

THROTTLECARD **USER'S** **GUIDE**

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THROTTLECARD:

PRECISION MODEL TRAIN CONTROL

USER'S GUIDE

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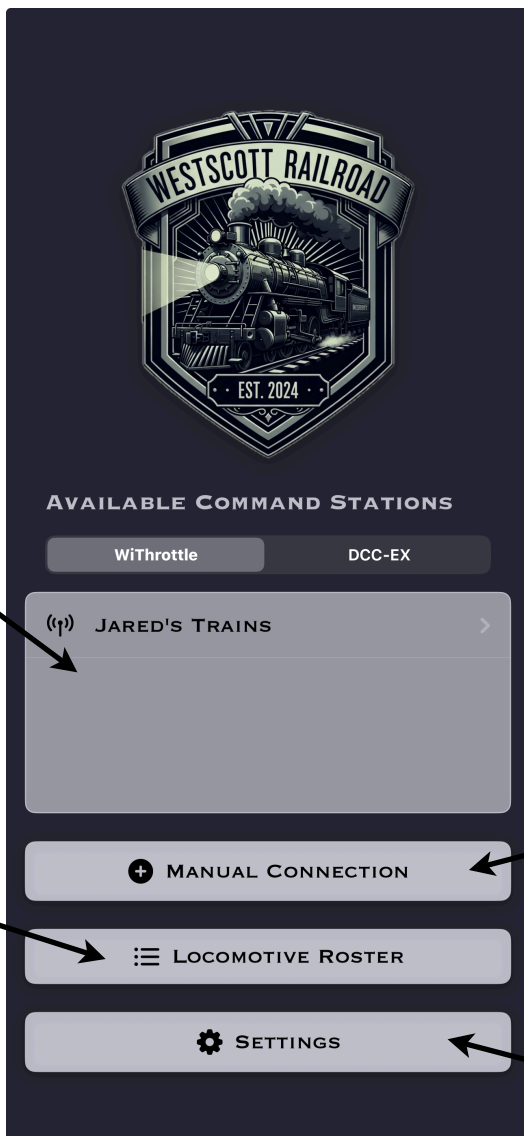
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CONNECTION DISCOVERY VIEW



1. Available
Command
Stations

3. Access the
Locomotive
Roster

2. Select here to
enter connection
details manually.

4. Access
Settings

GETTING STARTED

CONNECTING TO A COMMAND STATION

ThrottleCard automatically scans the network for **Available Command Stations** and displays them upon opening the app(1). Select a command station to connect. If connecting to a DCC-EX Command Station, we recommend connecting using the DCC-EX Protocol for a complete experience. For all other command stations and JMRI, select WiThrottle.

- **2. Manual Connection** Select this button to enter the command station connection details manually. You will need your command stations IP Address and Port.
- **3. Locomotive Roster** Select this button to enter the Locomotive Roster. Here, you can add/edit locomotives in your Roster, including pictures* and locomotive details. To drive or program the trains, you must be connected to a command station.
- **4. Settings Select** this button to enter the app Settings. More information on the settings view can be found on [Page 30](#).

CONNECTED VIEW



CONNECTED VIEW

NAVIGATING THE MAIN MENU

ThrottleCard's Main Menu is designed to be intuitive and easy to navigate. Every section of the app - Train Controls, Turnout, Routes, Roster, Command Station*, and Settings - can be accessed from this menu. Tapping on the logo/ nameplate at the top of the view flips it around to reveal the connected server details.

- **1. Power** Toggle track power.
- **2. Access Train Controls** Select this button to enter the the Train Control View. Here, you can select and control trains and create consists on the fly. More information on the Train Control View can be found on [Page 12](#).
- **3. Turnout** Select this button to enter the Turnout Control View. From here, you can toggle, add, edit, and remove turnouts. More information on the Turnout Control View can be found on [Page 18](#).
- **4. Routes** Select this button to enter the Routes Control View. From here, you can toggle, add, edit*, and remove* Routes. More information on the Routes Control View can be found on [Page 24](#).

CONNECTED VIEW

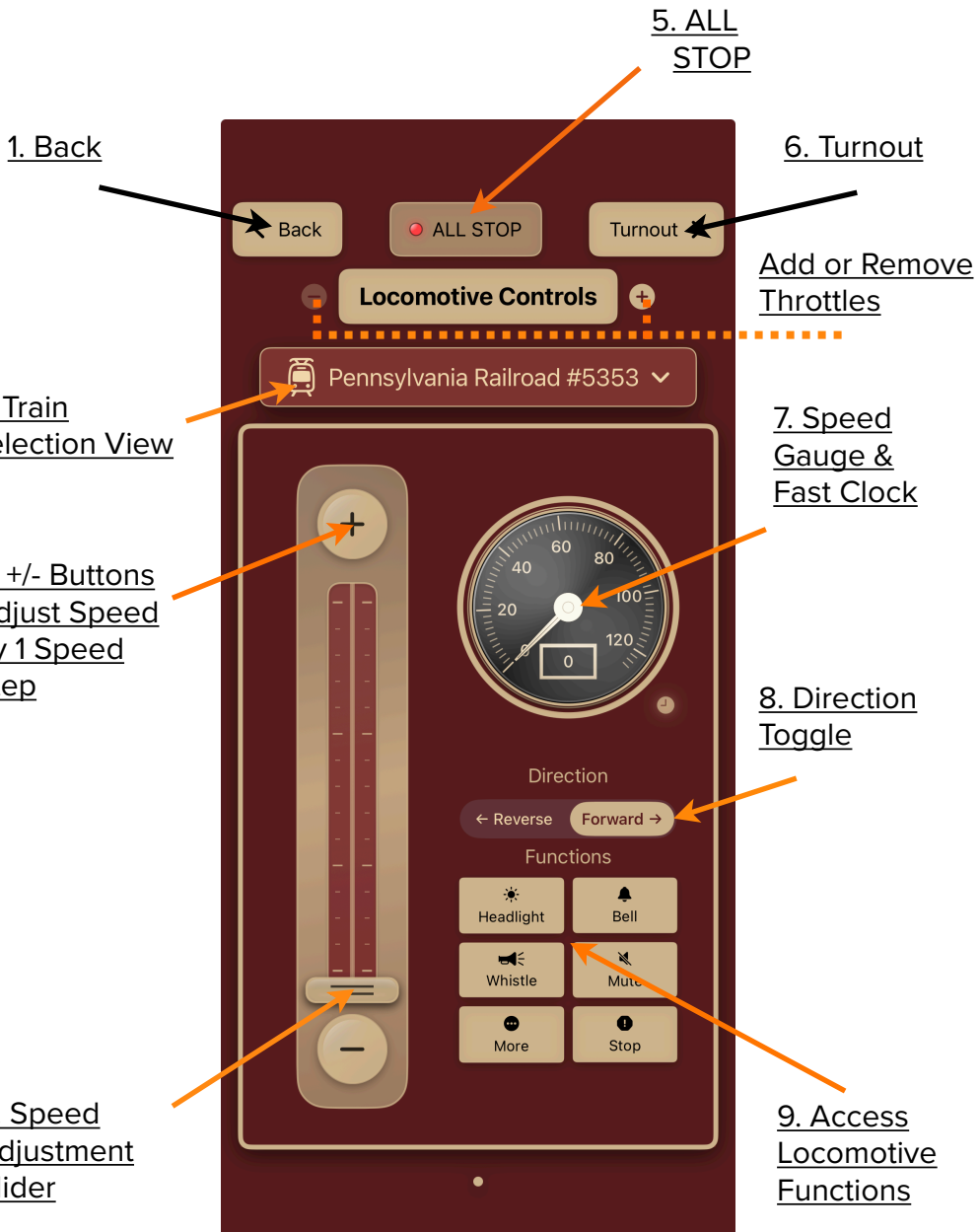
NAVIGATING THE MAIN MENU

(Continued)



- **5. Roster** Select this button to enter the Locomotive Roster. Here, you can add/edit locomotives in your Roster, including pictures* and locomotive details. Locomotive Programming can be accessed from this view as well. More information on the Roster View can be found on [Page 18](#).
- **6. Command Station** Select this button to enter the the Command Station View. Here, you can adjust the settings of and reboot your DCC-EX Command Station. More information on the Command Station View can be found on [Page 26](#).
- **7. Settings** Select this button to enter the app Settings. More information on the settings view can be found on [Page 30](#).
- **8. Disconnect** Select this button to disconnect from the current server and return to the Connection Discovery View. More information on the Connection Discovery View can be found on [Page 6](#).

TRAIN CONTROL VIEW



TRAIN CONTROL VIEW

CONTROLLING TRAINS

Train Control View is the central place to control your trains. From here, you can select individual engines or create consists from locomotives in your roster, add new locomotives, and control up to five trains (individual locomotives or consists) simultaneously. You can **Add or Remove Throttles** simply by pressing the +/- buttons to the left and right of the Locomotive Controls Nameplate.

- **1. Back** Return to Main Menu
- **2. Train Selection View** Tap here to select or add a locomotive or to create a consist. More information on the Train Selection View can be found on [Page 15.](#)
- **3. +/- Buttons** Tapping these buttons adjust the speed by +/- one speed step.
- **4. Speed Adjustment Slider** Press and drag the handle on the speed adjustment slider to increase or decrease the speed of the selected train.
- **5. ALL STOP** Press this button to bring all active trains to an immediate stop and cut track power.

TRAIN CONTROL

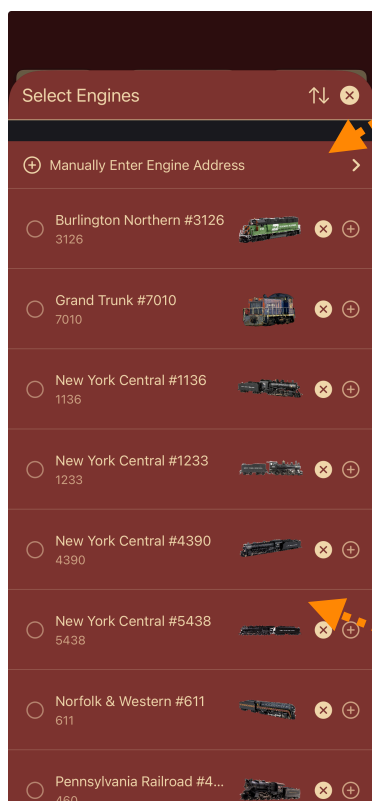
VIEW (CONTINUED)

CONTROLLING TRAINS

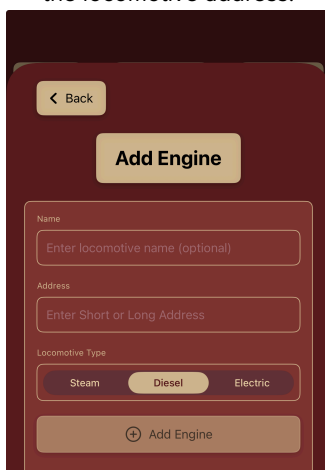
- **6. Turnout** Press this button to access the Turnout Control View. More information on the Turnout Control View can be found on [Page 18](#).
- **7. Speed Gauge & Fast Clock**
This displays the selected trains current speed step. It can be toggled between an analog or digital gauge in [Settings](#). Pressing the clock icon to the bottom right of the gauge flips the gauge to reveal the Fast Clock. Pressing it again returns to the current speed.
- **8. Direction Toggle** Change the direction of the selected train.
- **9. Access Locomotive Functions** The first four functions in the grid are the Headlight, Bell, Whistle/Horn, and Mute. Pressing the ... button reveals Comprehensive Train Control View which allows you to control all 28 locomotive functions in addition to speed and direction.

TRAIN CONTROL VIEW (CONTINUED) ADDING A LOCOMOTIVE

ThrottleCard makes it simple to add a train to your ThrottleCard Roster right from the train control view. You can then easily select it from your Roster to begin driving.



Tap here to add a locomotive to the roster. You will need the locomotive address.



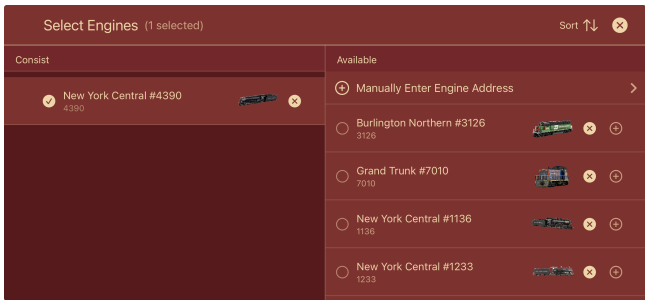
Select a Locomotive from the list to begin controlling it. Check as many as desired to create a consist. You will be asked to set the relative direction of each additional locomotive. When you're finished selecting engines, simply swipe down or press the "X" in the upper right corner to begin driving.

TRAIN CONTROL

VIEW (CONTINUED)

LANDSCAPE TRAIN CONTROL VIEW

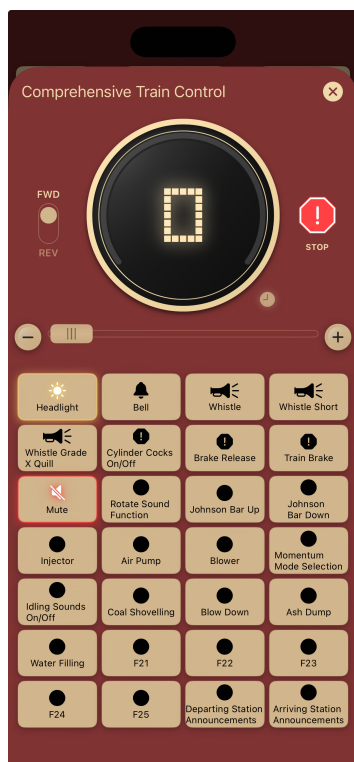
Landscape Train Control View is optimized for use with handheld game controllers on iPhone. You have all of the same controls available to you in the standard Train Control View, with the addition of quick access to the Turnouts and Routes on the left side of the display.



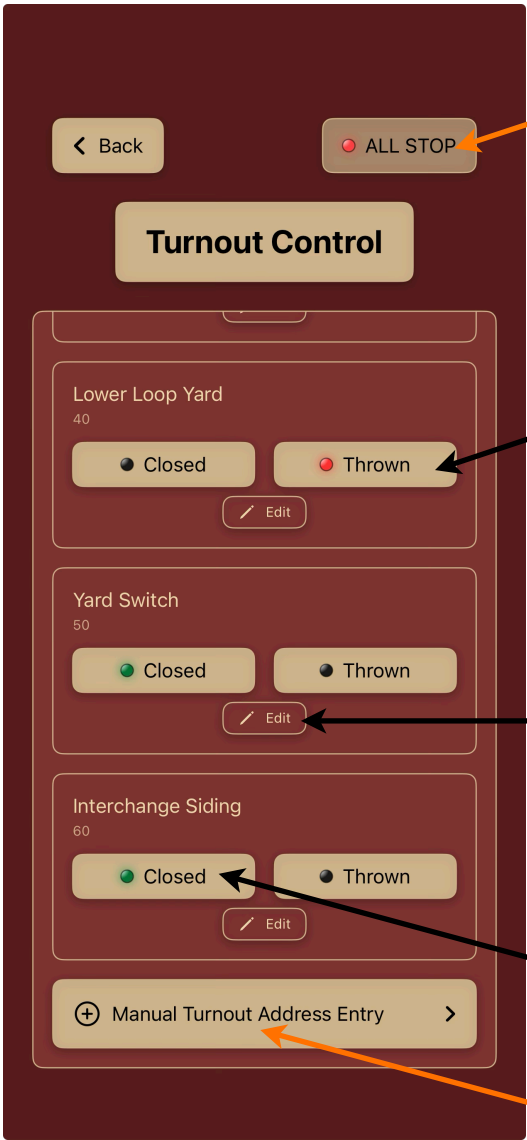
TRAIN CONTROL VIEW (CONTINUED)

COMPREHENSIVE TRAIN CONTROL VIEW

Comprehensive Train Control View allows you to control the speed, direction, and all 28 locomotive functions in a single, unified User Interface. The function labels and icons can be edited in the “Edit Locomotive” view accessible from the Roster. Learn more on [page 23](#).



TURNOUT CONTROL VIEW



Stop All Trains and
Cut Layout Power

Thrown Turnout

Edit Turnout

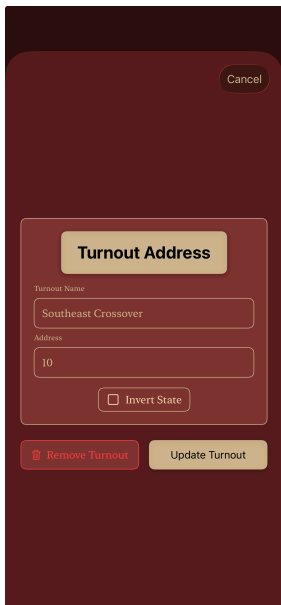
Closed Turnout

Add New Turnout

TURNOUT CONTROL VIEW

ADDING, EDITING, AND CONTROLLING TURNOUTS

Turnouts can be managed from the Turnout Control View. From here, you can Throw/Close, add, edit, and remove turnouts on your layout. Each Turnout's state is indicated with a light - green for closed, red for thrown. To control a turnout, press "Closed" or "Thrown" on the desired turnout.

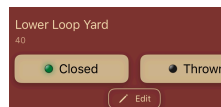


A screenshot of a mobile application interface for adding a new turnout. The background is a dark reddish-brown. At the top right is a "Cancel" button. The main form is titled "Turnout Address" in a light yellow box. Below the title, there are two input fields: "Turnout Name" with the text "Southeast Crossover" and "Address" with the text "10". Below these fields is a checkbox labeled "Invert State". At the bottom of the form are two buttons: "Remove Turnout" (with a trash icon) and "Update Turnout".

To Add a New Turnout, Select:

+ Manual Turnout Address Entry

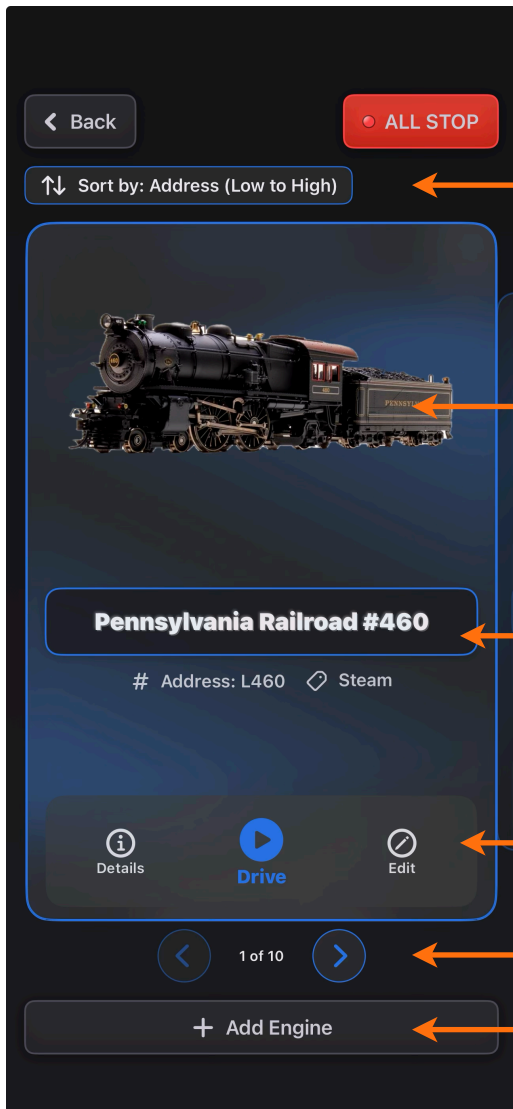
To Edit an Existing Turnout, Select Edit
on the Desired Turnout:



A screenshot of a mobile application interface for controlling a turnout. The background is a dark reddish-brown. At the top, it says "Lower Loop Yard" and "40". Below this are two buttons: "Closed" (with a green dot) and "Thrown" (with a red dot). At the bottom is an "Edit" button with a pencil icon.

From this view, you can name, set the address of, invert the state of, or remove a turnout.

ROSTER VIEW



Change Sorting Method

Locomotive Image

Locomotive Name, Address, and Type

Locomotive Action Bar

Select Locomotive

Add New Locomotive

ROSTER VIEW

OVERVIEW

Roster View is the place to manage your entire fleet of locomotives. Here you can view your locomotives, edit them, add photos, and access DCC Programming*. You can add and delete locomotives from your ThrottleCard Roster in this view, too.

- **1. Change Sorting Method** Adjust the sorting method of the locomotives in the roster by name or address.
- **2. Locomotive Image** Can be added or changed under the “Edit” view.
- **3. Locomotive Name, Address, and Type** This area shows the name, address, and type of the selected locomotive. This can be changed under the “Edit” view.
- **4. Locomotive Action Bar** This area allows you to view the locomotive details (where you can access DCC Programming), drive the selected locomotive, or edit/delete the locomotive.
- **5. Select Locomotive** Switch between selected locomotive.
- **6. Add New Locomotive** Add a new locomotive to the Roster.

ROSTER VIEW (CONTINUED)

ADDING/EDITING A LOCOMOTIVE

← Back

Add Engine



Add Photo

LOCOMOTIVE ADDRESS

Enter Short or Long Address

NAME

Enter locomotive name (optional)

LOCOMOTIVE TYPE

Steam Diesel Electric

FUNCTION LABELS

Edit Functions

✓ Save Locomotive

Select “Add Photo” to add a locomotive image. You can then select AI background removal if desired. For best results, a solid, bright background is recommended.

Locomotive Address

Locomotive Name(Optional)

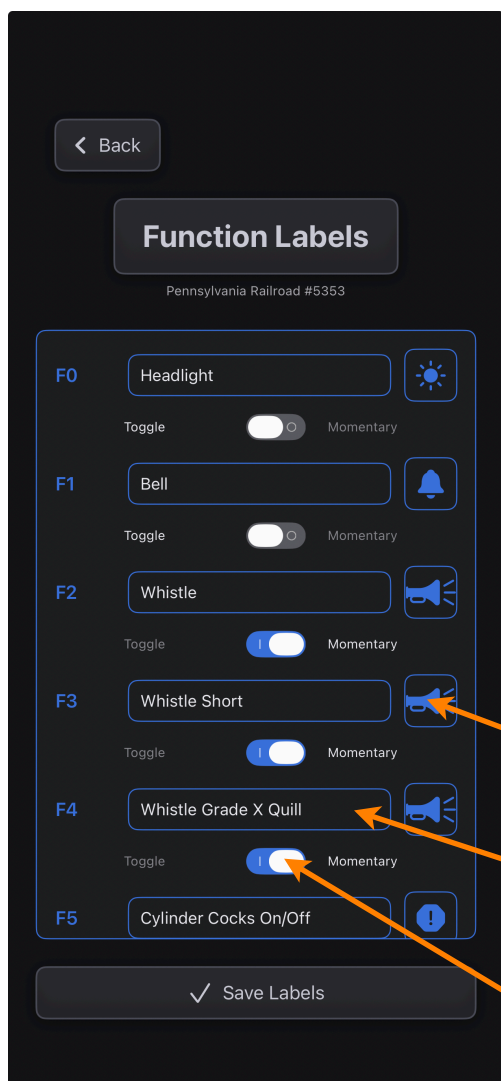
Set Locomotive Type

Edit Function Labels/Icons

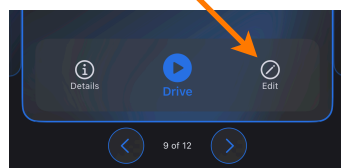
Save Changes

ROSTER VIEW (CONTINUED)

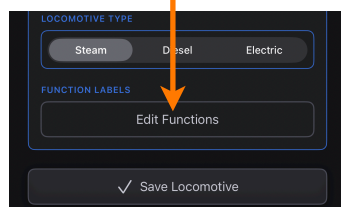
EDITING FUNCTION LABELS & ICONS



To edit the function labels and icons of a locomotive, select “Edit” on the desired locomotive:



And then “Edit Functions” at the bottom:



Tap to select icon

Enter Function Label

Set Function as Momentary or Toggle-able

ROSTER VIEW (CONTINUED)

DCC PROGRAMMING

DCC Programming can be accessed via the Roster View. Simply swipe to the desired locomotive, select the “Details” button in the Locomotive Action Bar, and then select “Basic DCC Programming.” It is only available when connected to a DCC-EX Command Station via the DCC-EX Protocol.

The screenshot shows the 'DCC Programming' screen. At the top is a '< Back' button. Below it is the 'DCC Programming' title. The main content area is divided into sections: 'Programming Mode' with 'Programming Track' and 'Program on Main' buttons; a warning box 'Programming Track Required' with instructions; 'Operation' with 'Read CV', 'Write CV', and 'Write Address' buttons; 'CV Number' with a text field containing '1-1024'; 'CV Value' with a text field containing 'No value read yet'; and an 'Execute Read CV' button at the bottom. Four orange arrows point from text descriptions on the right to these specific UI elements: the first arrow points to the 'Programming Track' button, the second to the 'Read CV' button, the third to the 'CV Value' text field, and the fourth to the 'Execute Read CV' button.

Programming Track/Programming on Main Selection Toggle

The Programming Track allows you to both read and write CVs and update locomotive addresses. Programming on Main only lets you write CVs - not read. It also does not support updating locomotive addresses. (See more on next page)

Operation Toggle

Select between Read (Read a CV Value), Write CV (Write a CV Value), and Write Address (Update a Locomotive

CV Number

Enter the desired CV Number.

CV Value

If in Operation “Read CV,” the current CV Value will be displayed. If in Operation “Write CV,” this field can be updated to the desired value and then written by pressing

Execute Read/Write Operation

ROSTER VIEW (CONTINUED)

DCC PROGRAMMING

Updating a locomotive address is simple and can be done in a few easy steps. Ensure the Programming Mode is set to Programming Track and the Operation is set to Write Address. Enter the Desired Address in the “New Address” field and press Execute Write Address.

Enter Desired Address

Execute Write Address

The screenshot shows the 'DCC Programming' screen. At the top, there's a 'Programming Mode' section with two buttons: 'Programming Track' (selected) and 'Program on Main'. Below this is a warning box titled 'Programming Track Required' with the text: 'Place locomotive on isolated programming track. Remove other locomotives to avoid accidental reprogramming.' Underneath is the 'Operation' section with three buttons: 'Read CV', 'Write CV', and 'Write Address' (selected). Below the operations is a 'New Locomotive Address' section with a text input field labeled 'New address'. At the bottom is a large 'Execute Write Address' button. Two orange arrows point from the text instructions to the 'Programming Track' button and the 'Execute Write Address' button.

The screenshot shows the 'DCC Programming' screen. At the top, there's a 'Programming Mode' section with two buttons: 'Programming Track' and 'Program on Main' (selected). Below this is the 'Operation' section with a button labeled 'Write CV'. Underneath is the 'CV Number' section with a text input field showing '1-1024'. Below that is the 'CV Value' section with a text input field showing '0-255'. At the bottom is a 'Locomotive Address' section with a text input field labeled 'Current loco address'. At the very bottom is a large 'Execute Write CV' button. Three orange arrows point from the text instructions to the 'CV Number' field, the 'CV Value' field, and the 'Execute Write CV' button.

Enter Desired CV

Enter Value

Enter Locomotive Address

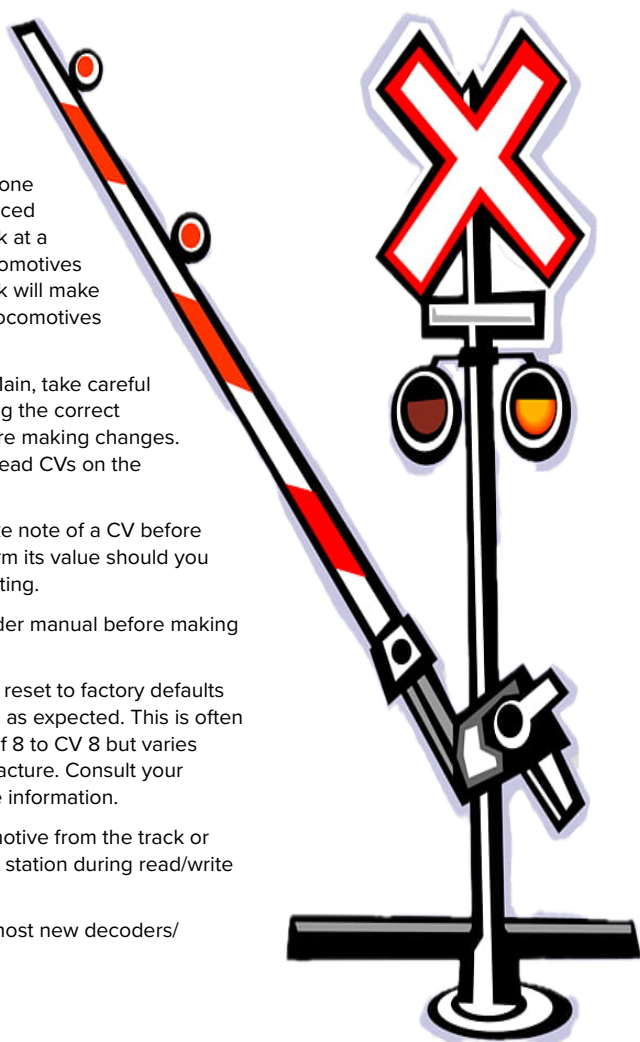
Programming on Main can be done by setting the Programming Mode to Programming on Main and then entering the desired CV, Value, and Locomotive Address and then pressing “Execute Write CV.”

ROSTER VIEW (CONTINUED)

DCC PROGRAMMING

When programming locomotives, a few general guidelines should be kept in mind:

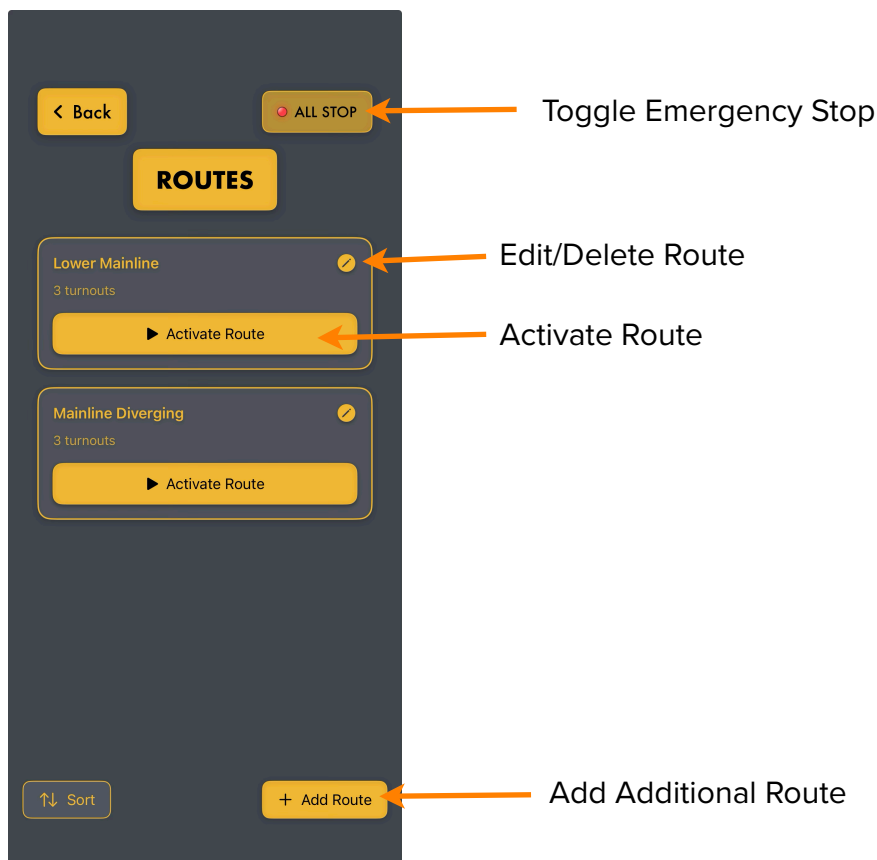
1. When updating a locomotive using the programming track, only one locomotive should be placed on the programming track at a time. Placing multiple locomotives on the programming track will make the same updates to all locomotives on the track.
2. When Programming on Main, take careful note that you are updating the correct locomotive address before making changes. Please note you cannot read CVs on the mainline.
3. It is good practice to make note of a CV before making changes to confirm its value should you need to revert after updating.
4. Always consult the decoder manual before making changes.
5. Most locomotives can be reset to factory defaults should it stop functioning as expected. This is often done by writing a value of 8 to CV 8 but varies depending on the manufacture. Consult your decoder manual for more information.
6. Do not remove the locomotive from the track or power off your command station during read/write operations.
7. The default address for most new decoders/ locomotives is 3.



ROUTES

OVERVIEW

Routes can be created, edited, and executed from the Route List View. Routes pre-defined on the server are displayed here and can be executed, but they cannot be edited. Only Routes created directly within ThrottleCard can be edited or deleted.



ROUTES_(CONTINUED)

ADDING/EDITING ROUTES

Adding or editing Routes is simple and can be done in a few easy steps. If adding a new Route, select: “+ Add Route” in the bottom of the Route List View. To edit an existing Route, select the pencil icon on the desired route.

Cancel Edit Route Save

Route Details

Lower Mainline

Turnouts

Southeast Crossover ID: 10 Closed

Lower Loop Yard ID: 40 Closed

Northeast Crossover ID: 20 Closed

+ Add More Turnouts

Save Changes

Assign Route Name

Add Turnouts to the Route

Cancel Select Turnouts Done

Southeast Crossover ID: 10 Closed Thrown

Northeast Crossover ID: 20 Closed Thrown

Upper Loop Turnout

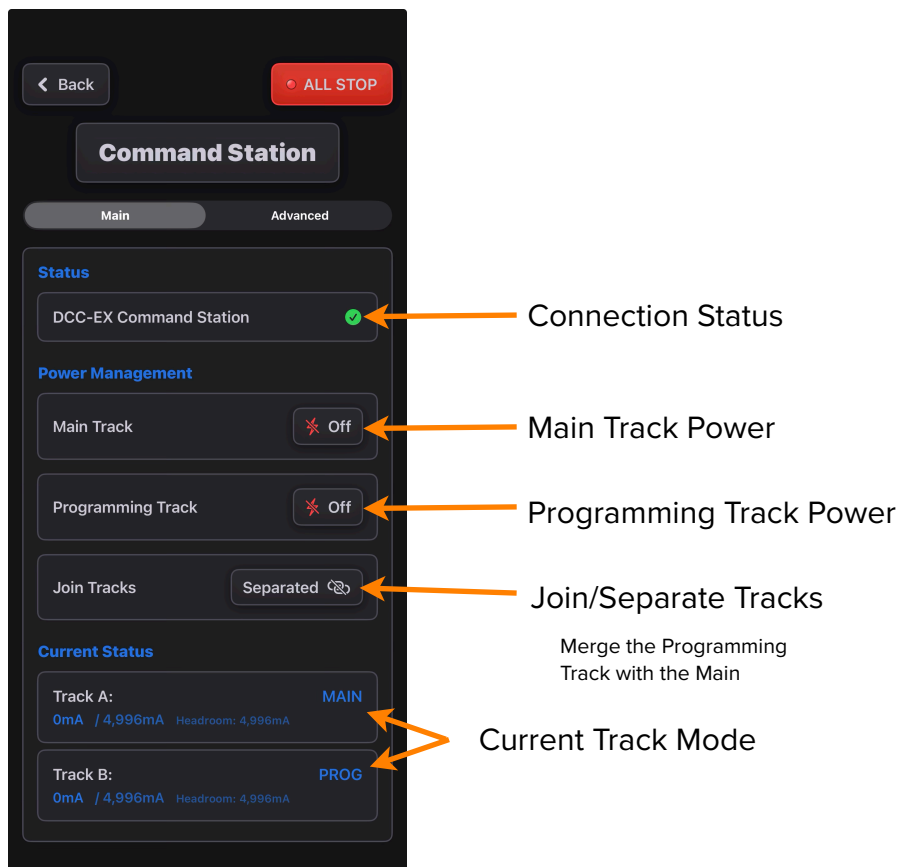
Lower Loop Yard ID: 40

Switching the Toggle to the Right Will Include the Turnout in the Route. Select the desired turnouts, the states, and then press done.

COMMAND STATION

MAIN

The Command Station View is available exclusively when directly connected to a DCC-EX Command Station via the DCC-EX Protocol. From here, you can view and adjust a variety of parameters.



COMMAND STATION_(CONTINUED)

MAIN

◀ Back

● ALL STOP

Command Station

Main

Advanced

Track Manager

Track:

A

B

Mode:

MAIN

✓

 Apply Track Configuration

System Information

Version:

V-5.4.14

Hardware:

MEGA / EX8874

Build:

G-devel-202504182148Z

Max Cabs:

50

↻

 Refresh All

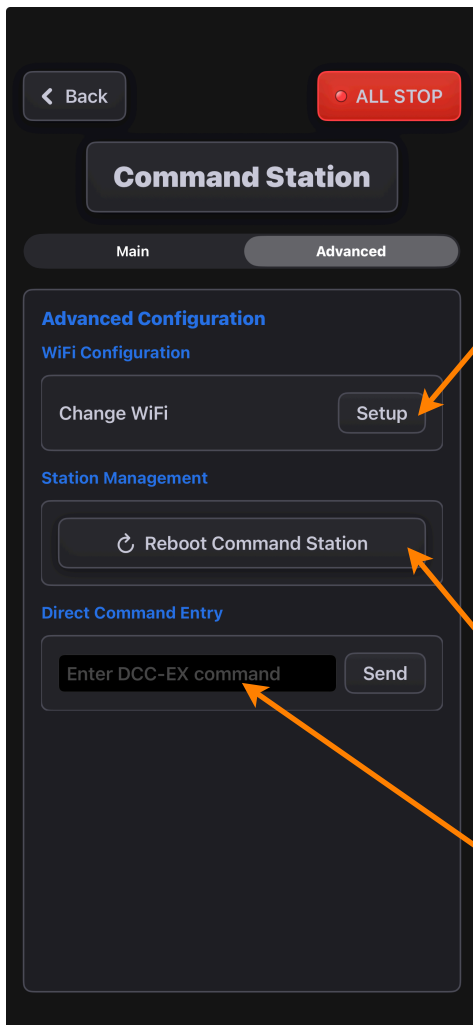
Select and Apply Track Mode

This allows you to apply various track modes (MAIN, DC, PROG, etc.) to the tracks available.

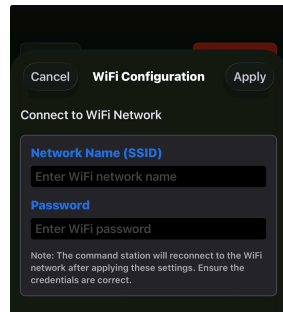
Various System Information

COMMAND STATION_(CONTINUED)

ADVANCED



Update Command Station WiFi Configuration



Enter your Network Name (SSID) and Password. Press Apply. Your Command Station will reboot and join the selected network.

Reboot the DCC-EX Command Station

Send Direct DCC-EX Commands

SETTINGS

Settings can be accessed from the main menu. From here, you can configure a variety of options to customize the app to your tastes.

- **1. Select Theme** Tap here to choose from a variety of different themes.
- **2. Railroad Name** This will be the name shown on the nameplate in the “Connected View.”
- **3. Use Custom Logo** Select here to choose an image from your photo library to act as a custom logo for your railroad. Select AI Background Removal to automatically remove the background from the image.
- **4. Clock Style** Choose between digital and analog. This is clock displayed in Landscape Train Control View.
- **5. Mirror Mode** Switch controls between left and right handed mode.
- **6. Landscape Mode** Enable Landscape Train Control View on iPhone.
- **7. Digital Speed Display** Toggle Between Digital/Analog Speed Display.

SETTINGS_(CONTINUED)

- **8. Flywheel Speed Control** Toggle Between traditional speed control slider and a flywheel.
- **9. Game Controller Button Map** View the Game Controller Button Map for Xbox, PlayStation, Nintendo, and MFi Game Controllers.
- **10. Use Default Server** Enter a default host address and port number for ThrottleCard to connect to upon first boot.

SETTINGS(Continued)

Game controllers can be paired with your iPhone/Mac/iPad via Bluetooth or USB (depending on the type) and used with ThrottleCard. To pair a bluetooth controller, go to the Settings App on your iPhone/Mac/iPad and Select Bluetooth. Put your controller in pairing mode and then select it from the list of “Discovered” devices. For more information and specific pairing instructions, consult your controller manual or visit [Apple's Website here](#). Once paired, the controller will work in ThrottleCard automatically.



ThrottleCard's Landscape Mode on iPhone is specially designed to work with handheld gaming controllers and works with a variety of brands.



Button Map:

Left D-Pad:

Left/Right - - - Previous/Next Throttle
Up/Down - - - Previous/Next Turnout

Left Joystick:

Depress to Toggle Fast Clock/Current Speed

Right Joystick:

Left/Right - - - Direction Selection
Up/Down - - - Speed Increase/Decrease
Depress - Emergency Stop

Y - - - Toggle Mute

B - - - Toggle Bell

A - - - Whistle/Horn

X - - - Toggle Headlight

L1 - - - Close Selected Turnout

R1 - - - Throw Selected Turnout

L2 - - - Decrease 5 Speed Steps

R2 - - - Increase 5 Speed Steps

L2 + R2 - - - Idle Selected Train

