SHWOZ

Railway Train System Simulation
Track Controller User Manual/Installation Guide

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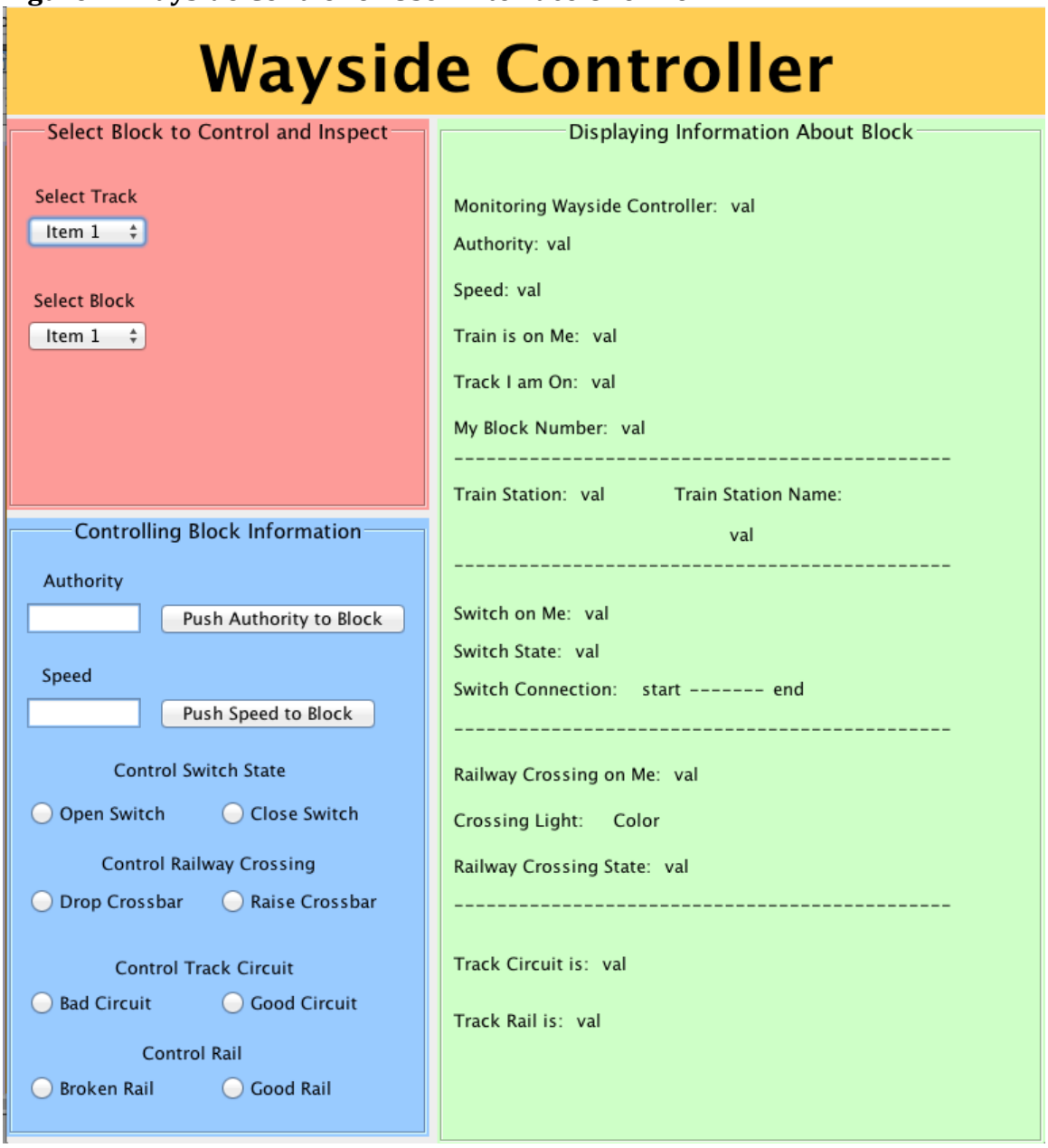
Installation Guide:

Please Make Sure the red_line.txt, the green_line.txt, railCrossingPullDownLogic.txt, railCrossingPullUpLogic.txt, switchFromCloseToOpenLogic.txt, and the switchFromOpenToCloseLogic.txt file are in the same location as the TrainSimulator.jar program. Then simply run TrainSimulator.jar.

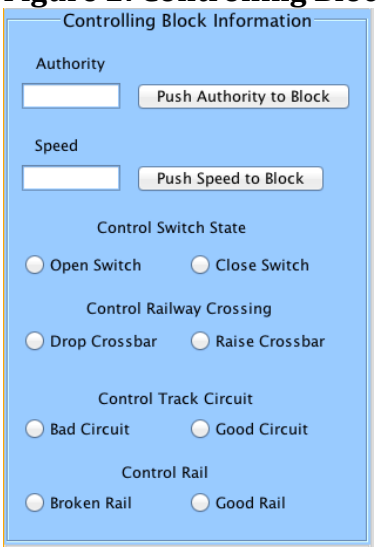
Figure 1: Wayside Controller User Interface Overview



Within the “Select Block to Control and Inspect Panel” (Red), you choose which track you want to inspect and which block you want to inspect on that track. The

“Displaying Information About Block” (Green) Panel and the “Controlling Block Information” (Blue) Panel are both not visible until both a track is selected and a block is selected.

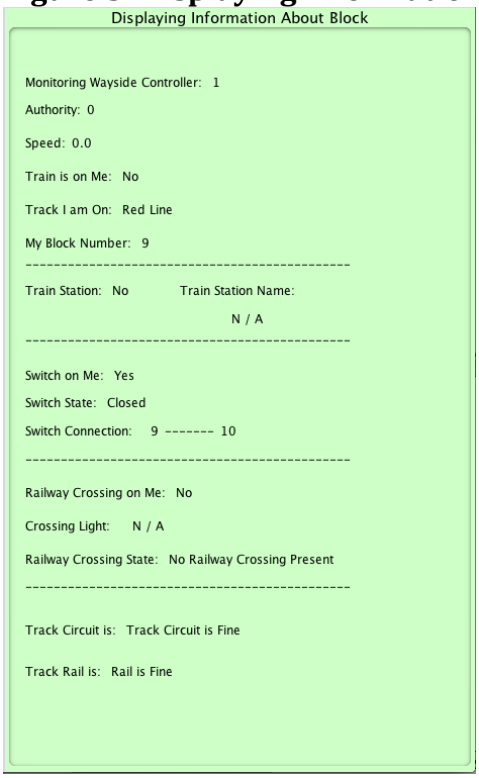
Figure 2: Controlling Block Information



Within this panel we can push an Authority and a Speed to be stored in a given block. We can also control whether the track circuit is good or bad at a given block location. We can also control whether the rail at a given block location is broken or fine. The controls for the "Switch State" are only visible if the selected block contains a switch.

The controls for the "Railway Crossing" are only visible if the selected block contains a railway crossing. With the controls for switch state we can open and close the switch, at a given block location, as long as the system verifies we are able to do so. With the controls for the railway crossing we can raise and lower the crossing bar, at a given block location, as long as the system verifies we are able to do so.

Figure 3: Displaying Information About a Block



Within this panel we can view the identification number of the wayside controller that monitors this block, we can view the authority and speed stored in this block. We can also view if there is a train currently located on this block. You are also shown the name of the track you are currently viewing and the block location. If there is a train station located on this block, its name will be displayed. If there is a switch on this block, its real-time state will be displayed as well as the block numbers that are being bridged. If there is a railway crossing on this block, its real-time state will be displayed as well as the Crossing light. If a track circuit is bad or good, at this block location, that information will be displayed at the bottom as well. If the track rail is broken or fine, at this block location, that information will be displayed at the bottom as well. It is important to note that all information is the panel is displayed and refreshed in real-time.

File Configuration:

Four text files are required to have the system work correctly. The first is railCrossingPullDownLogic.txt, the second is railCrossingPullUpLogic.txt, the third is switchFromCloseToOpenLogic.txt, and the fourth is switchFromOpenToCloseLogic.txt. It is pretty clear from the file names which part of the system the logic applies to. Contained in these files is the logic the system will abide by. An example of the logic is “(!&(1|(!))”. “!” Stands for false or not existing.

“1” Stands for true or existing. “&” Stand for the logical AND operation. “|” Stands for the logical OR operation. Parenthesis must be placed as seen. The true/false and “not existing”/existing relates to the train presence at varies points on the train track .