



# The PLS GAZETTE

**A newsletter of the Pennsylvania Live Steamers, Inc.**

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## Green Signals Ahead

I thought it might be helpful to some of our members to open a general discussion about how steam locomotives are identified. This thought is generated because when I am walking around the railroad on run days I often hear the question "What type of engine is that?" Most agree that it's black, small, big, cute or some other adjective that attempts to give an identification or a name to what they are looking at and that is okay because it is not often easy to give a description that even the most seasoned live steamers can agree upon. To make matters worse, steam locomotive identification or notation, as it is

often referred to, has several different major notation schemes. The main notations are the **Whyte notation** (based on counting wheels), the **AAR wheel arrangement** scheme (based on either axles or the bogies). AAR is the Association of American Rail Roads. The **UIC classification of locomotive axle(s)** arrangement (based on counting either the axles or the bogies). UIC is the *Union Internationale des Chemins de fer* or International Union of Railways. For the purpose of this discussion we will focus on the most common system for the U.S.A, Canada, United Kingdom and Ireland the **Whyte notation**. If you were to Google "Locomotive Wheel Arrangement" you can find a list of loco-

motive wheel arrangements totaling 81. This list gives a side by side comparison of the Whyte Notation and the UIC System. Since many of the 81 wheel arrangements are not commonly found running on the PLS railroad we will focus on only those that you will most often see at PLS or other live steam organizations around the U.S.A and Canada. Along with wheel arrangement most of the engines you see on the PLS railroads also have "American Names". Some of these names are shared by the United Kingdom and other parts of the world as well. Table 1 below only lists 18 common Whyte Notation wheel arrangements.

**Table 1**

Whyte Notation	American Name	Picture Scheme Locomotive front is to the left	Notes
0-4-0	Four-Wheel-Switcher	OO	Note 1
4-4-0	American	ooOO	Note 2
4-4-2	Atlantic	ooOOo	
4-4-4	Jubilee	ooOOoo	
0-6-0	Six-Wheel Switcher	OOO	
2-6-0	Mogul	ooOOO	
2-6-2	Prairie	ooOOOoo	
4-6-0	Ten-Wheeler	ooOOO	
4-6-2	Pacific	ooOOOo	
4-6-4	Hudson	ooOOOoo	Note 3
0-8-0	Eight-Wheel-Switcher	OOOO	
2-8-0	Consolidation	oOOOO	
2-8-2	Mikado	oOOOOo	
4-8-2	Mountain, Mohawk (NYC)	ooOOOOo	
2-10-0	Decapod	oOOOOO	
4-6-6-4	Challenger	ooOOO OOOoo	Simple Articulated
4-8-8-2	Cab Forward	ooOOOO OOOOo	Simple Articulated
4-8-8-4	Big Boy	ooOOOO OOOOoo	Simple Articulated

The "Picture Scheme" in the table above shows small wheels designated by the small "o" for the lead or trailing truck and a large "O" for the locomotive's drive wheels. In all cases shown, the driver wheels are coupled by side rods *i.e.* when one drive wheel moves all drive wheels move.

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## Donation Acknowledgements

PLS wishes to thank the following for donations received during June and July: Rich Poletto, Jerusalem Lutheran Day Care, and the Delaware Valley Triumph Car Club.

Thank you also to those who have contributed to the extensive Gauge 1 renovation project: Terry Smelzer and Jim Stapleton.

## 2017 Fall Meet

As we prepare for our 2017 Fall Meet, it is again time to remind all members, Regular and Associate, that we depend on you to help the weekend run smoothly. Our need for volunteers to perform gate duty and/or staff the kitchen/snack areas seems to be more difficult to meet each season. So please sign up when you arrive on Friday, Saturday, or Sunday of Labor Day Weekend. Thank you.

Also, **we greatly need** donations of baked goods for our snack area, either homemade or store bought.

**REMINDER:** During the meet, the clubhouse refrigerators are used for food and drinks sold by PLS throughout the weekend. Should you need refrigeration for either personal use or items brought for the potluck dinner, please use your own cooler.



## Upcoming Events

- Saturday, August 19 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run\*
- Sunday, August 27 Run Day - Members & Guests (No Rain Date)
- Friday, Sept. 1 **Fall Meet** - Members & Guests
- Saturday, Sept. 2 **Fall Meet** - Members & Guests  
Pot Luck Dinner at 5:30 PM
- Sunday, Sept. 3 **Fall Meet** - Members & Guests
- Saturday, Sept. 16 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run\*
- Sunday, Sept. 24 Run Day - Members & Guests (Rain Date 10/1)
- Saturday, Oct. 14 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
**FALL CLEAN-UP in AM**  
Afternoon/Evening Run\*
- Sunday, Oct. 22 Run Day - Members & Guests (Rain Date 10/29)

**\*Note:** Rides may not be available at afternoon/evening run days following membership meetings due to possible limited participation by equipment owners. All members and their guests are welcome to attend with the understanding that rides are not guaranteed at these events.

## Club Membership News

PLS welcomes new Associate Members: Jeff Paton, Daniel Horting, Ben Giess, Jonathan Price, David Pettys, and Don Weinberger. Steve Mallon and Kenneth Birnbaum have applied for Regular Membership.

## Membership Gauge

As of July 31, 2017 PLS has:

- 110 Regular Members**
- 184 Associate Members**
- 7 Honorary Members**

## Pennsylvania Live Steamers, Inc.

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The preceding list has a column for notes. Next to Note 1, the 0-4-0 Four Wheel Switcher represents only the most common name for this type of steam engine you might see running at PLS but not the only engine with this wheel arrangement. You can also see a model of the first American built 0-4-0 named the Tom Thumb designed and constructed by Peter Cooper in 1830 to convince the owners of the newly formed Baltimore and Ohio Railroad (B&O) to use steam engines even though this engine was not intended for revenue service and was only for demonstration. See Photo 2. Up until this time the B&O was using engines manufactured in England. Note 2, next to the 4-4-0 wheel arrangement shows the most common name as "American" and in deed the American is a fitting name as more than 25,000 of these engines were built by various manufactures from 1836 through 1900. But it wasn't until 1872 that the name American was used to describe this very popular locomotive. Prior to 1872 it was called the "Standard" or "Eight-wheeler", see Photo 1. However, you will often see a 4-4-0 Camel Back running on the 7 1/4" gauge track at PLS and engines of various wheel arrangements that have a center cab are most often called "Camel Backs". Note 3 is next to the 4-8-4 Northern the most common name for this wheel arrangement, but the New York Central called their 4-8-4's Niagaras and the Canadian National Railroad (CNR) called theirs a Confederation. As a general note, some the listed wheel arrangements might only be seen on the PLS Gauge 1 track or at other live steam organizations around the U.S.A

The Whyte Notation is a good starting place for the identification of a steam locomotive but it does not give a complete description of a specific engines from a builder such-as Baldwin, American Locomotive Works, Montreal Locomotive Works (MLW), Lima Locomotive Works or one of the many other companies that manufactured steam locomotives. As an example; I have a 4-8-4 locomotive that was modeled after an engine manufactured by Montreal Locomotive Works for the Canadian National Railway. A total of 155 of these locomotives were purchased by

CNR between 1927 and 1944 and numbered 6100 - 6264. These engines were manufactured for 8 different orders with the first given Class Number U-2-a and the last build in 1944 given Class Number U-2-h. The Class of a locomotive build defines the basic engine in this case being a U-2. The "a" though "h" defines the revision made for each of the 8 builds. Changes for each of these builds might have been the addition of a specific type of appetences like a super-heater or an increase in the maximum operating pressure of the boiler or the engines drive wheel size. See Photo 2, CNR 6213 U-2-g. Since my engine is numbered 6276 and is one of several models built by an unknown builder we only know that it is a Class U-2-(?) and falls beyond the last MLW engine number; 6264 U-2-h. It is possible that the builder used an original set of builder's drawings and specification sheets to model this engine but that is now lost to history. What we do know is that my engine lacks some of the details of the original prototype but from a distance it is very representative of the original Canadian Confederations 4-8-4 Class U-2.

The Whyte Notation does not address one more important identification and that is that all engines are assumed to have a standalone tender coupled behind the engine and used to carry water and fuel. An adaptation for tank type engines is to add a "t" at the end of the wheel arrangement i.e. 0-4-0t. This may be a saddle tank wrapped over the boiler or side tanks, See Photo 2.

As mentioned above, the Whyte Notation is a good starting point for locomotive identification, but the final word is always open to qualification as some model builders can be very fussy about ALL the details of their locomotives. But don't worry, the basic wheel arrangement and the common name works well for most of what you see running at PLS and if you don't know, you can always ask!

See you on the Mainline,

Frank Webb, President



## Common Wheel Arrangements



Photo 1  
0-4-0 Tom Thumb - Year 1830  
B&O Railroad Museum



Photo 2  
4-4-0 American Locomotive  
25,000 Manufactured



Photo 3  
Confederation 4-8-4  
CNR 6213 Class U-2-g



Photo 4  
0-4-0t Saddle Tank Engine  
Often used in Mining



# PLS Spring Picnic...

THANK YOU to Jonathan Riehl and family for supplying the Steam Cream for this year's Picnic. It was a treat again this year to have ice cream made on site by one of our Associate Members Jonathan Riehl and his family. If you have not attended a PLS Picnic where Jonathan rolls out his model 3 inch scale Frick Steam Tractor and fires it up to run his ice cream churns you have missed a lot of fun. Here again a very special THANK YOU to Jonathan and his family for adding a special touch to this year's PLS picnic.



Steam



Cream



THANK YOU to John and Jay Forsythe and their Families for a GREAT PLS Picnic .

All that attended this year's PLS picnic in July owe a very special **THANK YOU** to John and Jay Forsythe and their families. If you didn't attend the picnic you missed a very grand event. John, Jay and family went well beyond just cooking hamburgers and hot dogs by adding many special touches right down to the check-board table cloths. The food was great, the weather was great and the company of all those that participated was great as well!





# Along the Tracks...

President Frank Webb presents longtime Regular Member, Harry Quirk, with a certificate from the Pennsylvania Live Steamers Board of Directors that bestows upon him the lifetime title of Honorary Member.

Harry has been a familiar face around the Gauge 1 track for decades and has generously contributed his time and energy to our exciting hobby of Live Steam Model Railroading.



The clubhouse porch extension project has been completed. Not only will it serve as a permanent shelter for club picnics, it also provides a comfortable place to take a break during work day projects.



Carl Miller cleaned the accumulated dirt and grime on the concrete walkways with the power sprayer during a recent workday. Jim Salmons also cleaned up the adjoining brick surfaces.



Bob Hillenbrand has refurbished the crossing gates at the front entrance including replacement of the wooden crossing arms.





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## FIRST CLASS



## Help Needed for Fall Meet

**Many new Volunteers have stepped forward to help us fill our kitchen needs during our Spring and Fall Meets. However, PLS needs you to continue volunteering and hopes others will join us. Just one hour of your time will allow the PLS kitchen to function smoothly.**

The kitchen will be open until 3 pm on Saturday and 2 pm on Sunday. Below is a sample of activities where help is needed:

1. Friday 9 am 1 or 2 people, set up, etc.
2. Saturday 9 am – 10 am 1 person kitchen prep
3. Saturday 11am – Noon 2 people serving & 1 cashier
4. Saturday Noon – 1 pm 3 people serving & 1 cashier
5. Saturday 1 pm – 2 pm 3 people serving & 1 cashier
6. Saturday 2 pm – 3 pm 3 people serving & 1 cashier
7. Saturday 3 pm – 4 pm 2 people clean up
8. Sunday 9 am – 10 am 1 person kitchen prep
9. Sunday 11am – Noon 2 people serving & 1 cashier
10. Sunday Noon – 1 pm 3 people serving & 1 cashier
11. Sunday 1 pm – 2 pm 3 people serving & 1 cashier
12. Sunday 2 pm – 3 pm 2 people clean up/tear down



**Please contact Kathy Parris via email at [parrisk415@gmail.com](mailto:parrisk415@gmail.com) with any questions and to indicate your availability for volunteering.**