

Ridge Lines

Voice of the Ridge Live Steamers

August 2019

Dundee, Florida

RLS Work Day	Saturday	August 31, 2019
RLS Work Day	Saturday	September 7, 2019
RLS Work Day	Saturday	September 14, 2019
RLS Work Day	Saturday	September 21, 2019
RLS Run Day	Saturday	September 28, 2019
Scheduled Board of Director's Meeting, 11:00 AM		
General Membership Meeting, 12:15 PM		
RLS Work Day	Saturday	October 5, 2019
RLS Work Day	Saturday	October 12, 2019
RLS Work Day	Saturday	October 19, 2019
RLS Fall Meet	Friday, Saturday, Sunday	October 25-27, 2019
Scheduled Board of Director's Meeting, Saturday, 11:00 AM		
General Membership Meeting, Saturday, 12:15 PM		
Tradewinds Fall Festival	Saturday	October 26, 2019
Big Boots - Fall Meet -	Monday-Sunday	Oct 28 – Nov 3, 2019
Sebring Family Lines - Fall Meet	Friday-Sunday	November 1-3, 2019
RLS Work Day	Saturday	November 2, 2019
RLS Work Day	Saturday	November 9, 2019
RLS Work Day	Saturday	November 16, 2019
RLS Run Day	Saturday	November 23, 2019
Scheduled Board of Director's Meeting, 11:00 AM		
General Membership Meeting, 12:15 PM		
RLS Work Day	Saturday	November 30, 2019
RLS Card Order Session	Saturday, Sunday	December 7, 8, 2019
RLS Work Day	Saturday	December 14, 2019
RLS Work Day	Saturday	December 21, 2019
RLS Run Day	Saturday	December 25, 2019
Scheduled Board of Director's Meeting, 11:00 AM		
General Membership Meeting, 12:15 PM		
RLS Card Order Session	Saturday, Sunday	January 4, 5, 2020
RLS Work Day	Saturday	January 11, 2020
RLS Card Order Session	Saturday, Sunday	January 18, 19, 2020
RLS Run Day	Saturday	January 24, 2020
Scheduled Board of Director's Meeting, 11:00 AM		
General Membership Meeting, 12:15 PM		
Big Boots Winter Meet	Monday-Monday	February 3-10, 2020
Manatee Winter Meet	Friday-Tuesday	February 14-18, 2020
RLS Winter Meet	Thursday-Sunday	February 20-23, 2020
FLS Banquet	Saturday	February 22, 2020
Pasco Winter Meet	Monday-Sunday	Feb 24 - March 1, 2020
Sebring Family Winter Meet	Friday-Sunday	March 6-8, 2020
RLS Card Order Session	Saturday, Sunday	March 14, 15, 2020
RLS Spring Meet	Friday, Saturday, Sunday	March 27-29, 2020

Newsletter of the Ridge Live Steamers, Inc.

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Director (2019-2020): Bruce Rauch

Director (2018-2019): Jim Reid

Director (2019-2020): Mikey Starck

Past President: Tim Meyer

Newsletter Editor: Rich Dobler

Publisher: Allen Newcomb

Submissions: Ridge Lines welcomes Articles, news items, digital photos, And other contributions. Please Contact the Editor.

Membership: Anyone interested in Joining the Ridge Live Steamers Should contact the Secretary.

Electronic Distribution. Help the Treasurer and the Secretary/ Editor to save money, and time. If you do not already get the newsletter e-mail, please e-mail me at allenpn@tampabay.rr.com with your e-mail address. Please be sure to add me to your mailbox so that I won't be blocked. Please be assured that only RLS mail will be sent to you and it will be as a "blind copy" to prevent anyone else gaining access to your computer. In addition, and very important, please advise us if your e-mail changes.

General Membership Meetings will be held the fourth Saturday of each month, unless otherwise noted. They will be held at the pavilion after lunch. This is to satisfy the Requirements of Article 1, Section 4 of the Ridge Live Steamers By-Laws.

Board of Director Meetings are scheduled on the fourth Saturday of every month, subject to cancellation with at least one weeks notice by the President. This is to satisfy the Requirements of Article II, Section 3, Paragraph (1) of the Ridge Live Steamers By-Laws.

Name Badges. Please wear your name badges when at the track, especially during run days, so that we may all learn the names of members we don't know, and new members may get to know us. Additional, or new, badges may be purchased for \$7.50.

The Florida Live Steamers is an umbrella organization that coordinates the railroad activities around the state. If you don't belong, it is time you did. If you do belong, dues are due. \$20.00 a year should be mailed to FLS, 9111 Erie Lane, Parrish, FL 34219-9049

SUPPORT FLS Florida Live Steamers, Inc. is an umbrella organization that coordinates live steam activities throughout the state. Dues are \$20.00 per year and membership can be obtained by sending your check to Joan Smith, 9111 Erie Lane, Parrish, FL 34219-9049.

“From the President’s Cab”

Well here we are with the fall meet right around the corner and it can't come soon enough. If you haven't noticed it is hot outside, many thanks to the summer work crews who continue to keep the track from being taken over by Mother Nature during the summer. The year thus far has seen some administrative work completed by the BOD for the organization. You will probably notice the official track plan has been updated along with finalizing the updated “Track and Signal Operations” Booklet aka “Ridge Lines Railroad - Book of Rules”, it will be sent to the printers for publication, a counter top version will also be available at the registration counter, along with a web friendly version update for the website. John Forte and I updated the storage track underwriters and renters list so that 2019 invoices could be sent out. If you are a sub-letter make note the annual track rental rate is \$2.50/foot per RLS By-Laws Article IX Section 3.

It has been brought to the attention of members of the board that both Blue Track flags (used to protect ROW work crews) and Red Signals are being ignored. Please make note that the signal system upgrades have been completed to a point which brings the track back to a Bi-Directional status. Please for SAFETY do not pass a Blue Flag/Red Signals with any motive power. If you anticipate the track ahead is clear, please verify first by walking the block before moving your motive power.

Additional good news is that both HB1267 & SB1788 died in committee earlier this year, so the concern for 2019 has passed but does not alleviate concerns for future legislative years.

One last item Chuck Hackett with Mini Rail Solutions will provide a “Lunch and Learn” during the 2019 Fall Meet to discuss the signal system, answer any questions and solicit feedback for improvement. Please see his article elsewhere in this newsletter.

Happy Steaming, Fred DeLoach, RLS President

THE RIDGE LINES RAILROAD

Ridge Live Steamers, Inc.,
Dundee, Florida



www.ridgelivesteamers.org

Track and Signal Operations
Effective Date
June 2019

An Explanation of the track and signal
Operations on the Ridge Lines Railroad.

Ridge Signal System – Part I: Status

By: Chuck Hackett

I am sure all are all aware that the signal system at Ridge has been undergoing conversion from a manual “Capture/release” type system to a Fully Automatic type system. This has been a significant undertaking. We have gone through many ‘growing pains’ but, through the efforts of John Forte, Rich Dobler, and others, we are very close to having full-time, bi-directional running with fully automatic signals. We anticipate that the conversion will be complete by the end of the year.

Why automatic signals? One of the issues with the capture/release system was that, if someone forgot to hit a release button, the railroad came to a standstill and people got frustrated. I have seen this happen many times. This is not a big issue when it's just “us locals” who are familiar with the buttons. It can become a big issue and cause frustration for visitors during a meet when they are not familiar with the buttons or what one red .vs. two reds means, etc. There were also maintenance issues with the old system caused by engineers hitting the buttons too hard. Maintenance issues were also created when the posts were broken off by wind or people working near them.

The Hardware:

The system consists of three main parts that I started developing 10 years ago. The main parts are: a) a micro-processor based signal controller, b) software running in the controller, and c) hardware components to protect against lightning.

The controller hardware was designed 10 years ago and has remained unchanged. The software has been constantly improved over that time adding new features along the way without any changes to the controller hardware.

Using modern microcontrollers gives us a lot of flexibility and many more features than can be achieved using relays, buttons, etc. The downside is that electronic components are easily damaged by lightning surges – and we live in Florida – the lightning capitol of the world.

One of the biggest problems is the power company. The Ridge track is right next to a large substation where they have lightning arresters to protect the power grid. These lightning arresters take the lightning that hits the power lines and sends it into the local ground which is where our tracks live. This is also true of the powerline that runs along the north edge of the railroad past Rich's house.

The lightning protection in the signal system has undergone constant improvement over the last 10 years. We have recently suffered some very close lightning strikes (Fred DeLoach witnessed one of them in person) with very little damage. Dealing with lightning is a very complicated subject – especially when you have 1,000's of feet of cable and track involved.

Automatic systems based on relays are less susceptible to lightning damage but are susceptible to wet/dry track conditions and become very complicated when a signal system goes beyond simple occupied/unoccupied systems. For more information on how we deal with lightning, see:

<http://www.minirailsolutions.com/living-with-lightning/>

<http://www.minirailsolutions.com/the-viability-of-solid-state-components-for-signal-systems/>

The system works to control traffic flow in ways that you will probably never notice, but, can be significant when there is a lot of bi-directional traffic. For example, if you are southbound at a signal to exit a passing siding and there is a northbound train (A) at the far end of the block on a passing siding headed towards you, the system will grant access to one of you to proceed.

However, if there is already an southbound train (B) occupying the siding that you are headed for (i.e.: next to train A - where you will be when you exit the block at the other end) you will be stuck blocking the mainline as well as preventing the northbound train (A) from proceeding until train B moves, which allows you to clear the main. The new system will not let this happen. In the case above, you would not be cleared into the block because you have no place to go when you get to the other end (the system calls this: "Blocked by destination and opposing"). Instead of clearing you, the system will clear the opposing train (A) towards you. This works to keep traffic flowing if a train is derailed in a siding, taking on water, etc. This is just one example of how the system tries to keep traffic moving as much as possible.

One of the things that could not be easily done with the old system is to allow multiple trains in a block **while still controlling train separation**. In prototype railroads this is done with "Intermediate Signals". By adding intermediate signals (one or more signals between sidings) we will be able to allow trains to follow other trains through a block while still enforcing safe separation.

Configuration and Control:

Even though the system runs on software, no software knowledge is needed to install and configure the system. The system is configured by setting parameters to control the different blocks, etc. For example, if it is desired to give southbound traffic in a block priority over northbound traffic you just raise the "priority" assigned to the southbound signal(s). If we want to enforce a train separation of, say 1 minute (even if the block clears before this), this is accomplished simply by setting the "Entry Delay" of a signal to 60 seconds. We could switch between clockwise, counterclockwise, or bi-directional running simply by changing the configuration. I anticipate 90% of the time the system will be left in full bi-directional running mode.

Because of the way the system works, the status of every track, every signal, every switch motor, etc. is available at any point on the railroad. This means that we can have a real-time track display in the pavilion to watch train activity as well as another display in the tower for a dispatcher to use in directing traffic.

Any component can also be controlled from any point on the railroad. If we want to, the dispatcher can be given control of some/all switch motors and signals such that he can hold traffic at a given signal, etc. For example, he could hold a train at the signal at the top of Summit with a mouse click – no wiring changes needed.

These displays can also help diagnose broken bond wires, etc.

What's With All The Blinking?

The basic signal rule is very simple: If the signal is green or yellow, you may go, anything else means stop. Beyond that, the system uses winking/blinking to convey more information to the engineer and/or the signal maintainer.

The most common indications will be:

- a) A red that is winking off once each second. This is normal and means that the block is free and no trains are requesting the block. When a train approaches the signal, it will probably turn to solid green/yellow allowing it to proceed.
- b) A red that is winking off twice each second. This means that there is a route selection switch ahead that is **not** set for this direction. If you want to go this direction you will have to throw the switch.

Other “winking” signals indicate temporary things like “you can’t proceed because part of your route is not clear”, etc. but these conditions should clear shortly. As an engineer, you can just consider them “red”.

If you see “blinking” (where the signal is OFF most of the time and blinks ON for short intervals) the system is saying that the condition of the block cannot be determined and there is a track issue that needs to be addressed by a signal maintainer. *Note: At the option of the railroad, all blinking can be disabled leaving the signals solid. In this case, the signal maintainer can still access the information using the display program.*

Next time: Part II – How is this system related to full-size ABS/APB block signaling?

BTW: On Saturday, October 26th during the Fall Meet, I will be making a presentation on the signal system as well as answering any questions you might have. In the meantime, there is more information available at: <http://MinirailSolutions.com>

Gopher Tortious Spotting

Sort of like train spotting only reversed, spotting the gopher tortious from the train.



The next time you come to the track looking for something to do

“Take A 20 Minute Walk....”

- With one of the batteries weed eaters and trim everything
- With a rake and rake ballast back on the ties
- With a battery hedge trimmer
- With a KEE push mower and mow in YEEHAW
- To the work trailer and carry trash to the dumpster
- To the work trailer and straighten up around the area
- Around the track with a blower and clean out turnouts
- To a restroom and clean it and replace toilet paper
- With a blower and blow out the picnic shelter
- To the tractor and check fluids in radiator and battery
- To the golf cart and check battery fluids
- To the Kubota ATV and check battery fluids
- Around the track and pull Caesar weeds
- Around the track and pull any tall weeds
- Around the track with a hand sprayer and spray weeds
- With a paint brush and paint one steaming bay board
- With a paint brush and paint one section of the fence at the steaming bays
- With the battery pole saw and trim low branches
- To Hays Hill and water trees
- To Elston Yard with a hand sprayer and spray weeds
- With a weed eater to the steaming bays and trim under them
- To a trestle and do a thorough inspection
- To the club gasoline diesels and check hour meters (servicing is done every 50 hours)
- To the pump house and sharpen mower blades
- To the “G” car shed and service couplers
- To the “M” car shed and service couplers
- With clippers and cut root suckers around the base of oak trees

These are some of the daily chores that the “residents” do every day.

If you need instructions on how to do any of these chores, ask one of the “residents.” I am sure they will be willing to help.