CTC Installation Manual

12/12/2018

The Conductors

William Taylor
(For assistance, call or text (570) 971-4680.)

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CTC Office Installation Manual
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Change Log

Date	Author(s)	Description
12/12/18	William Taylor	**First Issue**

Table of Contents

12: Test Routing

1) Launch the Program

-Run the file CTC.jar in the CTC directory

-To view any XML, go up one directory, in the XML folder

2) Manually sending a train

-On the left-hand side, choose which destination to go to, choose the speed, and hit dispatch. Note that speed must be between 0-70 mph

-To see the output, see step #4

3) Loading a schedule and automatically sending trains

-Click on the Load Schedule button on the top right

-Choose GreenLine.csv, or RedLine.csv (both can be stored at once if needed)

-Mode is set to automatic, and a train is instantly deployed with that schedule

-Change the mode to manual to stop trains being sent out over time

-To see the train output, see step #4

4) View and approve a dispatched train (Train Model normally does this)

-In the XML folder (../xml), open "TrainOutputs.xml"

-Find your dispatched train, read the values needed

-To show that the train was sent out, change the 0 before </Dispatch> to a 1

-View in the CTC module, the status of the train

-To remove the train, change that 1 to a 2. It is removed from display and XML

-If you close and reopen the XML file, the train will no longer be there

5) Change the mode to automatic/manual

-A schedule must be loaded and selected to be in automatic mode

-Click the dropdown menu, and choose on for automatic, off for manual

6) Request to close a block for maintenance

-Under Close/Open Track, select which line, and type the block number to close

-Choose to open or close the section, then click the request change button

-In "../xml/CTCOutput.xml", check the new request of the following format

-R1TCR : stands for Red, block 1, Track Close Request

-G10TOR : stands for Green, block 10, Track Open Request

-The Track Controller then handles this, and should output states

-Reading in closed sections was removed, as TC output ended up not working

7) Request a manual switch change

-Under Flip Switch, choose the location of the switch you would like to flip

-View the request for the switch change in "../xml/CTCOutput.xml "

-Keep in mind, requests are removed after 15 seconds

-The following format is followed: Line+Switch Number+Request type

-ex. R1SNR : Red, switch #1, Switch Normal Request

-ex. G2SRR : Green, switch, #2, Switch Reverse Request

-Note that all requests have a 1 value

-To act as the Track Controller changing the switch:

-Open "../xml/TrackControllerOutputs.xml"

-Navigate to your switch number, with SNP on the end (i.e G2SNP)

-0 means the switch is reversed, 1 means the switch is normal

-Switch the value, and view the output on the CTC module

8) Request a manual crossing change

-Follow the same format as requesting a switch change, with:

-The following "../xml/CTCOutput.xml" format to output requests

-ex. G19UR : Green, crossing in block 19, up request

-ex. R47DR : Red, crossing in block 47, down request

-This is the "xml/TrackControllerOutputs.xml" format to edit the display

-R47C and G19C are the crossings, with values the CTC receives

-For the values, 0 is for a down crossing, 1 for an up crossing

-Keep in mind, requests are removed after 15 seconds

9) Change the whole project's time multiplier

-Click on the Time Multiplier drop down menu, select the desired value

-Open "../xml/multiplier.txt", and view the multiplier value here

10) View Train Occupancy on the Track

-Open the file "../xml/TrackModelOutputs.xml"

-A 1 associated with each block number means that the block is empty

-Change one of those 1's to a 0 to treat it as a train on that block, then check the G Line or R Line on the display to see that the section of track is occupied

11) View and test throughput

-Look at the top left for throughput, it starts at 0 unless changed

-To change throughput value sent by the Track Model

-Open "../xml/TrackModelOutputs.xml"

-The last variable named throughput, is the value the CTC is getting, change the 0 if needed

-The value received is the total number of passengers that have boarded the trains over time from the Track Model

12) Test Routing

-Change the occupancy of one of the following sections of track, to automatically send out switch requests for routing (change occupancy in step #10)

-Sections that flip switches with some block numbers associated with them

-Red: B(4), I(46), G(21), K(55), M(61)

-Green: L(69), M(74), P(89), Q(98), S(102), Y(147), E(17), B(4), H(33), I(36)

-Dispatching new trains automatically requests some switches as well

-(change occupancy in step #10)

-(view switch requests in step #7)