

Driving, placing & creating Trains

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Train Controls

This page contains all default train controls. They can be changed in the mod configuration, which you can access from within Minecraft's title screen by pressing on `Mods` and selecting Zora no Densha in the list on the left side. Once selected, press `Config` and enter `Cab Controls`.

Default Keys:

Driving:

Key	Effect
W	Move reverser forward
S	Move reverser backward
A	Increase throttle
D	Decrease throttle
" / Ä	Increase break force
{ / Ü	Decrease break force
F	Enable/disable AFB (Cruise Control)
R	Increase AFB speed limit
V	Decrease AFB speed limit

Train Configuration:

Key	Effect
H	External light switch (4 Modes: Off/Shunt/Rear/Front)
J	High Beams toggle (needs light mode: Front)
K	Toggle cab lights
L	Toggle train lights
9	Turn MTCS screen on/off (centre screen)
0	Turn MTIS screen on/off (right screen)
I	Unlock/Close left Doors

Key	Effect
O	Unlock/Close right Doors
P	Decouple cab coupler (Only with Scharfenberg coupler)
7	Raise/lower back pantographs
8	Raise/lower front pantographs

Safety:

Key	Effect
Q	Dead Man's Switch key
Enter	Emergency brake
Space	Horn
9	Turn MTCS screen on/ off
0	Turn MTIS screen on/ off

Destination Displays

Some vehicles have destination boards installed. These are small screens which display the destination your train is heading to. You can set the destination which should be displayed using `/setdest <Line1>, <Line2>`.

Usually, `<Line1>` is your train number or line number with destination name, and `<Line2>` is either a list of via's (i.e. stations the train visits) or other information.

Porting Trains (from v0.9.X to v0.10.X)

The new ZnD-Version (v0.10.X) sadly has the side effect that most locomotives/EMUs/DMUs made in v0.9.X are not capable of driving on their own, when placed on a track. To better understand this guide, you can read [this article](#) about the model editor.

To make them drive again, you'll have to edit the model from the old version and make a few modifications:

1. **Add Compressor Part:**

v0.10 introduces a new (air) breaking system because of which ever locomotive has to have a compressor. Just add it and move it to an offset position inside the trains body.

2. **Connect bogies with the engine:**

Click on every bogie and change the value of the setting "Has Engine?" from false to true.

3. **Correct Tractive Effort:**

While in the bogies, change the value of the setting "Tractive Effort" to the desired (higher) value.

Tractive effort must NOT be 0!

4. **(Optional) Turn off Hitboxes:**

If the train still won't drive you may have to turn off some hitboxes of parts near the track/ground. To turn off a Hitbox click on the part and look for the setting "hitbox?". Then change its value from true to false.

If you followed this guide completely, your train should drive normally again.

The Model Editor/Creating Custom Models

Zora no Densha adds the ability to assemble and configure a rail vehicle from a set of installed parts. Assembly of rail vehicles happens in the Engineer's Table.

Opening the Model Editor

Place an Engineer's Table and right-click it to open its GUI. In the GUI, select the Trains tab by clicking onto the center icon on the top right (the icon that shows the blue locomotive and the white passenger car). The GUI will change appearance.

GUI Elements

Position	Element	Short Description
Top-left corner	Model Editor Window	View the vehicle you're editing, interact with it inside the window using your mouse/ touchpad.
Center-right	Vehicle parts and saved Presets	Add and (de-)select vehicle parts or load and export Preset files. Scroll through all pages by clicking the + and - buttons above.
Center-left, below Model Editor Window	Input slots	Input slots for Black Dye and Paper. These slots have to be filled in order for a Blueprint to be printed.
Bottom-left (if selection isn't empty)	Selection and Pivot data	View and change the average data of the selection's elements, such as average offset and rotation. Set the Pivot's position.
Bottom-right (if selection isn't empty)	Selection index data	View and change an individual part's data, such as offset, scale, rotation or color. Some parts might have additional fields that can be changed. Scroll through the selection's indices by clicking the + and - right next to the index number.

Keyboard Shortcuts

Please note that following keyboard shortcuts assume that you use default settings; the respective key might differ depending on your settings.

Key/Shortcut	Function	Short Description
CTRL+C	COPY selection	Copy the selection into the clipboard.
CTRL+V	PASTE selection	Paste the clipboard.
CTRL+Z	UNDO action	Undo your previous action.
G	MOVE selection	Grab and move the selection using your mouse. While grabbing, press X, Y or Z to move along a specific axis.
R	ROTATE selection	Rotate the selection along the view axis using your mouse. While rotating, press X, Y or Z to rotate about a specific axis. Change the Transformation Mode to rotate about local origin, selection center, or pivot point.
S	SCALE selection	Scale the selection in all dimensions using your mouse. While scaling, press X, Y or Z to scale along a specific axis.
X	DELETE selection	Remove the selection from the Model Editor.
5	Toggle orthographic/ perspective view	Press to switch between orthographic and perspective view mode.
8	Set camera angle - View along +X	View the model's rear.
2	Set camera angle - View along -X	View the model's front.
3	Set camera angle - View along +Y	View the model's bottom.
9	Set camera angle - View along -Y	View the model's top.
6	Set camera angle - View along +Z	View the model's left side.
4	Set camera angle - View along -Z	View the model's right side.

Model Editor Options (Drag down menu)

Right-click in Model Editor Window to open.

Option	Short Description
Clear model	Remove all vehicle parts. Leaves the entire Model Editor window blank.
Save as Preset	Save the model as Preset file.
Toggle floor grid	Click to (de-)activate the floor grid displayed in the Model Editor window.
Transformation mode	Click to switch transformation mode (applies to rotation). Switches between individual origins, selection center, and pivot point.
Orthographic/ Perspective view	Click to toggle orthographic/ perspective view. Will change the camera's projection mode.
Toggle pivot	Toggles the pivot's size.
View in world	Click to toggle rendering in a small scene. Disables pivot and floor grid.
Set initial mass	Click to set a value to either increase your trains mass (positive value) or reduce its mass (negative value)

Vehicle Part Options (Drag down menu)

Right-click on any vehicle part icon on the center-right of the Model Editor to open.

Option	Short Description
Add to model	Adds the selected part to the model's center with default settings.
Deselect all	Removes all vehicle parts of the selected type from the selection.
Select all	Clears the selection, then adds all vehicle parts of the selected type to the selection.

Preset Options (Drag down menu)

Right-click on any Preset icon on the center-right of the Model Editor to open.

Option	Short Description
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Load Preset	Load the selected Preset. If there is another model in the Model Editor, it will ask to save. Clicking "No" will directly load the model without saving, clicking "Yes" will open the Preset save prompt. Press ESCAPE on your keyboard to cancel.
Print	Prints the selected Preset as Blueprint. Requires the input slots to be filled.
Export as file (If not exported)	Creates a Preset file in your Add-Ons directory. Use that file to share your Preset.
Remove Preset (If not exported)	Deletes the Preset forever. This cannot be undone!
Remove from Add-Ons (If exported)	Deletes the Preset from your Add-Ons directory forever. This cannot be undone!
Move to begin (If not exported)	Moves the Preset to the first index of Presets. The first index will be rendered on top of the Engineer's Table.

Assembling and editing vehicles

In the Model Editor, either load a Preset and edit it or start off with a clear model. Add Vehicle Parts and customise them to your taste. Once you are finished, save your glorious work as a Preset.

Printing vehicles

Right-click a Preset in the Engineer's Table GUI to print it. Remember to fill both input slots with Black Dye and Paper.

Blueprints have infinite uses. Right-click with a Blueprint in the center of a Maintenance Track section that is at least as long as the vehicle you're going to create. If the vehicle doesn't spawn, the track might be too short, or there might be blocks or other things obstructing the vehicle.

If the vehicle was successfully spawned, a transparent "ghost" model will be shown. (Please note: This will spawn the vehicle instantly, if instant-spawning in creative mode is enabled.) To finish the vehicle, apply Vehicle Part items to all ghost parts, until all parts appear. If you decide not to finish a vehicle, simply whack it and it'll drop all applied parts. Once you are sure that you've applied all parts, hit the vehicle to drop it as item. If you haven't forgotten to apply any parts, the vehicle will properly drop as item, if the respective setting was enabled in your mod's configuration. You can use the finished vehicle immediately.

Exporting and importing Preset files

Share your creations with the Zora no Densha community!

Export a Preset by right-clicking it in the Model Editor and selecting "Export as file". A file will automatically be created inside of your `Zora no Densha/` directory. You can copy this file and share it with whomever you like.

Import a Preset by dropping a Preset file in your Zora no Densha/Add-Ons/ directory. After you restarted your game, the new file will be shown in the Model Editor.