Rail Radio Activator (RRA)

Quick Start Guide

QuEST
QuEST RAIL LLC

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Contents

About This Quick Start Guide

This Quick Startup Guide provides setup information for the QuEST Rail Radio Activator (RRA).

Customer Support

For additional support, please call QuEST Sr. Product Manager, Eric Fuehring, at (660) 525-5180 or email at Eric@questrail.com.

1   Overview

RRA dimensions of the product unit are as shown below in Figure 1. All dimensions are in inches.
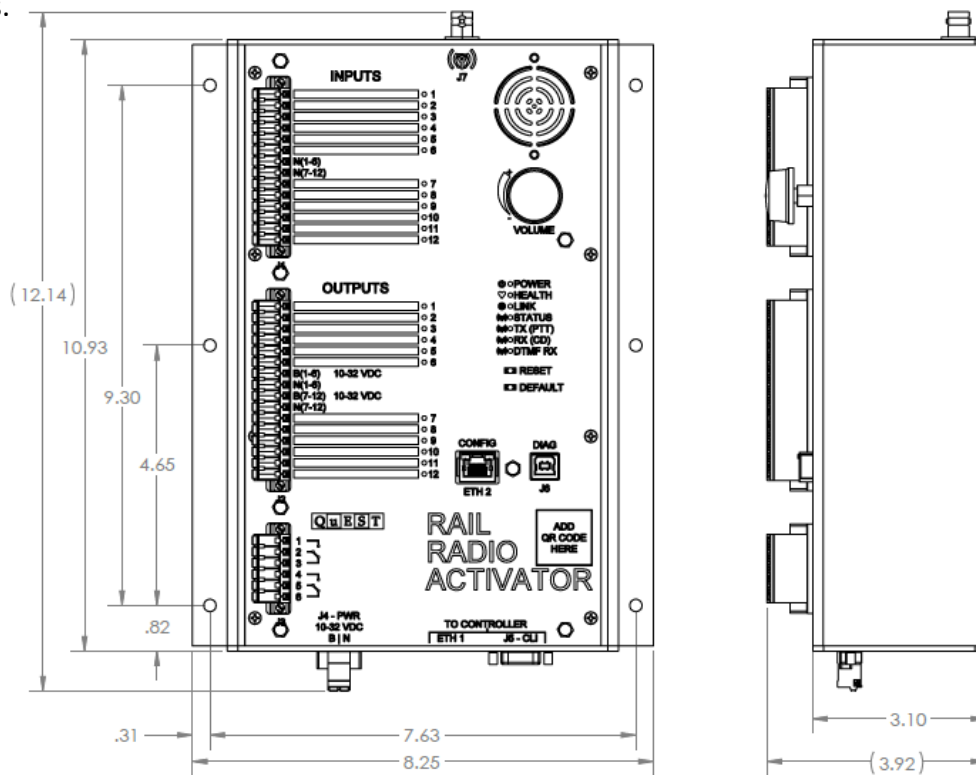

Figure 1

2 Connection Diagrams - Figure 2

The RRA now supports QNET protocol. This allows the RRA to connect to the ElectroLogIXS through the QLCP-NET in the CNLCP. The CNLCP and the RRA need to be configured to enable the RRA to be a client to the CNCLP QLCP-NET server.
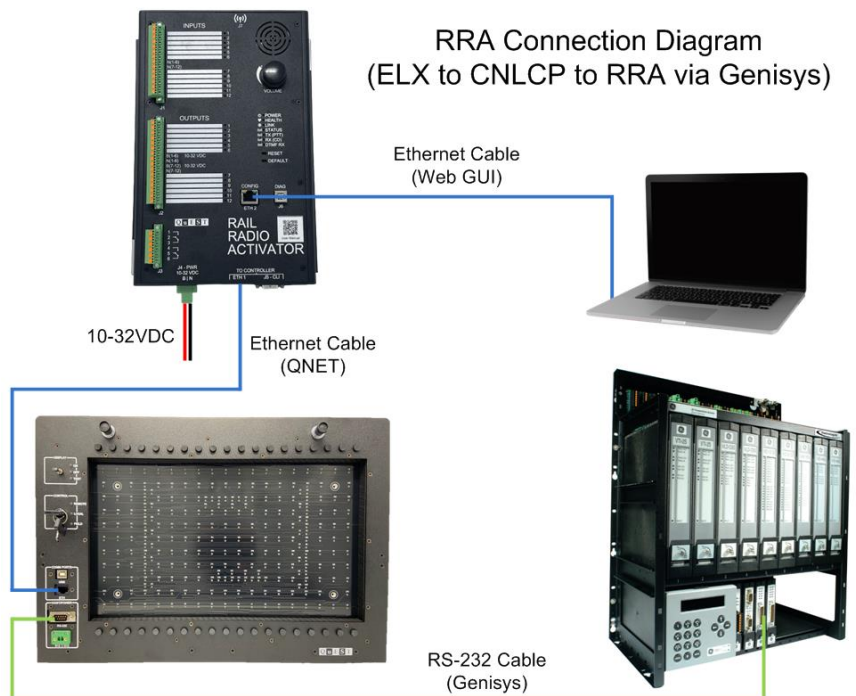

Figure 2

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3   RRA Configuration – Web GUI

Connecting to the RRA

Connect a computer to RRA Config RJ45 (Top/Front) port using a standard ethernet cable.

Configure computer IP address to 172.16.0.102 or higher.

Open web browser and enter 172.16.0.101:8080 to open RRA Web GUI.

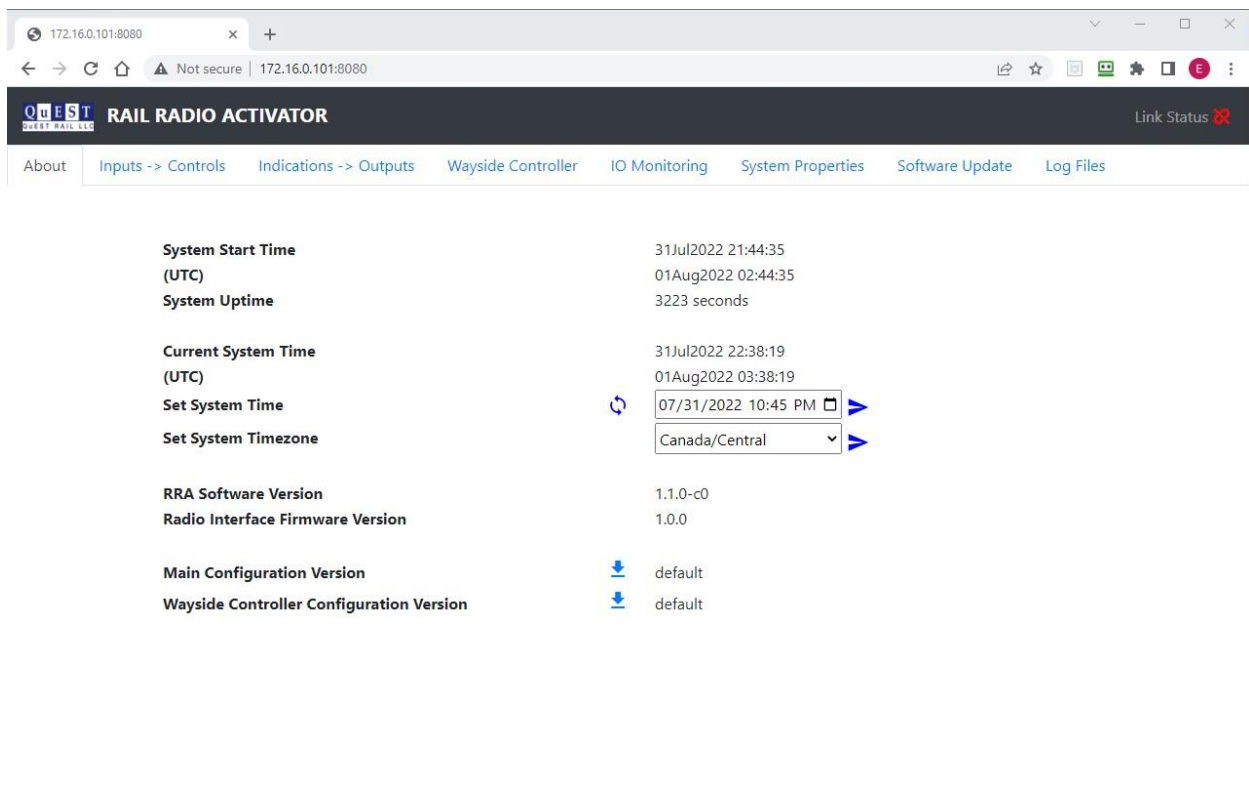The RRA web GUI will open to the "About" tab as shown in Figure 3.

Figure 3

"About" tab –

> **System Start Time** – Date and Time the RRA started running.
> **(UTC)** – System start time in Coordinated Universal Time.
> **System Uptime** – Number of consecutive seconds the RRA has been running.
> **Current System Time** – Day/Month/Year   Hour/Minutes/Seconds
> **(UTC)** – Current system time in Coordinated Universal Time.
> **Set System Time** – Press the calendar icon to manually set the RRA date and time. Press the ⟳ button to sync the RRA time with the connected computer. Then press the arrow button to save this time to the RRA.
> **Set System Timezone** – Use the drop-down arrow to choose timezone. Then press the arrow button to save the timezone to the RRA.
> **RRA Software Version** – Displays the installed RRA software version.
> **Radio Interface Firmware Version** – Displays the installed radio interface firmware version.
> **Main Configuration Version** – Displays the current main configuration ID. If none is loaded, "default" is displayed. To save the current configuration, press the download button. (Configuration files are uploaded to the RRA on the "Software Update" tab.)
> **Wayside Controller Configuration Version** – Displays the current wayside controller configuration ID. If none is loaded, "default" is displayed. To save the current configuration, press the download button. (Configuration files are uploaded to the RRA on the "Software Update" tab.)

Inputs->Controls Tab – Figure 4

The "Inputs->Controls" tab is used to change the DTMF Commands, Digital Input Triggers, and System State mapping.

> **DTMF Commands**
>
> - Click "Add New" to create a new DTMF code mapping and set which Control Bit(s) are mapped to this new DTMF code.
> - Click the "Pencil Icon" to edit the Control Bit(s) mapped to an existing DTMF code.
> - Click the "Trash Can Icon" to delete a DTMF code and mapping.
>
> **Digital Input Triggers**
>
> - Click the "Pencil Icon" under the "Digital Input Triggers" section, to edit the Control Bit(s) mapped to each input.

- o Add Mnemonic name for each Digital Input by clicking in the Input ID's Mnemonic Cell and typing in the user specified name.

System State

- o Click the "Pencil Icon" under the "System State" section, to edit the Control Bit(s) mapped to the Health status of the RRA.
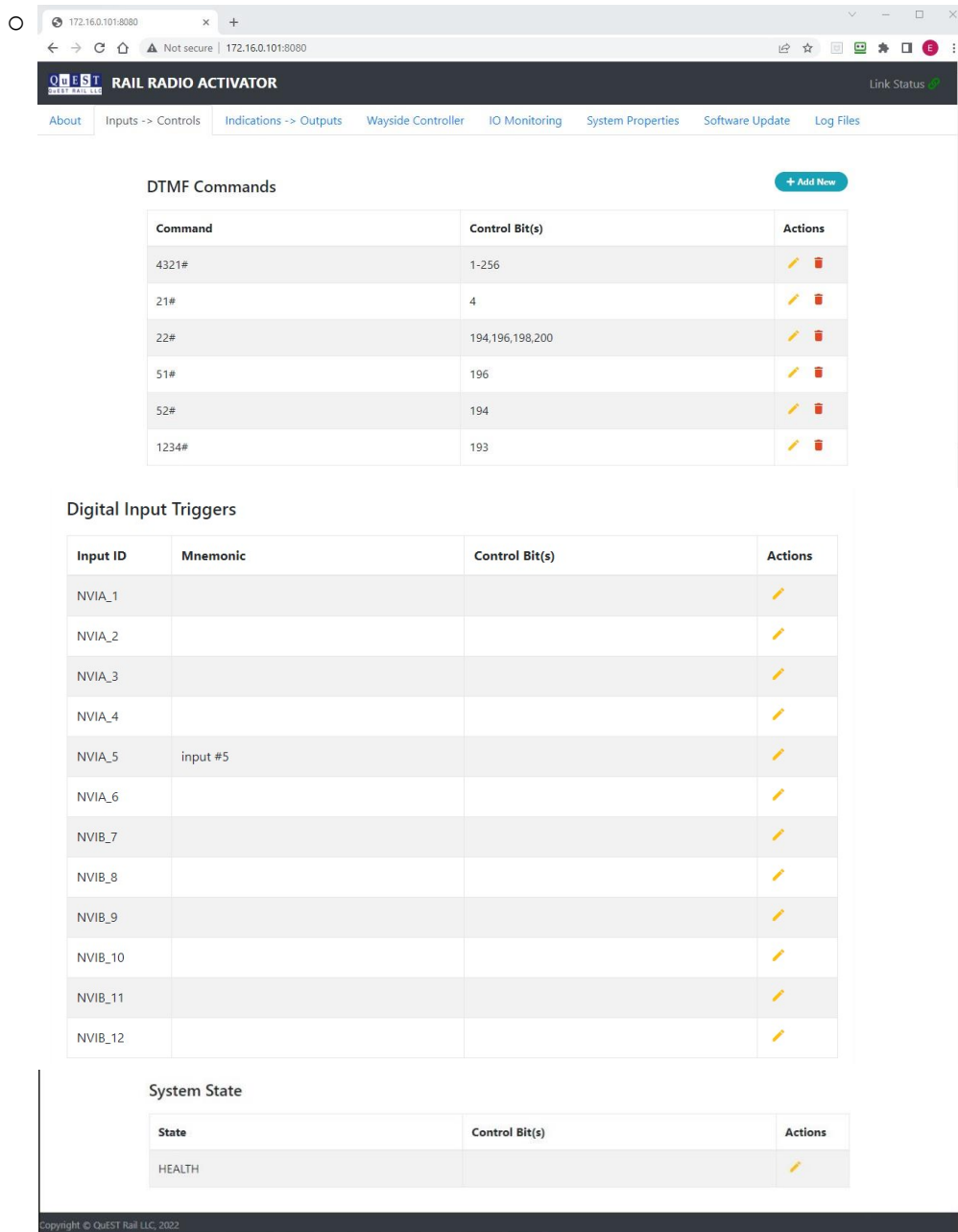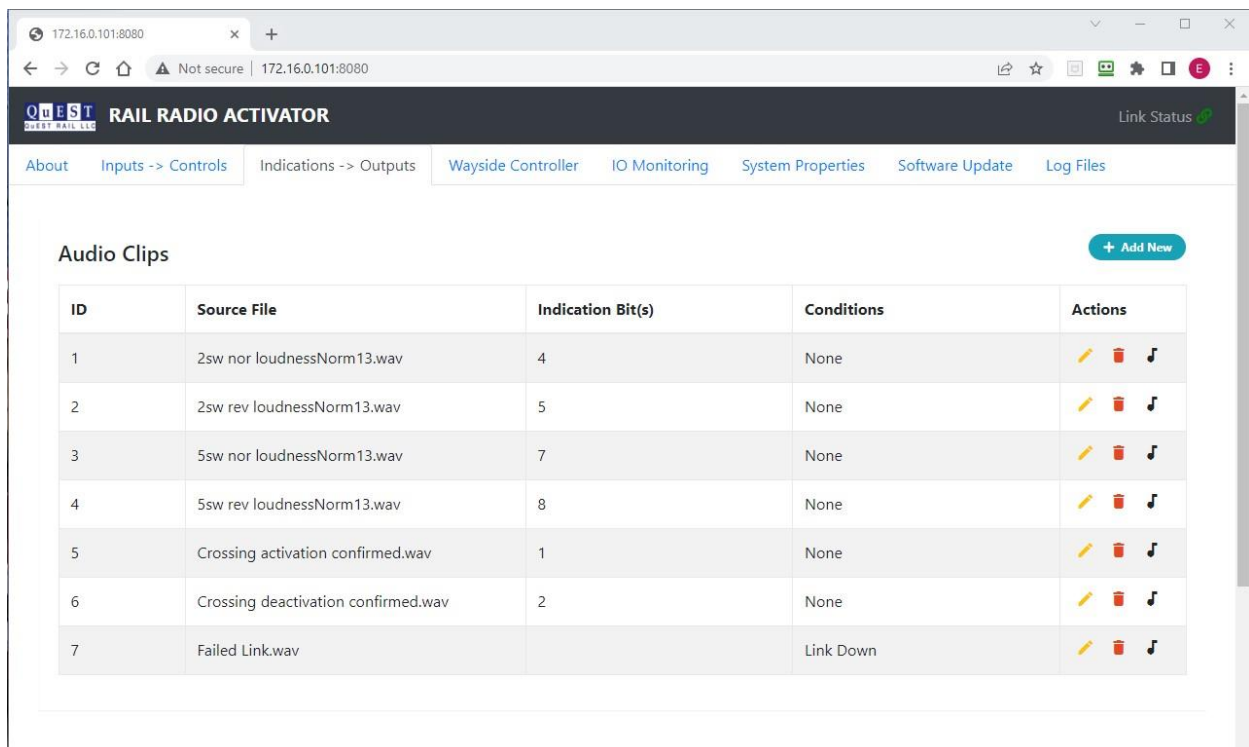
- o

Figure 4

Indications->Outputs Tab – Figure 5

Audio Clips

- o Click the "Add New" button and the Audio Clips "Pencil Icon" to –
    - ▪ Upload new Audio Source File ("Add New")
    - ▪ Edit the mapping of the digital Output Indications Bit(s). ("Pencil Icon")
    - ▪ The Conditions drop-down menu allows a selected audio file to be played if the link between the RRA and Wayside controller is down.
        - • **!! NOTE !! – This only is applicable when the RRA is configured for Genisys protocol to the Wayside controller. When the RRA is connected via QNET protocol, this audio file will play if this QNET link is down but not if the QNET server's link to the wayside controller fails.**
- o Click the Audio Clips "Note" icon to force playback of the Audio file loaded.

Digital Outputs & Relay Outputs

- o Click the Digital Outputs or Relay Output "Pencil Icon" to map Digital Outputs or Relay Output to Indication Bits.
- o Add Mnemonic name for each Digital Output or Relay Output by clicking in the Output ID's Mnemonic Cell and typing in the user specified name.

RAIL RADIO ACTIVATOR

| About | Inputs -> Controls | Indications -> Outputs | Wayside Controller | IO Monitoring | System Properties | Software Update | Log Files |

Audio Clips   + Add New

ID	Source File	Indication Bit(s)	Conditions	Actions
1	2sw nor loudnessNorm13.wav	4	None	✏️ 🗑️ ♪
2	2sw rev loudnessNorm13.wav	5	None	✏️ 🗑️ ♪
3	5sw nor loudnessNorm13.wav	7	None	✏️ 🗑️ ♪
4	5sw rev loudnessNorm13.wav	8	None	✏️ 🗑️ ♪
5	Crossing activation confirmed.wav	1	None	✏️ 🗑️ ♪
6	Crossing deactivation confirmed.wav	2	None	✏️ 🗑️ ♪
7	Failed Link.wav		Link Down	✏️ 🗑️ ♪

Figure 5

Wayside Controller Properties – Figure 6

The Wayside Controller tab allows the user to modify the communication settings to the Wayside Controller.

Note: When using QNET protocol, the Wayside Controller IP address setting should be the IP address of the QLCP-NET server.

When connected to the RRA, the current settings will be populated in the Current Values column. Any mismatch between the New Values and Current Values will be highlighted in Yellow until the Apply Changes button is pressed.
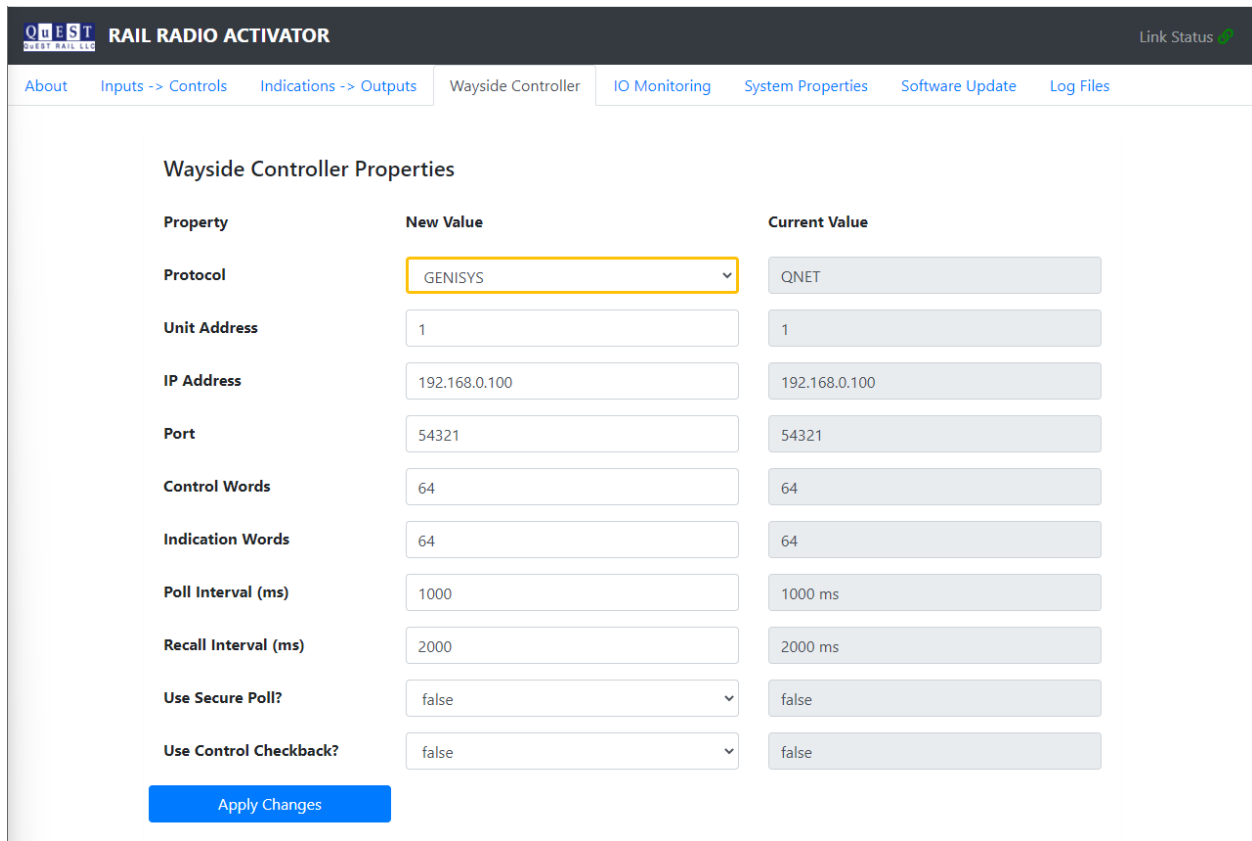
Genisys and QNET protocols are supported.

Figure 6

System Properties – Figure 7

The System Properties tab allows the user to configure each ethernet port address.

Once a connection is made, the current values are shown in both the "Current Value" and "New Value" columns. Once a change is made in the "New Value" column, that change is outlined in yellow.

Click the Apply Changes button to apply new setting.

NOTE: If the configuration IP address is changed, the user must reconnect to the RRA using the new IP address.

The System Properties tab also allows the user to configure the radio frequency.

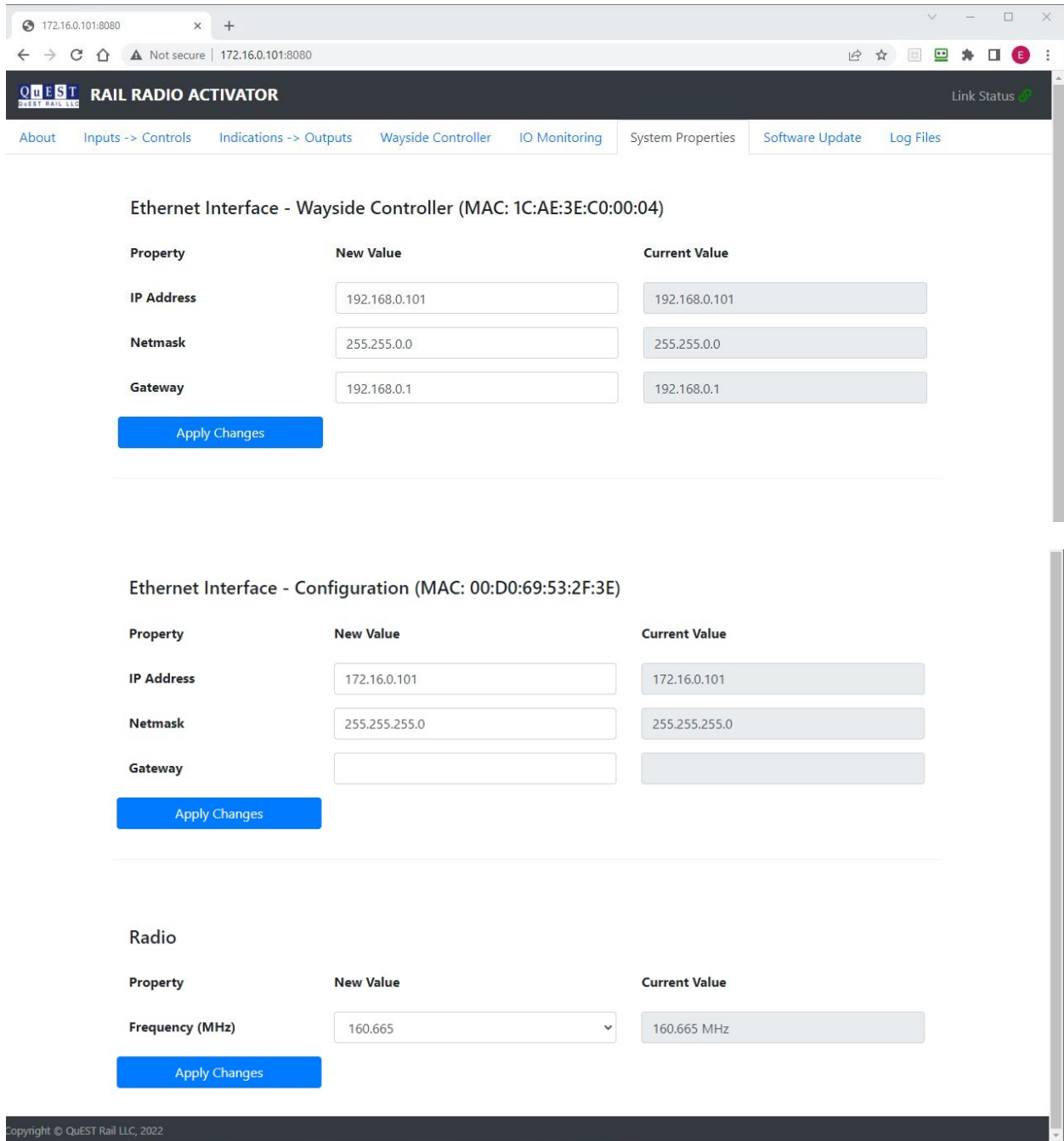Click the Apply button to apply new setting.

Figure 7

Software Updates – Figure 8

The Software Updates tab allows the user to upload new RRA software, Main configuration files, and Wayside Controller configuration files to the RRA.

Simply drag and drop any of the software files or configuration files into the window and they will be written to the RRA automatically. (QuEST Rail will typically provide CN with the xxx.tar.gz combined RRA software file.)

- *RRA main board SW (xxx.deb)*
- *RI board SW (xxx.hex)*
- *Combined (RRA main and RI) (xxx.tar.gz)*
- Main Configuration (rra-config-xxx.xml) Note: This file must begin with rra-config and end with .xml
- Wayside Controller Configuration (wayside-controller-config-xxx.xml) Note: This file must begin with wayside-controller-config and end with .xml
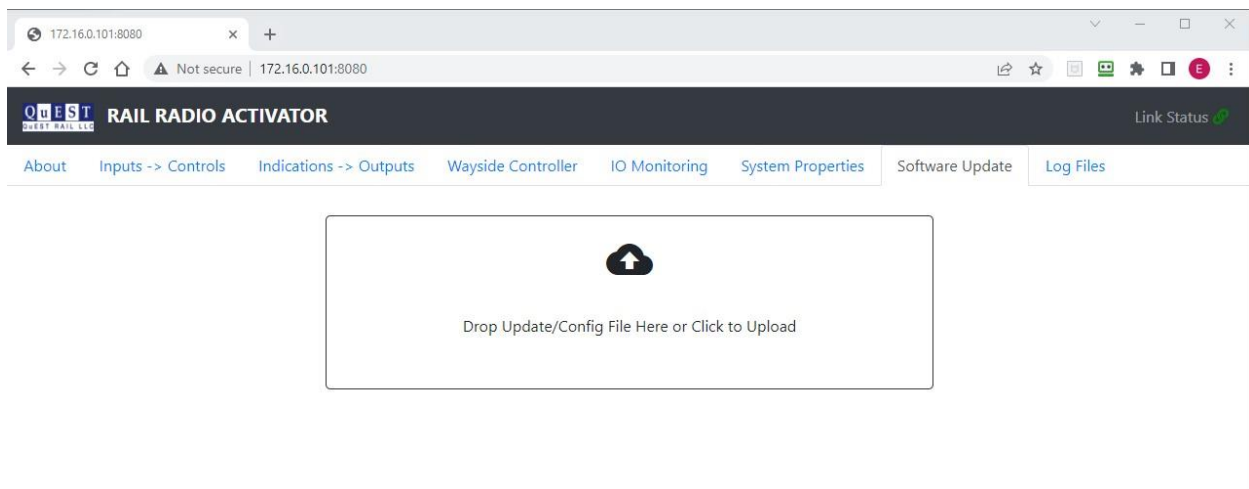

Figure 8

4 RRA Log Files – Web GUI

The QuEST RRA has logging capabilities built in. The method to access these log files has been updated.

To access the log files, select the "Log Files" tab.

5 Input/Output Monitor Tab – Figure 9

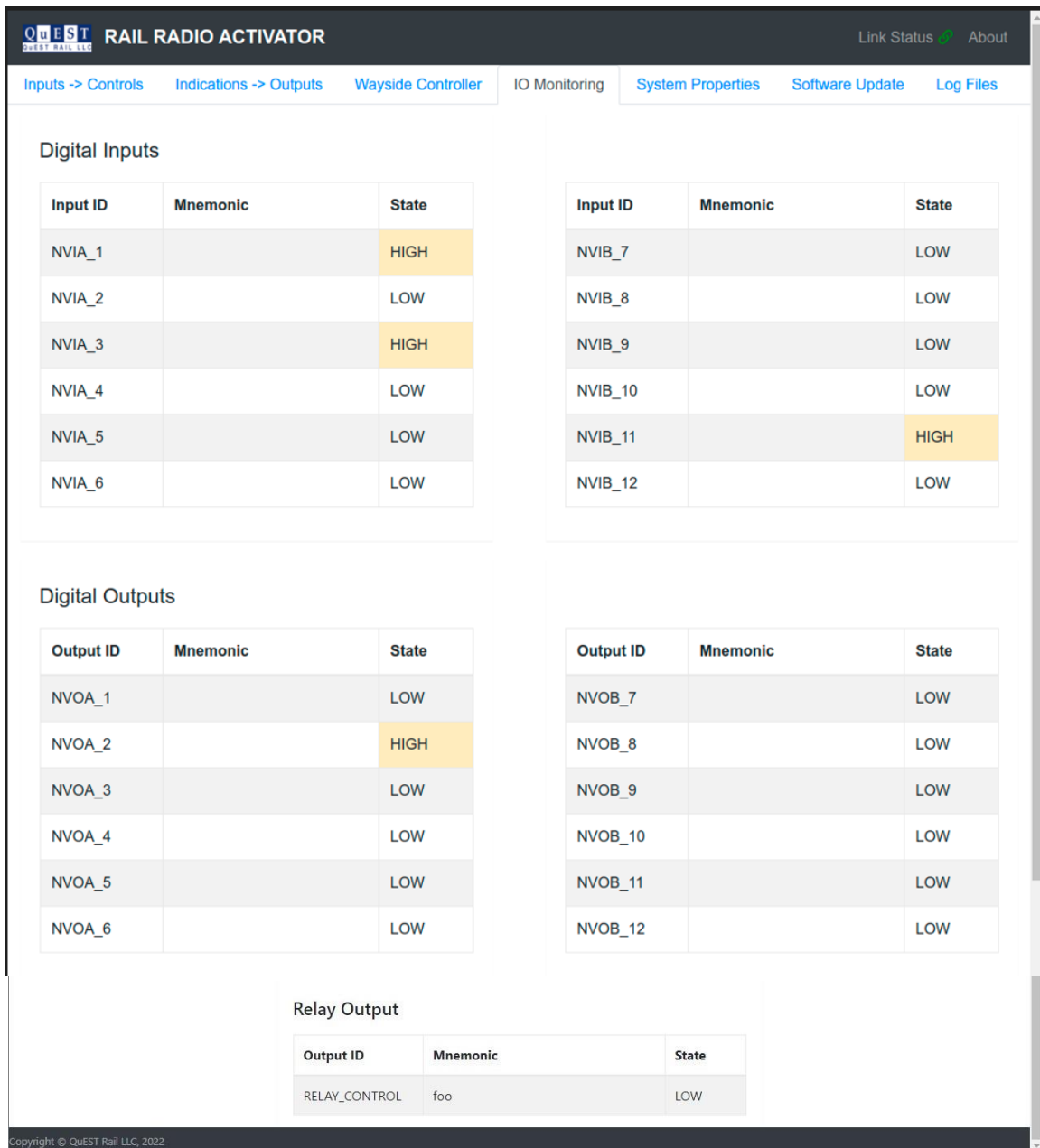The IO Monitor tab displays the status of the non-vital I/O

Figure 9