	Build	803	Potlatch Mill job	Potlatch Mill job	Potlatch	Potlatch
19:00	<input checked="" type="checkbox"/>	Build	#45	West manifest	M-SNPT-SPO	Sandpoint	Spokane
19:05	<input checked="" type="checkbox"/>	Build	#44	East manifest	M-SPO-SNPT	Spokane	Sandpoint
19:10	<input checked="" type="checkbox"/>	Build	#7	Westbound Amtrak	7-Amtrak	Sandpoint	Spokane
19:15	<input checked="" type="checkbox"/>	Build	#43	West manifest	M-SNPT-SPO	Sandpoint	Spokane
19:20	<input checked="" type="checkbox"/>	Build	#334	East local works everything	L-SPO-SNPT	Spokane	Sandpoint
19:20	<input checked="" type="checkbox"/>	Build	#40	East manifest	M-SPO-SNPT	Spokane	Sandpoint
19:30	<input checked="" type="checkbox"/>	Build	#502	East MRL manifest	SPO-SNPT-(MRL)	Spokane	Sandpoint
19:35	<input checked="" type="checkbox"/>	Build	#375	Local Sandpoint to K. Falls	L-SNPT-KF	Sandpoint	Kettle Falls
19:40	<input checked="" type="checkbox"/>	Build	#374	Kettle Falls East local	L-KF-SNPT	Kettle Falls	Sandpoint
19:45	<input checked="" type="checkbox"/>	Build	#X341	Extra Hauser to Spokane	X-HAU-SPO	Hauser	Spokane

Figure 10: Train Build Screen

Now let's talk about the Train List (TL) and what is needed for that. **Figure 10** shows how my Trains are entered in JMRI. I have a couple of trains that just work a paper mill and they are 801 and 803. I have a morning shift and evening shift for this mill. Notice these two trains do not have a # in front of their train number. The # tells SLC to create a TL for trains that need one. The TL tells the crew what they are hauling and where the cars in their train are going when they first pickup their train. My mill jobs do not need a train list so they do not have a # in front of their train numbers.

UNION PACIFIC				
TRAIN LIST at 9/7/2000 11:51				
UP turn to Kootenai River				
BNSF Kootenai River sub				
TRAIN NO		TIME	TIME	STATION
1000			16:15	Spokane
ROAD	CAR NO	TYPE	CONTENTS	DESTINATION
Tk.1				
BN	566185	GB	empty	KRID
UP	54550	FM	empty	KRID
UP	905280	FM	empty	KRID
SP	328437	GBR	steel	KRID
BNSF	512044	GB	raw ties	KRID
UP	24501	NE	crew	Spokane

Created 9/7/2014 11:51:31 AM

Figure 11: Train List (TL) - Train 1000

The Train List (TL), **Figure 11**, tells the crew where the cars are going that are in their train and what they are hauling. This also helps staging organize the train in station order with a little 0-5-0 before the train is ready to leave. The logo also comes from the train's page in JMRI. **On the SLC preferences page you will need to center it from left to right. Also, if you are using multiple logos, it is important to edit them so they are mostly the same width if you can. The program will center them from top to bottom. You will need to add a little white in the background to accomplish this. This is more fully explained later in the document.**

TRAIN INFORMATION for 1000		
CONSIST NO	DEPARTS	AT
#605	SPOKANE	16:15
Route Comment		
Kootenai River and KRID UP turn		
SPOKANE	<i>Switch List</i>	
Sound units have delays to match the prime mover.		
Pickup Loco UP 605 Track Tk.1		
YARDLEY JCT	<i>No Work</i>	
IRVIN	<i>No Work</i>	
HAUSER	<i>No Work</i>	
RAMSEY	<i>No Work</i>	
FOSTON JCT	<i>No Work</i>	
BOW RIVER	<i>No Work</i>	
KR INTG	<i>Switch List</i>	
HELPFUL HINTS! The KRID area is on both sides of the asile. Work the tie plant first so you can build your outbound trains there. The arrival track needs to be open for other trains that work the interchange.		
KR EAST	<i>No Work</i>	
KRID	<i>Switch List</i>	
NOTE: Chain link gate at Republic Steel opens out.		
KR INTG	<i>Switch List</i>	
BOW RIVER	<i>No Work</i>	
FOSTON JCT	<i>No Work</i>	
RAMSEY	<i>No Work</i>	
HAUSER	<i>No Work</i>	
IRVIN	<i>No Work</i>	
YARDLEY JCT	<i>No Work</i>	
SPOKANE	<i>Switch List</i>	
Setout Loco UP 605 Track Tk.1		
Train Terminates		
Created 11/10/2014 6:19:15 PM		

Train Orders (TOs) are another feature of this program. These TOs give an overview of the route and any work along the way. Here are the TOs for train 1000, **Figure 12**. In the MASTERS I changed the word "ORDERS" to "INFORMATION", as this is a better name for what my paperwork shows on this form. See information below about the SLC MASTER files that come as part of SLC. The TO page will give you the consist number for this train. This greatly helps crews as far as which engine is the lead unit of a Consist. Also, all locations that this train needs to work, will show there was a switch list generated for that location. Train 1000 has a switch list generated for SPOKANE, KR INTG., KRID, back to KR INTG., and back home to SPOKANE. Years ago, the Station Agent would hand generate a switch list for the arriving train and then hand them to the crew when they arrived to work that location. These lists can be placed in a holder at the location the crew works, or just staple them in a packet for the crew like I do here. The notes at the different locations all come from the information I placed in the various Comment fields within JMRI.

Notice that the information on the right side of the form is in *italics*. This was accomplished by making a change to the MASTER-TO file. Instructions on modifying the MASTERS are found later in this document.

Figure 12: Train Information (TO) - Train 1000

If you have an engine change along the way, the paperwork will indicate that with a notation at the location where you are changing locomotives. It will tell you the new consist number for the locomotive you are going to pick up there. All my passing sidings and locations are in the route. These are printed on this list as a guide for the crews. You can include as much or as little information as you wish in your JMRI routes. All the information on the Train Orders, **Figure 12**, comes from the route for this train set in JMRI.

For those of us that want our yard crews to receive their own paperwork using this format, there is a need to place a couple of files into your csvSwitchList folder, *LLC4JMRI.xls(m)* and *MASTER_LL.xls(m)*. The Location List Creator (LLC) creates the paperwork for your yard crews using the MASTER that is designed to incorporate the unique information that is created when you create the local switch list. JMRI creates the switch list for your locations that you have setup in the "Switch Lists by Location" area. All that is needed, is to build your train on the JMRI Trains page. The "switch list" button, toward the bottom of your JMRI Trains page, will turn red if a local switch list was generated. All you need to do, to have the local paperwork created, is to hit the "run" button in the Switch Lists screen. Excel will open and create the paperwork for your yard crew. Note: You need to be certain that JMRI has been properly set up before this will work as advertised. Please see **JMRI to SLC Link Setup and Process**. (Below) They now have the information in their hands to pull and spot cars for the appropriate train. Below is an example of a switch list created for my HAUSER yard crew for train 311. 311 is a turn that originates and terminates at HAUSER.

HAUSER SWITCH LIST							
BNSF Kootenai River sub							
WORK FOR: 311							
Hauser Yardley turn							
ARRIVES				DEPARTS			
ORIGINATES				WB @ 15:15			
Sound units have delays to match the prime mover.							
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
Yardley				Yardley			
BNSF	585026	FM	YARDLEY				
GATX	40001	T	YARDLEY				
GATX	40257	T	YARDLEY				
GATX	40636	T	YARDLEY				
OCE	12065	XM	YARDLEY				
BNSF	724331	XM	YARDLEY				
CPAA	204523	XM	YARDLEY				
UO	1524	XM	YARDLEY				
BNSF	713086	XM	YARDLEY				
SSAM	25148	XM	YARDLEY				
NS	450665	XM	YARDLEY				
WC	177549	XM	YARDLEY				
BNSF	511476	GB	YARDLEY				
BNSF Sand				BNSF Sand			
ATSF	82882	LO	BURMAN QUARRY				
Caboose				Caboose			
BNSF	100232	NE					
Engine Service				Engine Service			
BNSF	2371	GP38					
BN	3513	GP40					

Created 12/2/2014 10:25:36 AM

Figure 13: Location List (LL) for HAUSER Outbound

HAUSER SWITCH LIST							
BNSF Kootenai River sub							
WORK FOR: 311							
Hauser Yardley turn							
ARRIVES				DEPARTS			
EB @ 17:35				TERMINATES			
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
Sandpoint				Sandpoint			
				BN	630843	FM	SANDPOINT
				BN	247253	XM	SANDPOINT
				BNSF	724395	XM	SANDPOINT
Spokane				Spokane			
				ATSF	76640	GH	SPOKANE
				ATSF	76646	GH	SPOKANE
				ATSF	76648	GH	SPOKANE
				GATX	43212	T	SPOKANE
				DRWX	1951	XM	SPOKANE
				BNSF	714268	XM	SPOKANE
				BNSF	713987	XM	SPOKANE
Troy				Troy			
				BN	435658	LO	POTLATCH
Kettle Falls				Kettle Falls			
				BN	244490	XM	KETTLE FALLS
Caboose				Caboose			
				BNSF	100232	NE	HAUSER
off spot				off spot			
				BN	430316	LO	HAUSER
Engine Service				Engine Service			
				BNSF	2371	GP38	HAUSER
				BN	3513	GP40	HAUSER

Created 12/2/2014 10:25:39 AM

Figure 14: Location List (LL) for HAUSER - Inbound

This train is a turn and it originates in HAUSER and works YARDLEY. It is supposed to leave at 15:15, work YARDLEY and “maybe” arrive back at HAUSER around 17:35. Times are provided by JMRI with settings that you made in the Settings screen. The left location list tells the yardmaster at HAUSER the cars this train needs and where they are located in HAUSER. Upon its return, the right location list tells the yard crew where to place the cars in the yard and where the cars are going to.

All the above paperwork was generated on a piece of paper that was cut to 4.25” wide. I didn’t like the idea that I couldn’t print to the edge of these lists. I was wasting close to ½” of printable area. I made a spacer and placed it in the paper tray of my printer, **Figure 15**. This moves the paper over and with setting up the margins in the MASTER forms, I can achieve the results you see above. Those black line borders are on the extreme edge of the half sheet of paper.



Figure 15: Printer Modification - Print to left edge

A couple of very helpful hints here for you if you will be cutting your paper before a session:

1. Cut a few sheets at a time, because the more you cut the more the cut edge will roll over and cause the printer to grab too many sheets of paper.
2. After cutting, say 5 sheets at a time, break them up. Separate the now cut pieces of paper and just mix them up on the table. This assures you that you do not have a few stuck together. Yes this takes some time, but for a paper jam free session it is well worth it.
3. It takes me about 20 minutes to cut enough sheets of paper for a session.

The other three layouts just cut the paper to width after they are printed as they are using paperwork that is about 5” wide.

All of this is not too hard when setting up the program. If you want to see better looking, organized, easy to read and understand paperwork, this program will give you the desired results. High green and most of all, HAVE FUN!

Switch List Creator (SLC) – An Excel Perspective

Understanding that this application is written in Excel in Windows OS, it has a somewhat limited set of users. SLC has been tested in all version of Excel from 2000 to 2013. The only issue is with graphics (Logo) manipulation in Excel 2007. The program will function just fine with the exception of Logo placement. Send any comments or questions as to why it will run in some but not all versions of Excel to Bill Gates please. There are two Versions of the same Release of SLC4JMRI. One version has a file extension of XLS. This is to be used with Excel Version prior to 2007. You will also want to use the XLS Version of the MASTER files. The other Version has a file extension of XLSM. This is to be used with Excel version 2007 and above. Fortunately both Apps will work with MASTER files with an XLS extension.

If you might be interested in just how all of these “Creators” came about refer to History (See Appendix A)

Introduction

This application uses a CSV output file from JMRI. SLC uses this CSV file to generate Train Lists (TLs) (optional), Switch Lists (SLs), and Train Orders (TOs). Various examples may be seen within this documentation **and in the Samples document stored in the Files/Operations area within the JMRI User Group.**

There are several files that are part of each Release of SLC. This is further complicated by the different versions of Excel. Four of these files are used to create the TLs, SLs, and TOs for the different Excel version explained above, while other files are included as documentation or samples of generated output. When the displays (screens) were first created, a rather obscure font, AR JULIAN, was used. Although not absolutely necessary, it is strongly suggested that you install this font if not already on your system. This font file is included with the other files that make up a SLC Release.

SLC has been extracted from its parent application, Manifest Creator. However it has undergone major changes so that only a few functions from the original application remain. Preferences have been GREATLY reduced by including pre-built files for Train Lists, Switch Lists, and Train Orders that support the main application. These pre-built files are known as the MASTERS and will be described shortly. There remain a few Preferences that you may set to obtain different results and may be updated via a menu selection on the Welcome Screen. These too will be explained a bit later in this document.

The Welcome Screen or Main Menu controls all of the capabilities of SLC. You simply click on a “button” of your choice. The one you will use to build a set of Switch Lists is the Create Switch List button. Let’s start by building our first set of Train List, Switch Lists, and Train Orders. First you will need to do several things within JMRI as described above. Once that is set and you have built a Train or Trains in JMRI, you will be able to generate the Switch Lists using SLC.

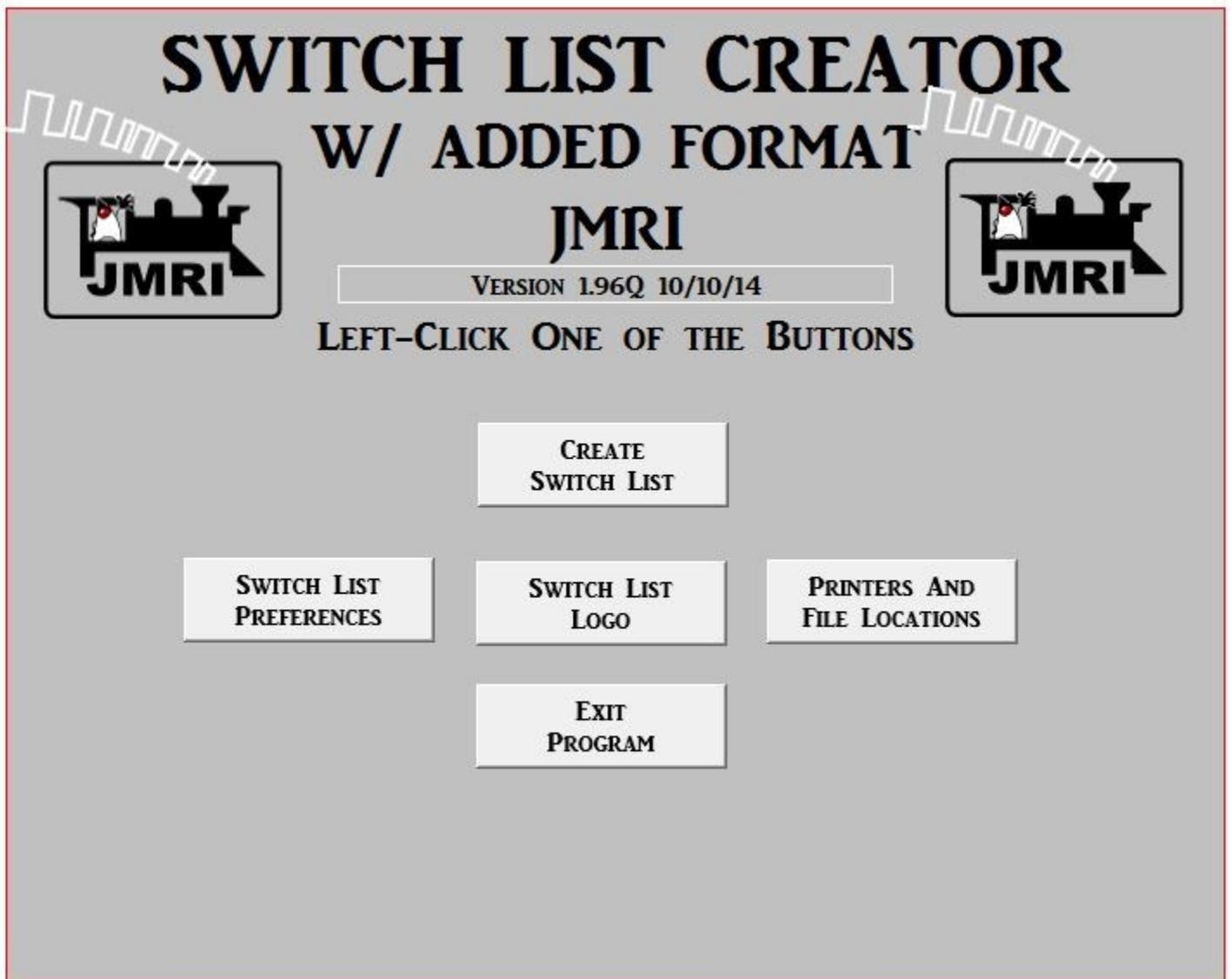


Figure 16: Switch List Creator (SLC4JMRI) Welcome - Main Menu



This selection allows you to generate the Switch Lists from the CSV files generated by JMRI. SLC will ask for the name of the CSV file that you would like to process. This is done through the normal Windows Open File dialog box. With SLC4JMRI placed in your csvManifests directory, SLC will show all .csv files in this directory. Once you see the file that you would like to process, highlight it and click Open or simply double click the filename. There is also an automatic JMRI to SLC Link function, explained below. A sample of the different documents generated were shown along with the manifest that would have been created by JMRI in the Introduction above.

The MASTERS

Many formatting features are contained within the MASTERS. There are three (3) MASTERS, namely MASTER-TL.xls, *Figure 17*, MASTER-SL.xls, *Figure 20*, and MASTER-TO.xls, *Figure 25*. Each of these files are updateable by you. However you must make these changes on the TAB labeled **Format** for them to take effect. There are two TABs within each

MASTER with **Format** being one of these. The other is **Form**. The concept behind the MASTERS that are supplied with SLC is to keep the width so that it will fit on a 4.25" x 11" piece (or half sheet) of paper. However, you have the ability to change the width of the document to suit your needs. Let's take a look at these MASTERS and see what changes are possible.

MASTER – Train List - MASTER-TL.xls

Please refer to the Train List, **Figure 19**, shown below. Immediately below is an "as is" supplied Train List MASTER. Each of the two (2) TABS (Form and Format) are shown.

5	TRAIN LIST				
6	Hauser Yardley turn				
9	TRAIN NO	TIME	TIME	STATION	
13	RN	CAR NO	TYPE	CONTENTS	DESTINATION
14	END				

Figure 17: Train List (TL) FORM Tab

5	TRAIN LIST				
7	Handle Cars With Care				
9	TRAIN NO		TIME	STATION	
13	RN	CAR NO	TYPE	CONTENTS	DESTINATION
15	END				

Figure 18: Train List (TL) FORMAT Tab

In comparing these two TABS, you can see that the **Format** has two more lines than the **Form**. These lines are used for each of the detail lines. Refer to Train List, **Figure 19**, sample below. Also, notice that the "default" RN has been changed to ROAD on the sample. This is done by the user on the Format Tab.

				
TRAIN LIST at 11/13/2014 15:55				
BNSF Kootenai River sub				
Local Sandpoint to K. Falls				
TRAIN NO		TIME	STATION	
377		16:45	SANDPOINT	
ROAD	CAR NO	TYPE	CONTENTS	DESTINATION
Tk.9				
ACFX	73011	T	kaolin	TROY JCT
SOEX	3024	T	propane	TROY JCT
BNSF	727685	XM	kit paper	TROY JCT
ACFX	78809	T	kaolin	TROY JCT
BNSF	726515	XM	kit paper	TROY JCT
BN	287000	XM	kit paper	TROY JCT
BN	468699	LO	empty	HAUSER
BN	10307	NE	crew	HAUSER
Created 11/13/2014 3:56:00 PM				

Figure 19: Train List (TL) - SANDPOINT

Line 15 in the MASTER is used for Spur (track) location of cars to be picked up by Train 377 upon departure from Sandpoint. The individual cars with Road Name (RN), Car No, Type (using AAR type codes in this example), Contents, and destination Location. You can add color to the spur names so they stand out for your crews. We used yellow in this example. The TL is time stamped on the end of the list. This is the time the file was created by SLC. The JMRI time of creation is under the TIME within the TL Header. Other information in the "header" include Train Name, and several other comments. Note: Many additional comments will be found in the TO document depending on what comments you have included in your JMRI setup.

Looking back at the TL MASTER, **Figure 17** and **Figure 18**, you will see that it appears to begin with Row 5. However Rows 1-4 are there, they just have their height set to zero. Doing this allows room for your Logo, if desired, but takes up no space if no Logo is requested. If you use a Logo, you have the capability to size and locate this logo as well. This is all done with the Preferences explained later.

Rows 5 and 6 are merged together to form the TL Header. You can make any text, font color, size, etc. changes within this space. Lines 7 and 8 are merged together and allow room for a fixed message of your choice. In this case the message is Handle Cars With Care. Once again you may change text, font, color, size, and message. Certain message types from JMRI will be placed within this area as well. Rows will be inserted to accommodate whatever messages are included in the CSV file. Rows 9 and 10 are merged together to provide additional headings. Once again, you may make any changes that you like (on the Format tab). Lines 11-and 12 are used by SLC to add Train Number, Time, and Station (starting Location). You may also change the Row height to any value that suits you.

The Columns need a bit more attention. Once again you have the ability to change the Column width to any value that suits you, but columns have been optimized to fix a 4.25" x 11" form (half sheet of paper). More importantly, you may NOT INSERT columns NOR DELETE columns as SLC uses these specific addresses to locate the information. Most important and not easily seen, is the fact that there is a Column A. It is set to a VERY narrow width as it has only significant use internally to SLC. It is very important that this Column A does not get forgotten. However you may change its width value.

You can modify the other MASTER forms in the Format tab in a similar fashion. However, the TL is the only form that has the ability to hold a Logo. REMEMBER, the Logo is handled within the Preferences settings.

MASTER – Switch List – MASTER-SL.xls

Please refer to the Switch List, *Figure 20* and *Figure 21*. This is an “as supplied” Switch List MASTER. This contains the two tabs, Form and Format.

	B	C	D	E	F	G	H	I
1	SWITCH LIST				377			
2	Pine Grove							
3	PULLS				SPOTS			
4	Road	Number	Type	Destination	Road	Number	Type	From
5	END				END			

Figure 20: Switch List (SL) FORM Tab

	B	C	D	E	F	G	H	I
1	SWITCH LIST							
2								
3	PULLS				SPOTS			
4	Road	Number	Type	Destination	Road	Number	Type	From
5								
6								
7	END				END			

Figure 21: Switch List (SL) FORMAT Tab

The same two line difference appears in the SL MASTER. Again these lines are used for the detail lines on the SL. Please refer to details under MASTER – Train List (TL) for information on what changes you may make on the Format Tab.

An SL is generated for each Location in your route that has work to be done. The information seems self-explanatory. PULLS or PICKUPS will appear on the left side of the form and SPOTS or SETOUTS will appear on the right side of the form. MOVES are a bit trickier to spot. The best clue is that they will have a Spur (Track) name rather than a Location for their Destination and From fields. A bit of experience will make this second nature. Currently, SLC will print all Locations in UPPER CASE, while Spurs will be as entered in JMRI. This may be a habit that you might like to create when entering your LOCATIONS and Spurs in JMRI as this automatic capitalization might be removed at the request of other users. In that case it may become a Preference.

SWITCH LIST				377			
TROY JCT				10/23/2000 10:39			
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	From
Westbound				Westbound			
CSX	151104	XM	HAUSER				
CHTT	405092	XM	HAUSER				
NS	456724	XM	HAUSER				
SLGG	86578	XM	HAUSER				
BN	287110	XM	HAUSER				
UTLX	71654	T	HAUSER				
CCLX	1888	T	HAUSER				
Inbounds				Inbounds			
				ACFX	73020	T	SANDPOINT
				UTLX	910162	T	SANDPOINT
				SLGG	86521	XM	SANDPOINT
				ACFX	78812	T	SANDPOINT

Created 11/14/2014 2:05:54 PM

Figure 22: Switch List (SL) – TROY JCT

SWITCH LIST				377			
HAUSER				10/23/2000 10:39			
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	From
West bound				West bound			
				MRL	50098	LO	SANDPOINT
				BN	501870	GB	SANDPOINT
				BNSF	402864	LO	SANDPOINT
				CSX	151104	XM	TROY JCT
				CHTT	405092	XM	TROY JCT
				NS	456724	XM	TROY JCT
				SLGG	86578	XM	TROY JCT
				BN	287110	XM	TROY JCT
				UTLX	71654	T	TROY JCT
				CCLX	1888	T	TROY JCT
Kootenai River				Kootenai River			
				UP	215676	FB	SANDPOINT
Weber annex 1				Weber annex 1			
BNSF	541422	GT	KETTLE FALLS-1				
Weber annex 2				Weber annex 2			
				BNSF	404042	LO	SANDPOINT
Weber annex 3				Weber annex 3			
BADX	1006	T	Weber annex 1				
Caboose				Caboose			
				BNSF	100232	NE	SANDPOINT
off spot				off spot			
SCL	996621	RB	Lambert Fruit 2				
ACFX	78948	T	Weber annex 2				
CCLX	1833	T	Fuel Rack				

Created 11/14/2014 2:06:04 PM

Figure 23: Switch List (SL) - HAUSER

SWITCH LIST				377			
KETTLE FALLS				10/23/2000 10:39			
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	From
Kettle Falls				Kettle Falls			
				BNSF	541422	GT	HAUSER
				BN	958233	GH	SANDPOINT

Created 11/14/2014 2:06:11 PM

Figure 24: Switch List (SL) – KETTLE FALLS

Figure 22, for Location “TROY JCT”, indicates seven (7) PULLS from Spur “Westbound” and with a Destination of HAUSER and four (4) SPOTS on Spur “Inbounds” and coming from SANDPOINT.

Figure 23, for Location “HAUSER” indicates one (1) PULL from Spur “Weber annex 1” with a Destination of KETTLE FALLS. The other four (4) PULLS, are actually MOVES as their Destinations are Spurs, “Weber annex 3” and “off spot”, which are Spurs within this HAUSER Location and the Spurs show in lower case. It also indicates 10 SPOTS on Spur “West bound” coming from SANDPOINT and TROY JCT, one (1) SPOT at spur “Kootenai River” coming from SANDPOINT, one (1) SPOT at spur “Weber annex2” coming from SANDPOINT, and finally one (1) SPOT on Spur “Caboose” coming from SANDPOINT.

Figure 24, for Location KETTLE FALLS indicates two (2) SPOTS on Spur “Kettle Falls” and coming from HAUSER and SANDPOINT.

MASTER – Train Orders - MASTER-TO.xls

Please refer to the Train Orders, **Figure 25 & Figure 26**, shown below. This is an as supplied Train Orders MASTER. Each of the two (2) TABS (Form and Format) are shown.

	A	B	C	D
1	TRAIN ORDERS			
2				
3	CONSIST NO	DEPARTS	AT	
4				
5				
6				
7	END			
8				

Figure 25: Train Orders (TO) FORM Tab

	A	B	C	D
1	TRAIN ORDERS			
2				
3	CONSIST NO	DEPARTS	AT	
4				
5				
6				
7				
8				
9	END			

Figure 26: Train Orders (TO) FORMAT Tab

The same two line difference appears in the SL MASTER. Again these lines are used for the detail lines on the SL. Please refer to details under MASTER – Train List (TL) for information on what changes you may make on the Format Tab.

TRAIN INFORMATION for 377		
CONSIST NO	DEPARTS	AT
#2372	SANDPOINT	16:45
Route Comment		
West local to Kettle Falls		
SANDPOINT		Switch List
Sound units have delays to match the prime mover.		
Works Troy junction and Hauser.		
Drops off caboose and changes engines at Hauser.		
Pickup Loco BNSF 2372 Track Tk.9		
Pickup Loco BN 2522 Track Tk.9		
TRI POINT	No Work	
PINE GROVE	No Work	
TROY JCT	Switch List	
KR EAST	No Work	
KR INTG	No Work	
BOW RIVER	No Work	
FOSTON JCT	No Work	
RAMSEY	No Work	
HAUSER	Switch List	
New Consist = #3364		
Pickup Loco BNSF 3364 Track Engine Service		
Setout Loco BNSF 2372 Track Engine Service		
Setout Loco BN 2522 Track Engine Service		
IRVIN	No Work	
KETTLE FALLS	Switch List	
Setout Loco BNSF 3364 Track Kettle Falls		
Train Terminates		

Created 12/2/2014 11:39:10 AM

Figure 27: Train Orders (TO) - Train 377

The Train Orders list, **Figure 27**, contains much information used by the Engine Crew. The paperwork created here, on my layout, is more geared to information, rather than orders for my trains so I changed the “ORDERS” to “INFORMATION” in the MASTERS. Looking at the Master TO, **Figure 25**, graphic we see that Rows 1 and 2 are reserved for the Train Number. Rows 3 and 4 are the Headers for the Consist Number, Departing Location, and time of departure. These headings can all be changed by making changes to the Format Tab, **Figure 26**. You may make the same type of changes as described above. The sample TO shows the formatting that is done for the TO itself. Information that is important to the Train Crew is collected here. Most Comments are shown here as well as each Location along the Route indicating if there is work to be performed (Switch List) or just passing by (No Work). Engine Number(s) and Consist Number is provided. Also, if there is a Change Crew (CC JMRI Record) as this sample shows, the new Consist Number is provided along with the new Engine Number(s). Lastly it shows when the Route is finished (Train Terminates) and a time stamp when SLC actually created this document.

OUTPUT FILES - NAMING CONVENTIONS

If you request hardcopy output (the normal) Preference, file names will have little value. However, if you set Save the File Preference to YES, you will want to understand the way that SLC names the files it creates. Each file will have the list type (TL, SL, TO) along with the Train Number (or name) and a sequential three (3) digit number. SLC maintains this number and is added so that you may determine the sequence of the files. TL and TO are rather self-explanatory as there is only one (1) of each of these per Train. **However there may be many SL files and their sequence cannot be determined without this sequence number.** Below is a sample of a set of files for Train 377.

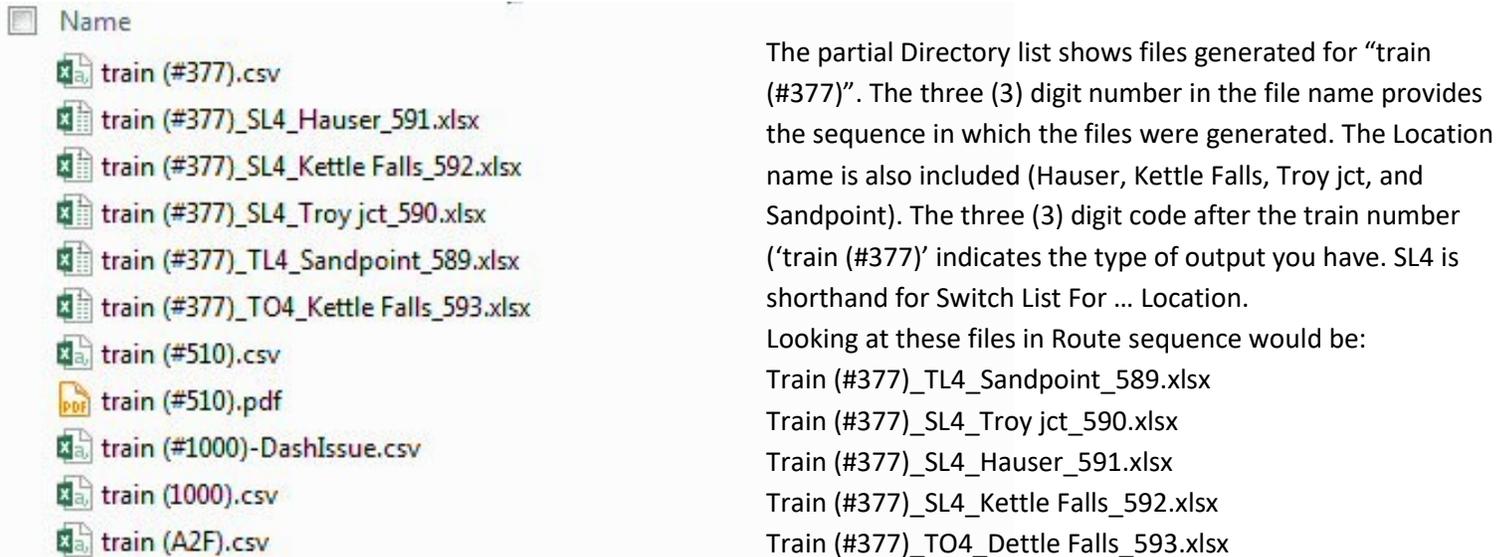


Figure 28: Directory Listing

Remember that this naming convention is only used if you set the Save Switch List Files Preference to YES. This same naming convention is used to provide information on any Hardcopy output you receive. Again this is to help you be certain that the individual Lists can be put in proper sequence should the need arise.

**SWITCH LIST
PREFERENCES**

Switch List Preferences.

SWITCH LIST CREATOR

PREFERENCES
VERSION 1.96S2 11/12/14

Manifest Directory: C:\Users\dant\JMRI\operations\osw\Manifests
Manifest Creator Version: 1.96S2 **Date:** 11/12/14

OUTPUT PREFERENCES		OTHER PREFERENCES	
COMMENT WRAP LENGTH	43	LOGO SIZE	50
PRINT PREVIEW	NO	MOVE LOGO DOWN	25
PRINT HARDCOPY	YES	MOVE LOGO RIGHT	10
SAVE SWITCH LIST FILES	NO	MULTI-LINE DELIM	/*/
UTY CAR ROAD NAME (B,R,U)	R	UTY CAR QTY DELIMITER	~

UPDATE PREFERENCES **RETURN TO WELCOME**

Figure 29: Switch List Preferences Screen

If you are familiar with Manifest Creator, you will see that the Preferences have been greatly reduced. Again, this is due to the inclusion of the “MASTERS”.

OUTPUT PREFERENCES

COMMENT WRAP LENGTH	INTEGER	43
----------------------------	----------------	-----------

Let’s start with Comment Wrap Length. This tells SLC how many characters to put on one line before wrapping the next portion of the text. This additional portion does not actually go to a new line, rather SLC increases the Row height to accommodate the text. The number, 43 shown above, tells SLC to allow up to 43 characters on one line. If there are 44-86 characters, SLC will double the height of the row. It will continue to grow like this to allow all characters to be shown on the form. The significance of having this preference is that with your ability to change the font style, size, etc. and the Column widths in the Format Tab, the number of characters on a line will be affected. 43 is set to fit the Masters as they are distributed. The best way to work with this is to do a test, change the value, do a test, change again ... until you have it set to what best fits your form. Values are any integer value. Extreme values like 1 and/or 999 have not been tested, so if you set these values, the results are unpredictable.

PRINT PREVIEW	YES/NO	NO
----------------------	---------------	-----------

Print Preview allows you to see a sample of the output on your screen before you save it and/or print it on paper. This is a good way to adjust the Comment Wrap Length value. WARNING: Print Preview does not currently function in Excel 2013 the same way as previous versions. To date a solution to this has not been found. One could do a Hardcopy Print to a PDF Printer and then review the output before finalizing the look of the output. This was done extensively when testing the creation of SLC. Once again, Bill Gates and company came up with a new way to handle Print Preview that is NOT compatible with previous versions. If this makes you unhappy, please contact Bill Gates. Values are YES or NO.

PRINT HARDCOPY	YES/NO	YES
-----------------------	---------------	------------

Print Hardcopy will normally be set to YES. When set to YES, SLC will print the documents to the specified printer. Values are YES or NO.

SAVE SWITCH LIST FILES	YES/NO	NO
-------------------------------	---------------	-----------

Save Switch List Files allow you to keep a hard copy of the TLs, SLs, and TOs that you create in the csvManifests folder. This would make it possible to review them, modify, and/or print another copy. . Values are YES or NO.

UTY CAR RD NAME (B,R,U)	B,R,U	U
--------------------------------	--------------	----------

Uty Car Road Name allows you to select what value will appear in the Road Name for a utility car. Since a utility car record refers to more than 1 car, the Road Name may be meaningless for some while others might track their utility cars by Road Name. There are three possible values. B – If you have a B set for this Preference the field will be blank. R - If you have an R set for this Preference the field will contain the Road Name of the car represented in the car record. Note that if you have utility cars with different road names, the road name of the first car in the list will be used. U - If you have a U set for this Preference the field will contain ‘UTY’. Any value other than R or U will default to B (blank).

OTHER PREFERENCES

SHOW HOLD CARS	YES/NO	YES
-----------------------	---------------	------------

HOLD Cars For Train Lists controls the inclusion or exclusion of HOLD Cars on the Train List and Switch Lists. If set to YES, HOLD Cars will be added in the sequence of the Current Track. It set to NO, then HOLD Cars are not shown. NOTE: Look below for an additional Preference for HOLD Cars.

MULTI-LINE DELIM	/*
-------------------------	-----------

Multi-Line Delim is any string of characters you choose that will split comments in multiple segments as if they are separate comments. You add this string of characters (matching what is set here) in your comment fields in JMRI and SLC will split the comment at each delimiter it finds. NOTE: Do not place a delimiter at the beginning or end of your comment text in JMRI.

Example:
 Comment in JMRI is: **WOW This is a nice feature Thank you SLC**
 Then SLC would print the text on a comment line just as is. Of course if the comment is longer than the Comment Wrap Length, it will take effect as well.
 Change the comment in JMRI to: **WOW/*/This is a nice feature/*/Thank you SLC**

Now SLC will treat the Comment as three (3) individual comments. The output would look like:

WOW

This is a nice Feature

Thank you SLC

Remember that you may use any character string you like. You are not forced to use /*/.

UTY CAR QTY DELIMITER	~
------------------------------	----------

Uty Car Qty Delimiter is any string of characters that you would like to surround the number of utility cars requested.

Example:

With the character shown above, the tilde, the quantity printed in the Car Number field would be ~#~ where # is the number of cars. You can leave this blank or have any character or any number of characters. If you set the value to *** the Car Number field would show ***#*** where # is the number of cars.

HOLD CARS FOR TRAIN LISTS?	YES/NO	NO
-----------------------------------	---------------	-----------

Example:

With the character shown above, the tilde, the quantity printed in the Car Number field would be ~#~ where # is the number of cars. You can leave this blank or have any character or any number of characters. If you set the value to *** the Car Number field would show ***#*** where # is the number of cars.

LOGO SECTION

PRINT (YES/NO)		
TL	SL	TO
YES	YES	YES

The Print (YES/NO) section deals with which of the three “lists” will include the Logo. Each of the three possible output “lists” are represented. YES will include the Logo on the associated “list” and NO will exclude the Logo on the associated “list”.

SIZE	
LOGO SIZE	75

The Size section deals with controlling the size of the Logo. This setting applies to Logos on all three lists. Logo Size is again an arbitrary value you may set to increase or decrease the size of your logo. SLC will use this value to adjust Rows 1-4 on the various “lists” to accommodate this size. Again, make a few changes and test to get the result you like best. If you are using multiple logos you will need to edit them so they are all the same width for proper placement on your paperwork. **Error! Reference source not found.** Figure 30 shows some examples of different railroad logos. Notice they are all close to the same width but the height is different on some. Remember, the program makes adjustments for the height automatically, it is the width that needs to be the same to help center the logo, using the preferences, and moving your logo to the right on the form. The background I used for these logos is white. NOTE: The border has been added in the documentation so you can see the overall size of the Logo.

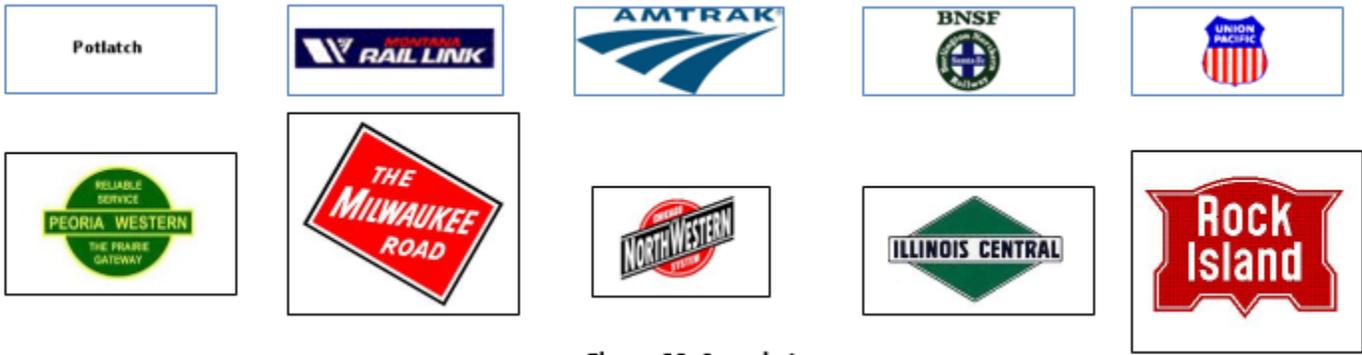


Figure 30: Sample Logos

H-POSITION (L, C, R)		
TL	SL	TO
C	C	C

The H-Position (L, C, R) section controls the placement of the Log on each of the three “lists”. The three possible positions include L-Left, C-Center, R-Right. Place the appropriate character under each list type, TL, SL, TO.

DEST. LOCATION OR TRACK (L/T)		
T	T	NA

The Dest. Location or Track (L/T) section controls what information is placed in the Destination Field in the Train List and Switch List documents. An L indicates that Destination Location should be provide while a T indicates the Destination Track. Set these values to your liking.

ADD LOAD TO UTY CAR TYPE FIELD (YES/NO)	NO
---	----

The Add Load to UTY Car Type Field (Yes/No) section determines if the Load will be included with the set of utility cars. Since UTY represents a Unit Train, all cars would contain the same load. Whether it be Empty or a specific Commodity. See the Preference to YES to include the load and NO to exclude the Load.

**SWITCH LIST
LOGO**

LOGO

This selection allows you to choose any graphic file that you like to use as a logo for the manifest. This logo will become your 'default' Logo, meaning it will be used if there is no LOGO Record in the JMRI CSV file. If you do not have a Logo set up here, the 'default' becomes no logo. When you click on this button you will be shown a normal Windows File Input Dialog Box asking for the name of the logo file you would like you use. Navigate until you find the logo of choice and Double Click (or select the file and Click Open). SLC will do its best to manipulate the graphic, whatever size, to make it fit in the header area of the manifest. Remember that if you have chosen a logo within JMRI, it will override this setting. NOTE: See Logo Size, Move Logo Down, Move Logo right, above, for directions on how to size and position your particular Logo

**PRINTERS AND
FILE LOCATIONS**

Printers

This option will allow you to define any printer that might be specific to your system. This ONLY needs to be used if you have more than one printer and wish to have your Switch Lists, Train Lists, Train Orders, and/or Location Lists print on different printers. This can be particularly helpful if you have a large yard or two and have a printer at this area of your layout. SLC/LLC now has the ability to print specific documents at these "remote" printers. Inspector Dave again asked for this enhancement. It has been added to JMRI and it is now passed to MC, SLC, & LLC. However, due to the quirky way the Windows is set up, Excel cannot obtain the proper address that Windows needs in order to redirect to a different printer. This needs to be done manually and is a rather convoluted process on the SLC/LLC side of things. The first step is to open JMRI and select the Trains option from the Operations Menu.

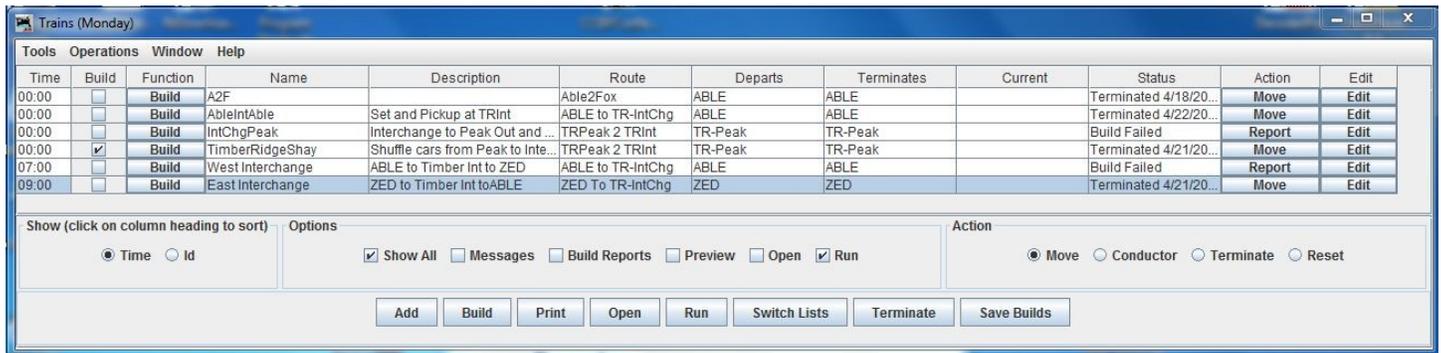


Figure 31: Trains Window

Next select the Switch Lists button in the list of buttons at the bottom of the window. You will then be presented with the Switch Lists by Location window.

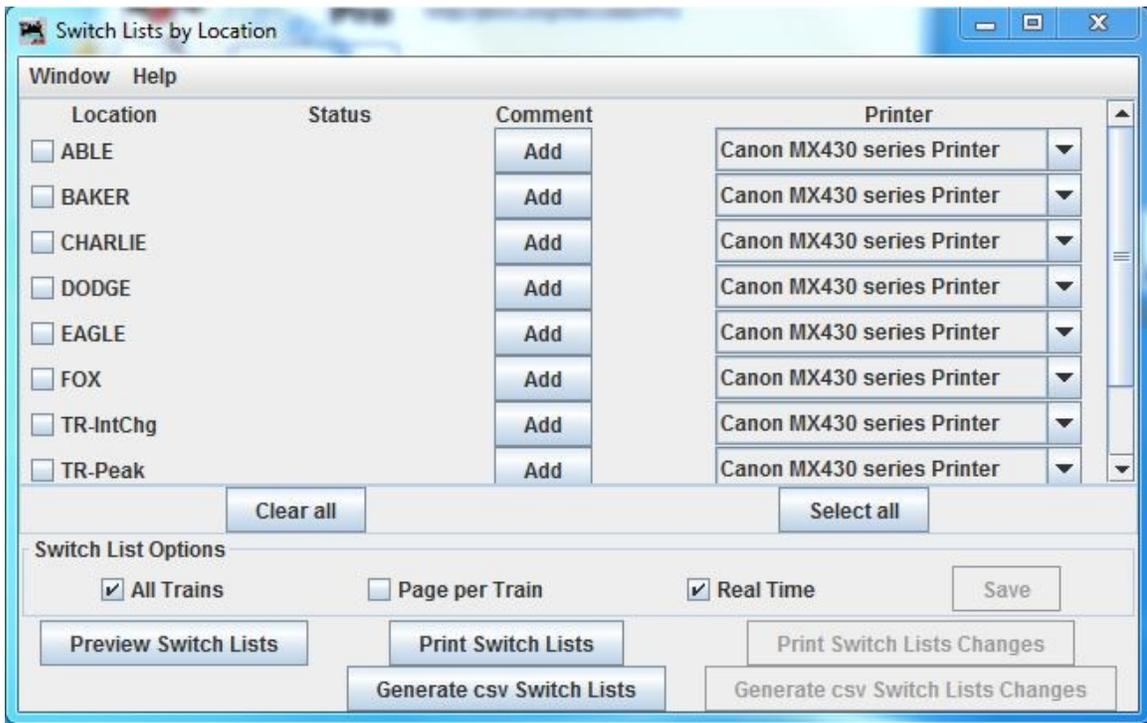


Figure 32: Switch List By Location Printers - 'default'

The printer currently assigned is listed to the right of each Location. Select the Down Arrow beside the Printer box and select the printer of choice.

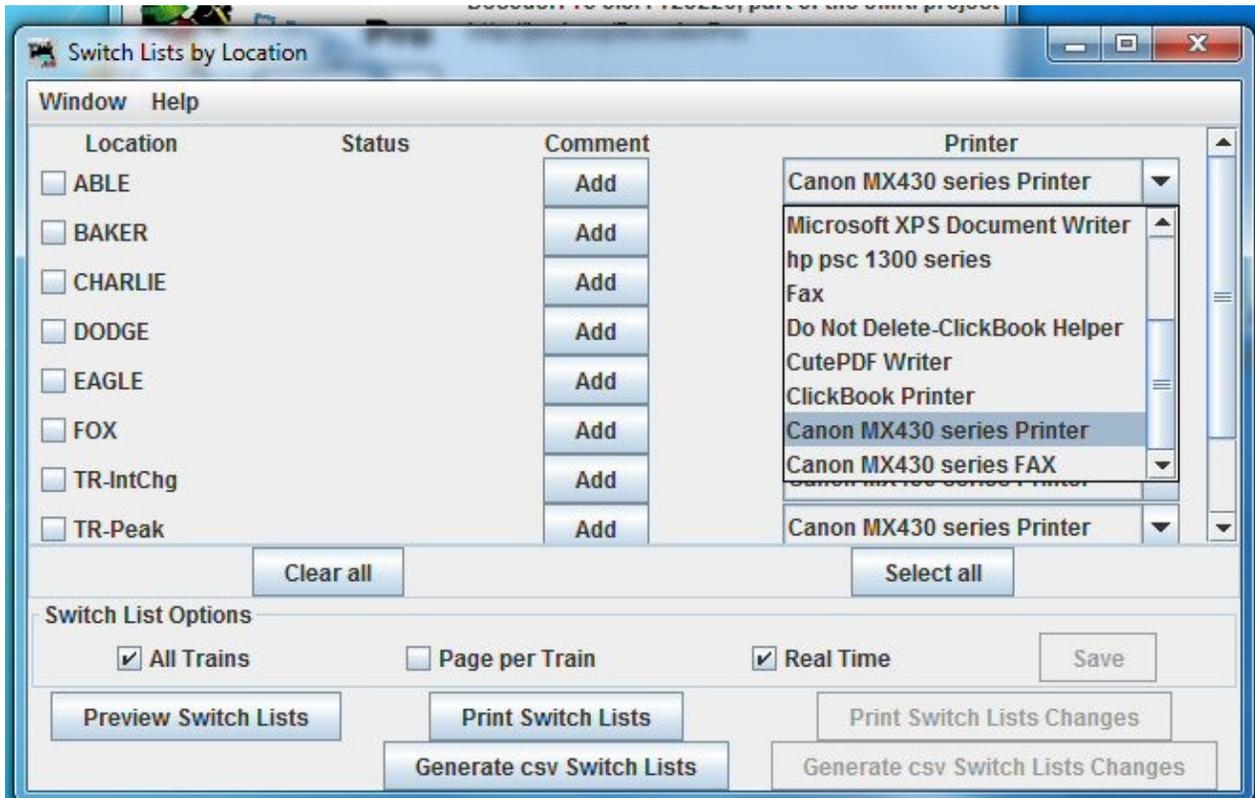


Figure 33: Switch List By Location Printers - (assigned)

Once selected you will need to make a note of each of the printers you will be using. Or you may enter the Printer Name selected, as noted from the JMRI list in the Common Name field in the Printers section of SLC4JMRI or LLC4JMRI. Once

you have done this, you may close JMRI and proceed below. I have introduced an ancillary application that is used to determine the names of the printers as they are known to your Windows system. Again, this is unique to each user. The name of this program is MC4PRNT.xls. This program was copied from the Internet and has a strange way of getting printers but once you do it, you won't need to do it again until you get a new printer or change where you want your TOs, TLs, SLs and/or LLs to print.

Let's look at MC4PRNT. Download this program (if not already done) from the MC4JMRI directory in the Files section of the JMRI Users Group. (Saving it to your csvManifests or csvSwitchLists directory is a logical location but that is not necessary) and run it. **Figure 34** below shows the screen when you first start MC4PRNT.

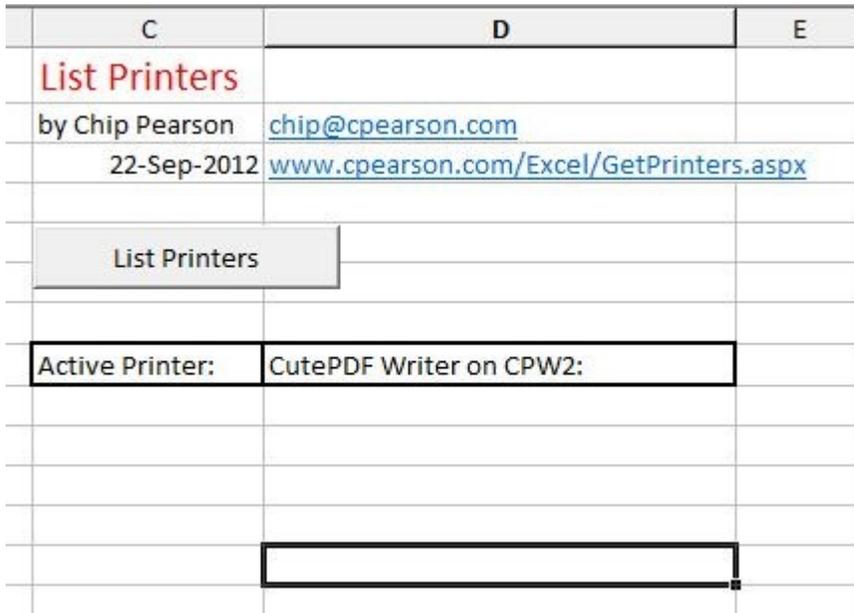


Figure 34: MC4PRNT - Initial Screen

Once at this point you want to Left click on the List Printers button. You will see the following screen, **Figure 35**.

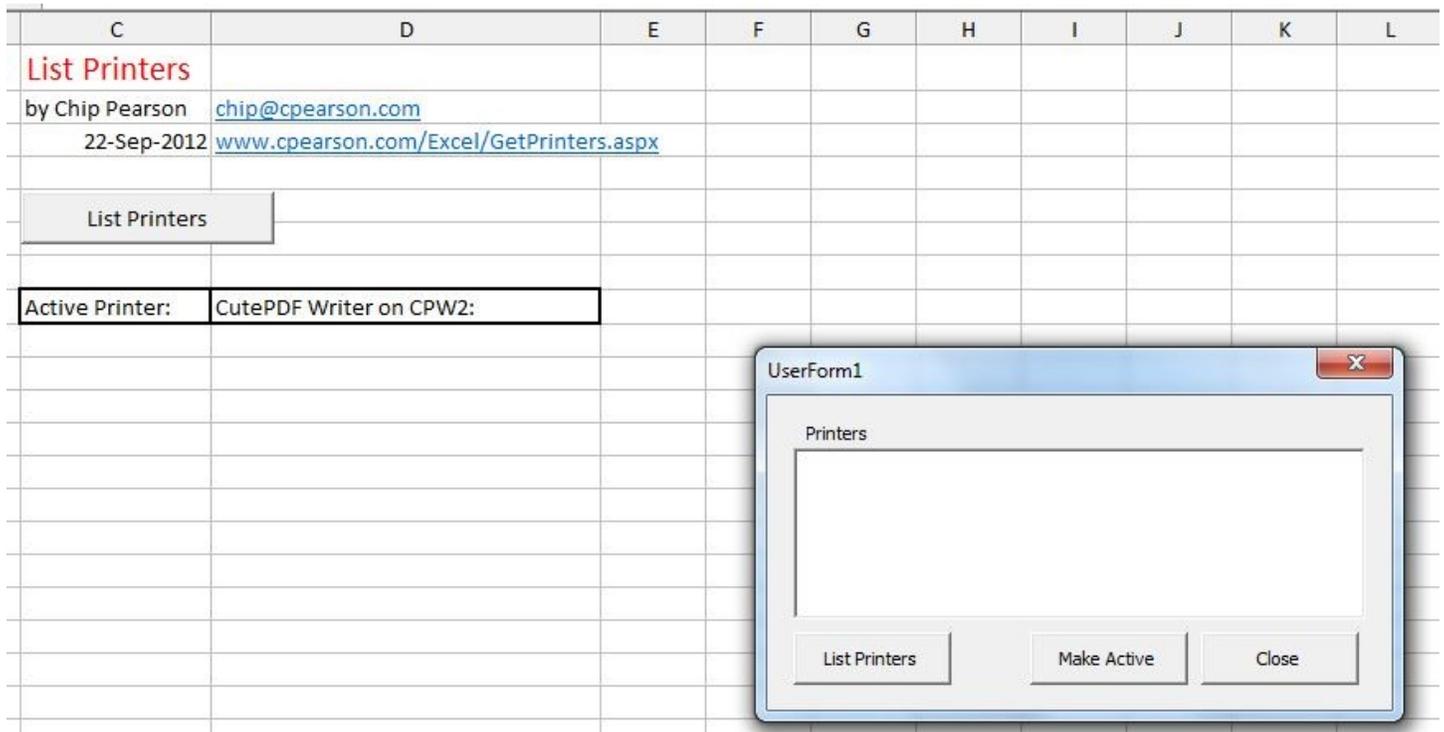


Figure 35: MC4PRNT - Initial List Window

You need to Left click on the newly displayed List Printers button to arrive at your final destination. Please see **Figure 36**.

C	D	E	F	G	H	I	J	K	L
List Printers									
by Chip Pearson	chip@cpearson.com								
22-Sep-2012	www.cpearson.com/Excel/GetPrinters.aspx								
List Printers									
Active Printer:	CutePDF Writer on CPW2:								

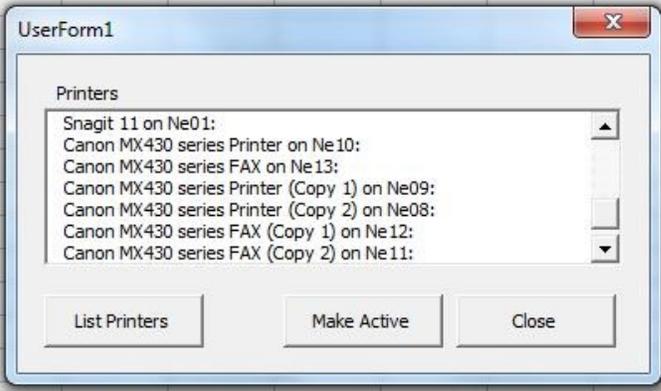


Figure 36: MC4PRNT -Final Printer List

You may not be able to see the detail in the above figure but each on the printers ends with 'on Nenn' where nn is a two digit number. **You need to copy or type this information into the right hand portion of the Files and Printers screen (below).** It must be entered just as it is displayed in the MC4PRNT dialog box. These need to be entered to the right of the corresponding printer that you listed from JMRI. These must match - printer and "on" address if you would. You may then Left click on Close in the MC4PRNT Dialog Box. Then close the MC4PRNT screen. It will ask if you want to save your changes. It does not matter how you answer this question. Once all that is accomplished, Left click on the Return To Welcome button on the Files and Printers screen and you should be ready to go. Refer to **Figure 37 & Figure 38**.

SWITCH LIST CREATOR



FILE LOCATIONS

VERSION 1.8J 11/13/14

RETURN TO
WELCOME



FILE TYPE	FILE LOCATION/NAME	
CSV MANIFEST INPUT FILE:		
MANIFEST OUTPUT FILE:		
MANIFEST LOGO FILE:		
MANIFEST LOG FILE:		
CSV FILE OF FILES FILE:		
PINTERS	COMMON NAME	EXTENSION
PRINTER 01:		
PRINTER 02:		
PRINTER 03:		
PRINTER 04:		
PRINTER 05:		
FONT TYPE	FONT NAME	
FIXED WIDTH:	COURIER NEW	
VARIABLE WIDTH:	ARIAL NARROW	
SWITCH LISTS BUILT COUNTER		
60		

Figure 37: Stored Printer Names - Empty

SWITCH LIST CREATOR



FILE LOCATIONS

VERSION 1.8J 11/13/14

RETURN TO
WELCOME



FILE TYPE	FILE LOCATION/NAME	
CSV MANIFEST INPUT FILE:		
MANIFEST OUTPUT FILE:		
MANIFEST LOGO FILE:		
MANIFEST LOG FILE:		
CSV FILE OF FILES FILE:		
PINTERS	COMMON NAME	EXTENSION
PRINTER 01:	Canon MX430 series Printer	on Ne02:
PRINTER 02:	PDFCreator	on Ne08:
PRINTER 03:		
PRINTER 04:		
PRINTER 05:		
FONT TYPE	FONT NAME	
FIXED WIDTH:	COURIER NEW	
VARIABLE WIDTH:	ARIAL NARROW	
SWITCH LISTS BUILT COUNTER		
60		

Figure 38: Stored Printer Names - Printers Listed

A rectangular button with a light gray background and a thin black border. The text "EXIT PROGRAM" is centered on the button in a bold, black, sans-serif font, with "EXIT" on the top line and "PROGRAM" on the bottom line.

**EXIT
PROGRAM**

Exit Program does just as it indicates. However, it is important that you end the program using this option as it will save the updates to various internal values that have been changed during the programs execution.

JMRI to SLC Link Setup and Process.

When using the JMRI Auto Link with SLC or LLC, you will not be using any part of SLC on your own. The program will be started from JMRI and will terminate upon completion. You may interact with SLC if you have the Print Preview Preferences set to YES. This may be useful if you would like to print switch lists to a specific printer other than your system's default printer. You will see the SLC Welcome Screen flash on your computer screen and other unusual looking activities will take place. At this point in development, you should expect this as normal operating procedure. It is hoped that future releases of SLC/LLC will eliminate much of this extra activity.

NOTE: YOU are NOT able to change Preferences when using the JMRI to SLC Link. You must use "Manual Mode" if you need to change the applications Preferences.

You must adjust some settings in JMRI before the JMRI Auto Link will work properly. In the Trains window, select Tools > Options and then set the Check Box by Generate CSV Manifest in the Options section at the bottom of the Options screen and then click Save. NOTE: If you will be using LLC also, you will want to set the Check Box by Generate CSV Switch List. Next select Trains > Tools > Setup Excel Program (Switch list Creator) and enter the name of the Excel file that JMRI should execute. This would be SLC4JMRI.xls(m) or LLC4JMRI.xls(m).

Two extra Check Boxes (Open and Run) appear in the Trains window when you select "Generate CSV Manifest" in the Options window. These two Check Boxes are mutually exclusive meaning you may select one or the other but not both. To trigger SLC from JMRI, you must select the "RUN" Check Box. You then Build you train and once it completes successfully you will see RUN in the Function column by the train you just built. When you click on Run, JMRI will trigger SLC and pass it the name of the CSV file to process. Excel now pops up on your screen. Once Excel is finished creating your switch lists, it disappears and your train's page is back up. You may also select several trains to build and then use the Build button on the bottom of the window. All of the Trains successfully Built will now show Run in the Function column. Now you may click on the Run button on the bottom of the window and JMRI will trigger SLC and pass it all of the CSV files that it should process. After clicking on the Run button, Excel pops up on your screen. Once Excel is finished creating your switch lists, it disappears and your train's page is back up on the screen. Note: You may need to select Enable Macros depending on your version of Excel.

The Link between JMRI and SLC is a text file named MCFilesFile.txt. This name is to indicate that this is a "file of files", which is exactly what it is and is found in the csvManifests Sub-directory in operations directory within JMRI. JMRI creates (or updates) this "file of files" and adds the name(s) of the CSV manifest file(s) for SLC to process before linking to SLC. SLC then looks for this "file of files", opens it if found, and processes all of the CSV manifest files that are currently in this "file of files". When SLC has processed all the CSV manifest files in this "file of files", it will delete MCFilesFile.txt. The next time a Train Build is Run, JMRI will create MCFilesFile.txt again and add the CSV manifest file(s) that SLC should process. If everything goes as planned, JMRI creates MCFilesFile.txt and SLC deletes MCFilesFile.txt. If for some reason SLC does not complete, MCFilesFile.txt will not be deleted. The next time that Train Build is run, JMRI will add more CSV manifest files to the existing MCFilesFile.txt. This could easily be the same switch list as was already in MCFilesFile.txt. This might make it appear that SLC is in a loop as it will process the same file more than once. If SLC does not end properly, by disappearing, then something is wrong and needs to be investigated. (That is probably when you send me a note!)

The OPEN button works in a similar fashion but will display the contents of the CSV file that was/will be sent to SLC for processing. You could investigate records that appear to be causing SLC issues or that do not appear as you would think.

The following paragraph is identical to that for generating a manifest manually. It refers to how you have set up your Preferences and they have the same impact on what SLC generates whether it be generated manually or via the JMRI link.

If you do receive a preview look at the switch list, you can print the switch list using the Print (icon) option within this window (here you could print to any printer on your system). You may also select the Close (icon) if you do not wish to print a hardcopy from here. Remember that you still might receive a hardcopy again based upon your Preference settings. If you have set your Preferences so that you ask for a file to be created, SLC will create the switch list file and save to the same directory as your input file directory. Unlike SLC in manual mode, when SLC has finished performing the necessary actions, based upon your Preferences, it terminates. If you asked for SLC to create a switch list file and wish to locate the switch list later, it has the same name as the CSV Input file but has an extension of .xls (Excel). This file will remain here (same directory as your input CSV file) until your next build for this particular train. This is the very basic operation of SLC. It is quick and easy to do and generates formatted switch list as shown in shown throughout this document.

Location List Creator.

Location List Creator (LLC) is a sister application with Switch List Creator (SLC). This application will create Switch Lists by Location, thus the name Location List Creator, to differentiate it from SLC. It has all of the Preferences that are part of SLC and looks and operates in the same or similar fashion. There are some differences that will be discussed in this section.

The program file, LLC4JMRI.xls(m) is to be placed in your csvSwitchLists directory within the Operations directory of JMRI. It works with the CSV files created by the Switch Lists generated by JMRI. This may sound confusing in that we deal with SLC and LLC. SLC, including Train Orders, Train Lists, and Switch Lists (Creator names), are built from JMRI Manifest information. LLC builds Location Lists from JMRI Switch List information. This is generated from the Trains screen just as the Manifest information. There is a separate setting within Switch Lists (on the Trains screen) in JMRI to set up the Excel file to use when running via the JMRI to LLC Link. This is explained as part of the SLC portion of this documentation. This setting is found by selecting Switch Lists on the Trains screen then Tools. It is important to remember that you can build all of your trains and then print all of your Location Lists. You build all of your trains and after doing that, in the "Switch Lists by Location" page just hit the "Run" button on the lower left. All of the Location Lists will now be printed. For those of us that run JMRI dynamically, that is building trains when the need is there, you will need to use the "Run Changes" button on the bottom right of the "Switch Lists by Location" page in JMRI

Location Lists

TERRE HAUTE SWITCH LIST							
Chicago & Eastern Illinois Railroad							
WORK FOR: #95							
Black Diamond Empty							
ARRIVES				DEPARTS			
SB @ 05:06 AM							
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
SB Shorts				SB Shorts			
				UTY	~3~	Hopper-empty	SULLIVAN

Created 11/19/2014 9:02:45 AM

Figure 39: Location List – TERRE HAUTE - Train 95

Figure 39, the first of five Location Lists created from a CSV file placed in csvSwitchLists directory. These are for the TERRE HAUTE ‘Yard’. This first LLC is for Train #95 and show that it arrives Southbound at 05:06 AM and Terminates. It has three (3) utility empty Hoppers to be placed on Spur SB Shorts with a final Destination of SULLIVAN.

TERRE HAUTE SWITCH LIST							
Chicago & Eastern Illinois Railroad							
WORK FOR: #702							
Vincennes Turn PM							
ARRIVES				DEPARTS			
ORIGINATES				SB @ 21:00			
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
Engine Service				Engine Service			
C&EI	213	GP7	ERRE HAUTE				
CHTT	230	GP7	ERRE HAUTE				
SB Shorts				SB Shorts			
UTY	~5~	Hopper-empty	SULLIVAN				
UTY	~1~	Hopper-empty	VINCENNES				
C&O	6137	Auto Box	VINCENNES				
CN	580427	Box	VINCENNES				
Caboose Track				Caboose Track			
C&EI	16	Caboose	ERRE HAUTE				

Created 11/19/2014 9:02:57 AM

Figure 40: Location List – TERRE HAUTE - Train 702

Figure 40 is for Train 702, Vincennes Turn PM. It originates here and departs Southbound at 21:00. It shows two (2) Locos, currently on Spur Engine Service. It begins with eight (8) Cars, five (5) empty Hopper utility cars headed to SULLIVAN and three (3) additional Cars headed for VINCENNES. Finally it shows one (1) caboose. Notice that the Locos and Caboose indicate TERRE HAUTE as their Destination. This is because this is a “turn” and will end up back at the TERRE HAUTE yard.

TERRE HAUTE SWITCH LIST							
Chicago & Eastern Illinois Railroad							
WORK FOR: #702							
Vincennes Turn PM							
ARRIVES				DEPARTS			
NB @ 10:44 PM				TERMINATES			
*** Contact Terre Haute Yardmaster for clearance into Terre Haute. Train terminates in Terre Haute.							
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
Engine Service				Engine Service			
				C&EI	213	GP7	TERRE HAUTE
				CHTT	230	GP7	TERRE HAUTE
NB Thru Block				NB Thru Block			
				UTY	~1~	Hopper-Coal	CHICAGO.
				FGEX	35204	Food Reefer	WABASH INT.
				FGEX	36162	Food Reefer	HOOPESTON
				WAB	18009	Auto Box	WABASH INT.
				M&STL	51792	Box	SAINT LOUIS, MO
				CG&W	5603	Box	CHICAGO
				SP&S	11111	Box	P&E/IT INT.
				GTW	516084	Box	CHICAGO
Propers				Propers			
				C&O	6210	Auto Box	TERRE HAUTE
				B&O	298898	Auto Box	TERRE HAUTE
				C&O	3256	Box	TERRE HAUTE
SB Thru Block				SB Thru Block			
				C&EI	452	Box	MOUNT VERNON
				C&EI	416	Box	PRINCETON
Caboose Track				Caboose Track			
				C&EI	16	Caboose	TERRE HAUTE

Created 11/19/2014 9:03:01 AM

Figure 41: Location List - TERRE HAUTE - Train 702

Figure 41, shows a Location List for Train 702, Vincennes Turn PM. This is the return of the 'turn'. It has the original Locos and Caboose along with many Cars showing there "final" (not next) destination. This Train Terminates here arriving from the South (Northbound direction).

TERRE HAUTE SWITCH LIST							
Chicago & Eastern Illinois Railroad							
WORK FOR: #54							
Train 54 - Terre Haute to Chicago							
ARRIVES				DEPARTS			
ORIGINATES				NB @ 23:00			
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
Engine Service				Engine Service			
C&EI	115	RS1	CHICAGO				
C&EI	117	RS1	CHICAGO				
Baker Yard				Baker Yard			
C&EI	511	Box	HALEY				
C&EI	64154	Box	CLINTON				
UTY	~1~	Hopper-Need Rep	BREWER				
NB Thru Block				NB Thru Block			
C&EI	2550	Box	BREWER				
SOO	137210	Box	BREWER				
LN	90512	Box	BREWER				
USN	625	US Navy Box	CHICAGO				
Caboose Track				Caboose Track			
C&EI	438	Caboose	CHICAGO				

Created 11/19/2014 9:03:06 AM

Figure 42: Location List - TERRE HAUTE - Train 54

TERRE HAUTE SWITCH LIST							
Chicago & Eastern Illinois Railroad							
WORK FOR: #55							
Train 55 - Danville to Evansville							
ARRIVES				DEPARTS			
SB @ 11:25 PM							
Follow yardmaster instructions. Cars picked up here may have destinations en route. Placing these cars within the existing blocks of the train is recommended.							
PULLS				SPOTS			
Road	Number	Type	Destination	Road	Number	Type	Destination
SB Thru Block				SB Thru Block			
UTY	~5~	Hopper-Coal	VINCENNES				
LN	90503	Box	VINCENNES				
Milwaukee Int Block				Milwaukee Int Block			
				CSOX	1421	Chem Tank	MILW INT.

Created 11/19/2014 9:03:10 AM

Figure 43: Location List - TERRE HAUTE - Train 55

Figure 42, is another LL for TERRE HAUTE. This is for Train 54 – Terre Haute to Chicago. This Train originates here and travels Northbound. The list shows the Cars that make up the Consist.

Figure 43, the final sample, shows a LL for Train 55 – Danville to Evansville. It is travelling Southbound, so it arrives from the North, picks up six (6) Cars and sets out 1 Car. NOTE: Currently JMRI does NOT provide the necessary information to provide the Departing information. This may be posed to Dan B.

The MASTER

LLC has its own MASTER file that may be used for modifying the “as is” format to most anything you would like. This functions identically as do the MASTERS for SLC described above. This file, MASTER-LL.xls must be placed within the csvSwitchLists Directory of Operations in JMRI.

In Closing

This completes the documentation for SLC and LLC. Please excuse any typos and other imperfections in the document. I would like to thank Inspector Dave (David Waraxa) for his tireless work not only in testing and suggesting but in urging me to take on the project from the get go. We have formed a “pen pal” friendship that continues. I would also like to thanks Joseph Mattick for his testing and suggestions as of late. These two folks have been instrumental in helping me with the creation of these applications. If you have comments, questions, or suggestions, please feel free to send them to either Dave or me (DannyDont@GMail.Com). With this being the initial release, we are somewhat prepared for additional ideas to flow our way. ABOVE ALL, if you find that you like this format for your Operations PLEASE ENJOY it. That is the best payment we could ever receive.

Dan Foltz

DannyDont@GMail.Com

Appendix A: History

The creation of Manifest Creator (MC) came about via a very circuitous route. It all began when I was asked to an Operating Session at Bill Zastro's layout in Clare, Michigan. I was very new to operations in general but knew that I wanted to hold Operating Sessions in my then-under-construction layout. Bill used clipboards and hand drawn manifests. The orders on these manifests were also generated by hand and entered into the photocopied manifests. Being rather handy in the use of Microsoft Excel for generating forms, I felt that I could improve the hand designed manifest that Bill was using. I wanted to do this as a thank-you for attending the operating session. I was able to do this and the first version of MC was born. However, this was just a computer generated version of what Bill had done with paper and pencil. The orders on these manifests still were done by hand, not only the entering of the data but figuring what cars went where.

About this time I stumbled into JMRI Operations. I had been looking at Ship-It but the initial learning curve seemed very steep, the software seemed pricey, and I just wasn't sure if it would do what I wanted. After looking at JMRI Operations, I found that to begin with very rudimentary operations, the learning curve was almost non-existent. At the same time I felt that at the rudimentary level, these computer generated orders would be an improvement to doing them by hand. So I thought I would share this information with Bill as well.

I soon found that the original manifest that I had created using Excel would not function with the data generated by JMRI. So in the beginning, I reformatted the original Excel manifest and attempted to use the text output that was used to print the manifests in JMRI. Soon I began having discussions with Dan Boudreau and we decided that things would be much easier for MC if Dan were to output a CSV formatted file.

This was the beginning of what we have now. Having a CSV formatted file made the parsing process in Excel VBA that was required much easier than just reading the raw text file. So having started with Excel, it just seemed natural that I would use Visual Basic for Applications (VBA) within Excel, since I was only doing this for my friend Bill. There were several conversations on what items would be appropriate in the CSV file and Dan Boudreau finally came up with what we all have now. (See JMRI Operations documentation for details.) After a bit of work, I thought that this format and parsing of the CSV file might be of interest to others using JMRI. At this point I was unaware that so many JMRI users were non-PC/Windows users, but since have found there are many that are not running on this platform. But the die had been cast.

My initial release was announced via the JMRI User Group and I found that there were some users that were interested in what Manifest Creator could do for them. The program has grown over the past years, mainly based upon user input which has been invaluable. Thank you to all that have contributed ideas. And a big THANK YOU to Dan Boudreau for all that he has done to make the MC workable. I also need to take time to recognize "Inspector Dave" as he was instrumental in establishing the link between JMRI and MC. There have been many, many others that have contributed great ideas and I thank you all!

NOTE: It is interesting that the original Excel formatted manifest was never used for an actual operating session by Bill, and since then Bill has retired from the hobby. But I still thank him as he was the catalyst to the creation of the Manifest Creator. Thank you Bill Zastro!

Appendix B: Revision History

Version 1.1 – 12/08/14

This version has added the **File Sequence Number** to the “Created ...” line at the bottom of each TL and SL to aid in keeping the proper sequence of documents when building the Crew Packet. This was suggested from Dennis Weber who is a layout owner in the La Crosse Wisconsin RiverRail group. Thank you for your suggestion.

Version 1.2 – 12/12/14

This version adds train information at the bottom of each TL and SL. This information includes **Direction, Number of Cars, Length, and Weight**. The **Number of Cars** is a guide to the Crew as a double check to see that the Consist is complete. The **Length** may be used to check Passing Siding Lengths. The **Weight** may be used to determine the need for Helpers. This was received from Dan Lipps who operates layouts in the La Crosse RiverRail area. Thank you for your suggestion.

SWITCH LIST				TRAIN: 377			
TROY JCT				11/25/2000 17:41			
PULLS				SETOUTS			
Road	Number	Type	Destination	Road	Number	Type	From
Power plant ash				Power plant ash			
PCIX	87008	LO	HAUSER				
West cars				West cars			
BNSF	727124	XM	HAUSER				
AGR	10035	XM	HAUSER				
DME	29065	LO	HAUSER				
BN	247225	XM	HAUSER				
GN	174224	GT	HAUSER				
WC	38040	LP	HAUSER				
MILW	156018	XM	HAUSER				
Potlatch				Potlatch			
				ACFX	73011	T	SANDPOINT
				SOEX	3024	T	SANDPOINT
				BNSF	727685	XM	SANDPOINT
				ACFX	78809	T	SANDPOINT
				BNSF	726515	XM	SANDPOINT
				BN	287000	XM	SANDPOINT
Departs Westbound, 9 cars, 626 ft, 916 tons							

File # 250 Created 12/12/2014 7:19:05 AM

Version 1.2
Train Information

Version 1.1
File Number

Figure 44: Revision 1.1 and 1.2

Version 1.3 – 12/20/14

This version cleans up some issues reported by Users and improves some pre-processing error checking. It changes the way the **File Path** is determined and checks for the existence of **MASTER** Files when the App first begins. Appropriate **Error Message** have been added as well. This also fixes an issue with the **Right Side Border** on Switch Lists (SLs). And finally fixed an issue with the Saved and Printed **File Name**. Several of these issues were pointed out by Dan Boudeau. Thank you Dan.