

15. List of Bluetooth audio receivers confirmed for operation

Brand	Name
ELECOM	Bluetooth Audio Receiver LBT-AVWAR500
ELECOM	Bluetooth Audio Receiver LBT-AVWAR700
Kashimura	Bluetooth Music Receiver USB BL-51
Princeton	Bluetooth Music Receiver PTM-BTR1
Princeton	Bluetooth Music Receiver PTM-BTR2
TOSHIBA	TOSHIBA Wireless Receiver TY-BT10
CENTURY	Bluetooth Audio Receiver CBTTR-AV
dodocool	2-in-1 Wireless Transmitter and Receiver DA88
TaoTronics	Wireless Stereo Transmitter TT-BA01
TROND	BT-DUO Wireless Transmitter TT-BA01
MPOW	Bluetooth 4.0 Music Receiver Audio Adapter
Ugreen	Wireless Bluetooth 4.1 Receiver Audio Adapter
inateck	Bluetooth transmitter and receiver all in one BR1003
JETech	JETech T2030
AUKEY	Portable Wireless Audio Receiver BR-C1
Collen	Bluetooth Transmitter and Receiver 2-in-1 Adapter

*This information current as of July,2017.

Some products may have been discontinued depending on the purchase time, or that may not be sold in the domestic market.

*Please note that depending on the models of Bluetooth audio receiver, it may not be able to be paired or operate wirelessly.

Thank you for purchasing Rokuhan e-Train controller.
Please read this User's Manual carefully before use to familiarize yourself with safe and effective usage.
This product is for railway models only. In addition to Rokuhan Z gauge, it can also be used for N gauge and HO gauge.
Please be sure to use input voltage of DC 12V ~ 16V, and rated current of 1.5A.
After reading this manual, please keep it in a safe place for future reference.

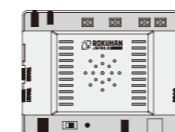
1. WARNING [Be sure to read before use]

- When a problem (abnormal over heating, smoking, odor, etc.) occurs at controller or locomotives, turn the power off and unplug the power cord immediately. Continuing to use with a fault could lead failure.
- Do not use this product for any application other than railway models.
- Do not disassemble or alter this product including cables and AC adapter as it may cause failures.
- Keep all foreign objects away from connection sockets and avoid damaging the power cord as it may cause a failure or generate heat.
- Do not put any metal objects on the tracks as it can be extremely dangerous due to short circuit and result in breakdown and heat generation.
- Do not connect any wires except as specified one to each socket.
- This product includes a magnet as a part of the electronic parts. Persons with pacemakers should use caution when operating this device.

2. CAUTION [Be sure to read before use]

- Do not use or store the product in an area exposed to moisture, dust, high heat, or water.
- Avoid using in poorly ventilated areas such as on a carpet or a bed.
- Due to the characteristics of the product, it is unsuitable for users younger than 15 years. Users younger than 15 may use this product only while supervised by an adult.
- Although it can be used for other company's Z, N, HO gauge, some models are difficult to convert to DCC and are not compatible.
- Be sure to use input voltage of DC12V ~ 16V, and rated current of 1.5A.
- Be sure to use "AC adapter dedicated to e-Train controller (12V)".

3. CONTENTS



e-Train controller



Input cable for tablet device (Φ3.5 mm)



Feeder cable (Dedicated to Rokuhan tracks)



AC adapter dedicated to e-Train controller (12V)

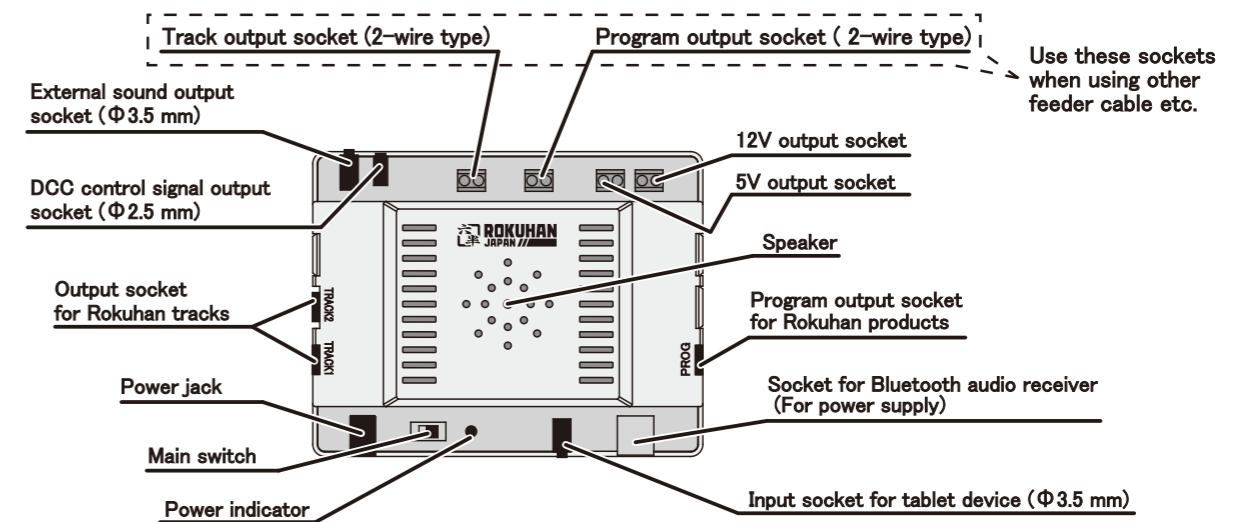


User's instruction manual (Japanese)



User's instruction manual (English)

4. Overview



※DCC control signal output socket (Φ2.5 mm), 12V output socket, 5V output socket will be used when corresponding products are released in the future.

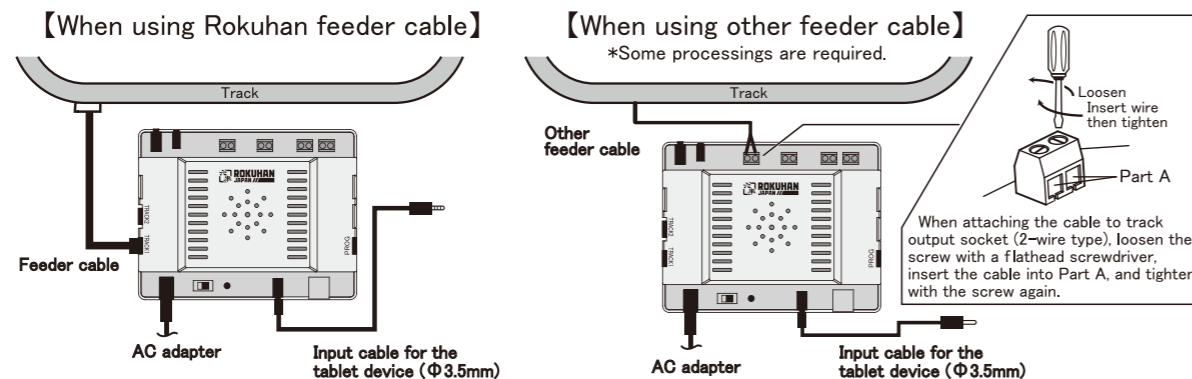
5. Setting Up e-Train controller

The tablet device (iOS device (iPhone, iPad), Android device (smartphone, tablet)) is required to operate with e-Train controller.

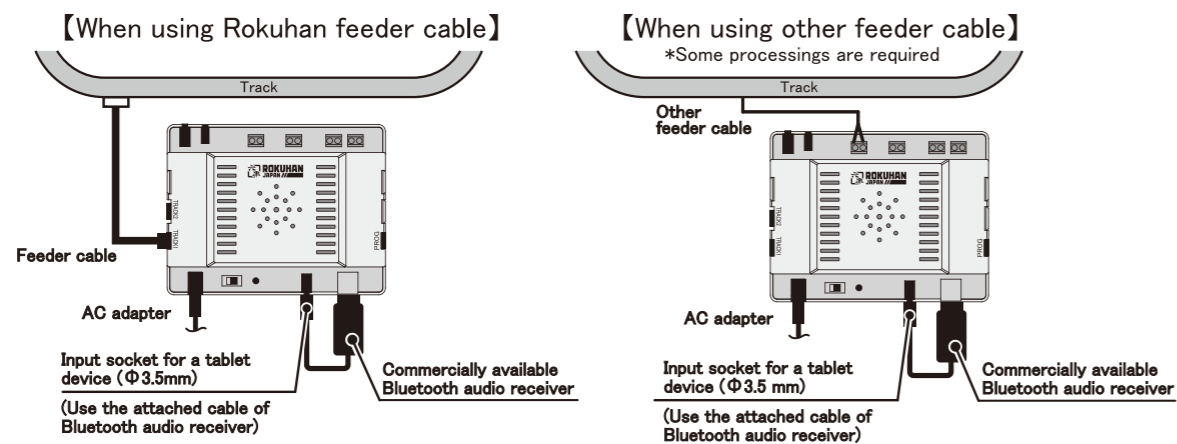
In this manual, the devices installed the dedicated e-Train controller App (See 6. Install the e-Train controller App) shall be generally described as "tablet device".

You can operate the e-Train controller by connecting the included cable to a tablet device or by using a commercially available Bluetooth audio receiver wirelessly. (See below ②)

① Setting up e-Train controller with course layout (wired type)



② Setting up e-Train controller with course layout (via Bluetooth audio receiver)



【Bluetooth audio receivers confirmed for operation】

As for Bluetooth audio receivers confirmed for operation, please see 15. List of Bluetooth audio receives confirmed for operation.

※Depending on the models of Bluetooth audio receiver, it may not be able to be paired or operate wirelessly.

When using a Bluetooth audio receiver, make sure that you have the model which can supply power from USB jack, also connectable with the input cable for the tablet device (Φ3.5mm). Or it is also possible to use a Bluetooth audio receiver that connects only to the input cable for tablet device (Φ3.5mm) and use separate power supply.

In either case, please be sure to use in accordance with the instruction manual of your Bluetooth audio receiver.

6. Install the e-Train controller App

① Install the App

Please search for "e-Train controller" and download the free App from the App store for iOS devices and Google Play store for Android devices.

●In this manual, "e-Train controller App" shall be described as "App".



Accessories Problem

Cannot turn the controller of the Rokuhan turntable ON.	①Ensure that an AC adapter is not connected to the controller of Rokuhan turntable. (The turntable controller will not operate with AC adapter connection while e-Train controller is connected to the turntable controller.)
A turnout won't move.	①Check the stationary decoder is connected to the turnout. ②Check whether the address has been programmed in the stationary decoder. ③Ensure that power is supplied to the turnout you want to move. ④Check the turnout alone to see whether the turnout itself has been damaged. ⑤Use it referring to the instruction manual of the stationary decoder.

Sound Problem

The speed of the locomotive doesn't match with the sound.	①Adjust "Sound sync adjustment bar" on the sound screen. ②Adjust the "running locomotive sound" and "speed control" on the DC setup screen. (For DC control only) ③The sounds from Music Library cannot be synchronized.
Cannot add sound/music into Music Library in the App.	①Ensure you have a music file in your tablet device, and add the sound/music according to the instructions in this manual.
No sound coming from external speaker.	①Check that the speaker is inserted correctly to "External sound output socket". ②Check external speaker is working properly.

14. Failure and Repair

- We will not be responsible for any accident, damage, and failure caused by incorrect utilization or operation, disassembling, or modifying of this product. We cannot accept any repair of disassembled and modified products.
- The specification, appearance, and application may be changed for improvement without prior notice.
- We do not sell parts for this product.
- Although extreme care has been taken in manufacturing this product, if you notice any errors or other problems, please contact us at the following.



TOYTEC CORPORATION
Rokuhan Division

7-27 Numawada, Tochigi-city, 328-0042, Japan
Customer Service Center: Tel. +81 (0) 282-20-2365
Operation hours: Monday to Friday 10:00 - 12:00 13:00 - 17:00

■For more details and the latest information, please visit our Rokuhan website.■

Rokuhan website: <http://www.rokuhan.com/>

※Information in this manual is current in July, 2017.

13. Trouble shooting

When you think “Is it a fault?”, please see below, and check the current situation and solution before asking for repair service.

Common Problems

Cannot turn the power ON.	①Check that AC adapter is correctly plugged in. ②Ensure that there are no short circuit.
Locomotive won't run.	①Check that the feeder cable is correctly connected to the track output socket. ②Check that the input cable for tablet device is correctly plugged in. ③Ensure that the sound volume of the tablet device is at maximum. ④Check that all the track wiring is correctly connected. ⑤Are you using the included input cable for tablet device? ⑥Close the App, turn the E-Train controller power OFF and turn it back ON, and open the App again.

DC Problem

Locomotive won't run.	①Ensure the locomotive is a DC locomotive (not equipped with a digital decoder). ②Ensure the current screen is the “DC control screen”.
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DCC Problem

Locomotive won't run.	①Ensure the address of the decoder in the operating locomotive matches that of programmed locomotive in the App. ②Ensure the current screen is the “DCC control screen”. ③Check the decoder in the locomotive is working properly.
The Head light of the locomotive will not light up.	①Check the wiring from the decoder and the locomotive head light. ②Check the decoder in locomotive is working properly.
Cannot read CV's from locomotive's decoder.	①Check that the feeder cable is connected to “Program output socket” and to the program track. ②Check whether there is a defective contact between the locomotive and the track. Do a frequent cleaning of the track and the locomotive contact parts, as it may cause a failure such that the control signal cannot be received correctly. ③Check the decoder in locomotive is working properly. ④Ensure you are not operating wirelessly using a Bluetooth audio receiver. (Reading/writing operation is only possible when E-controller program jack is connected to program track.) ⑤Please note that depending on the decoder make and model, program may not be able to read the decoder CVs.
Cannot write CV's to locomotive's decoder.	①Check that the feeder cable is connected to “Program output socket.” ②Check whether there is a defective contact between the locomotive and the track. Do a frequent cleaning of the track and the locomotive contact parts, as it may cause a failure such that the control signal cannot be received correctly. ③Check the decoder in locomotive is working properly. ④Ensure you are not operating wirelessly using a Bluetooth audio receiver. (Reading/writing operation is only possible when E-controller program jack is connected to program track.)
Photos aren't displayed in the locomotive window.	①Install the photo after adjusting the size of the photo data stored in your tablet device with adjustment function.

② Precautions for using App

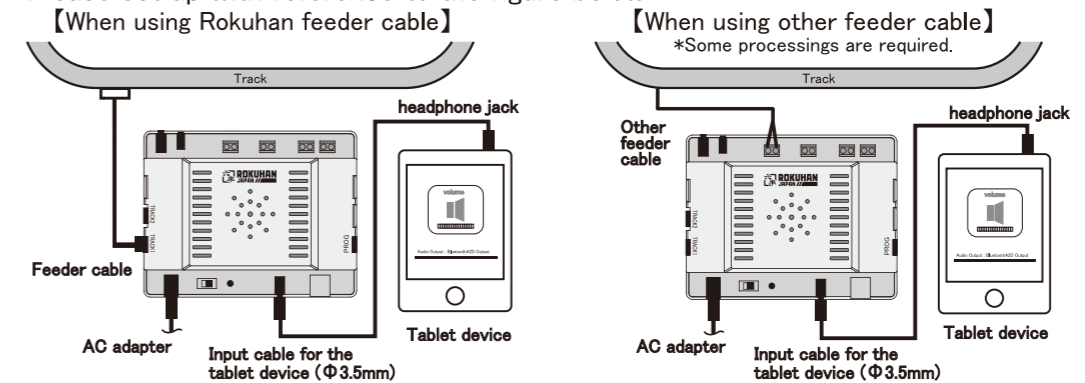
- The device information may be updated. Please refer to <http://www.rokuhan.com> for compatible devices for Rokuhan e-Train controller.
- App is FREE to download. Please download it beforehand and confirm if it works. Some models are not compatible with downloading the App.
- Please note that communication fee to download the App shall be borne by the customer.
- Be sure to take a backup data before use as we will not be responsible for the data lost or damaged while using the product.
- For instructions and precautions on how to operate each tablet device, please use in accordance with the instruction manual of your tablet device.
- In case of default setting, after a certain period of time the App goes into sleep mode. Unlock the screen of the tablet device for use.

OS corresponding to the App ■iOS version 8.0 and later ■Android OS version 5.0 and later
Bluetooth audio receivers confirmed for operation ■iOS 8.4.1 iPhone5c ■iOS 9.3.2 iPhone6.0
■iOS 10.2.1 iPad mini 4 ■Android 5.1.1 Nexus 10 ■Android 6.0 Galaxy Tab S8.4 ■Android 7.0 XPERIA SO-03G ■Android 7.1 Nexus9 Please note: Depending on the models, the App may not be compatible.
※The information above current as of July, 2017.

7. Setting up the Tablet Device

① Setting up the E-Train controller with a tablet device (wired type)

Please set up with reference to the figure below.

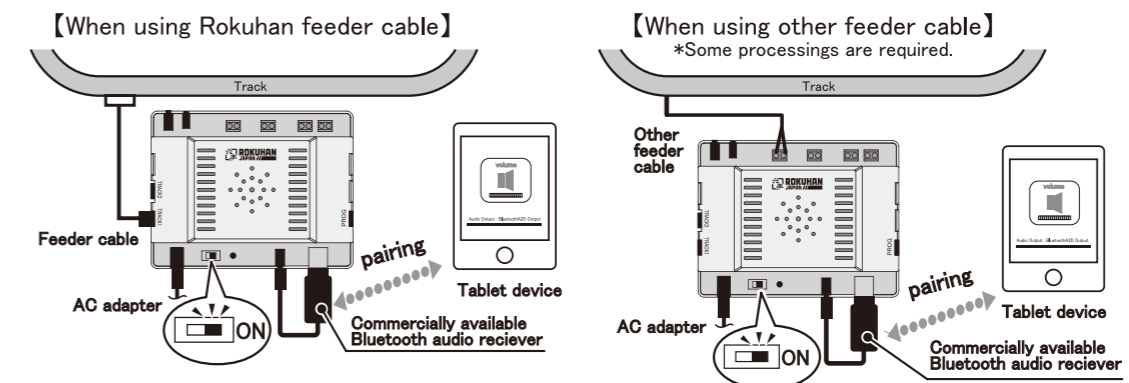


●Please be sure to maximize the volume on the tablet device after setting.

② Setting up the E-Train controller with a tablet device (via Bluetooth audio receiver)

Place your Bluetooth audio receiver in discovery mode, and turn on the Bluetooth setting on your tablet device. The available device names which can be paired will be displayed on the Bluetooth connection screen, tap your Bluetooth audio receiver accessory and establish the connection.

- This procedure is an example. Please refer to the operating manual for pairing instruction of your Bluetooth audio receiver when actually pairing. Refer to the figure below, turn the E-Train controller power on, and set up tablet device and Bluetooth audio receiver.



●Please be sure to maximize the volume on the tablet device after setting.

【Step 1】 Setting up for DC locomotives (not equipped a digital decoder) operations.

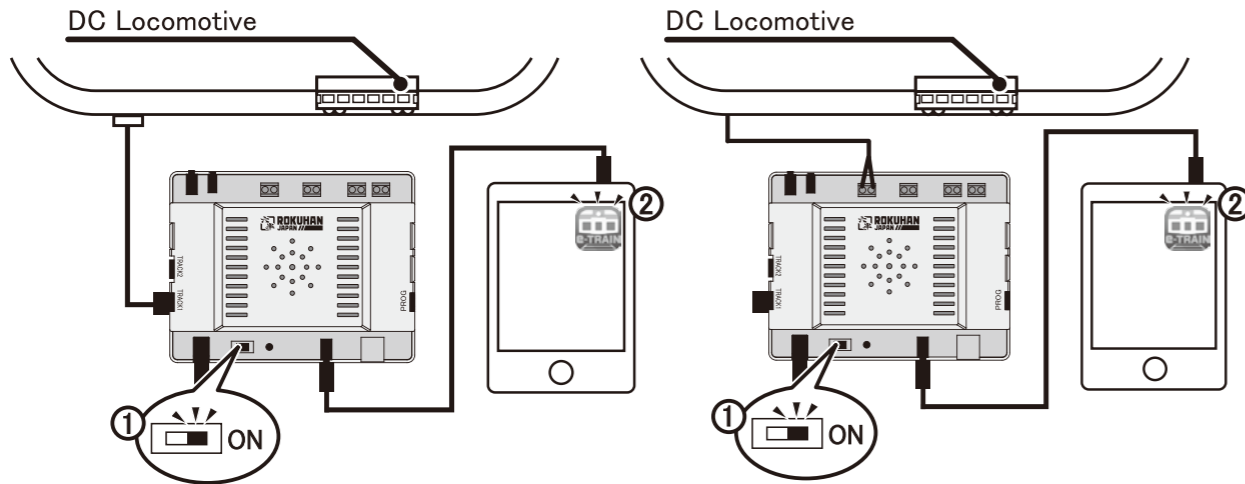
- ① Place a DC locomotive on the track, turn the main switch on.
- ② Open the App. (Be sure to maximize the volume of the tablet device at this time.)

【When using Rokuhan feeder cable】

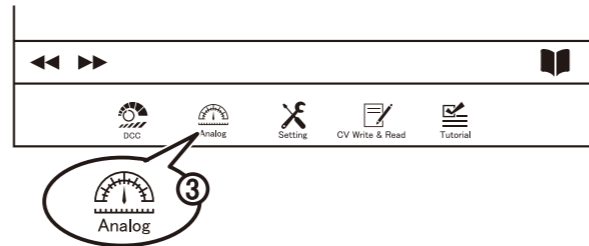
⚠ Be careful not to create a short circuit when you place a locomotive on the track.

【When using other feeder cable】

*Some processings are required.
⚠ Be careful not to create a short circuit when you place a locomotive on the track.



③ Touch “Analog” in the bottom menu of the screen and the set up process has been completed!



【Step 2】 How to control DC locomotives

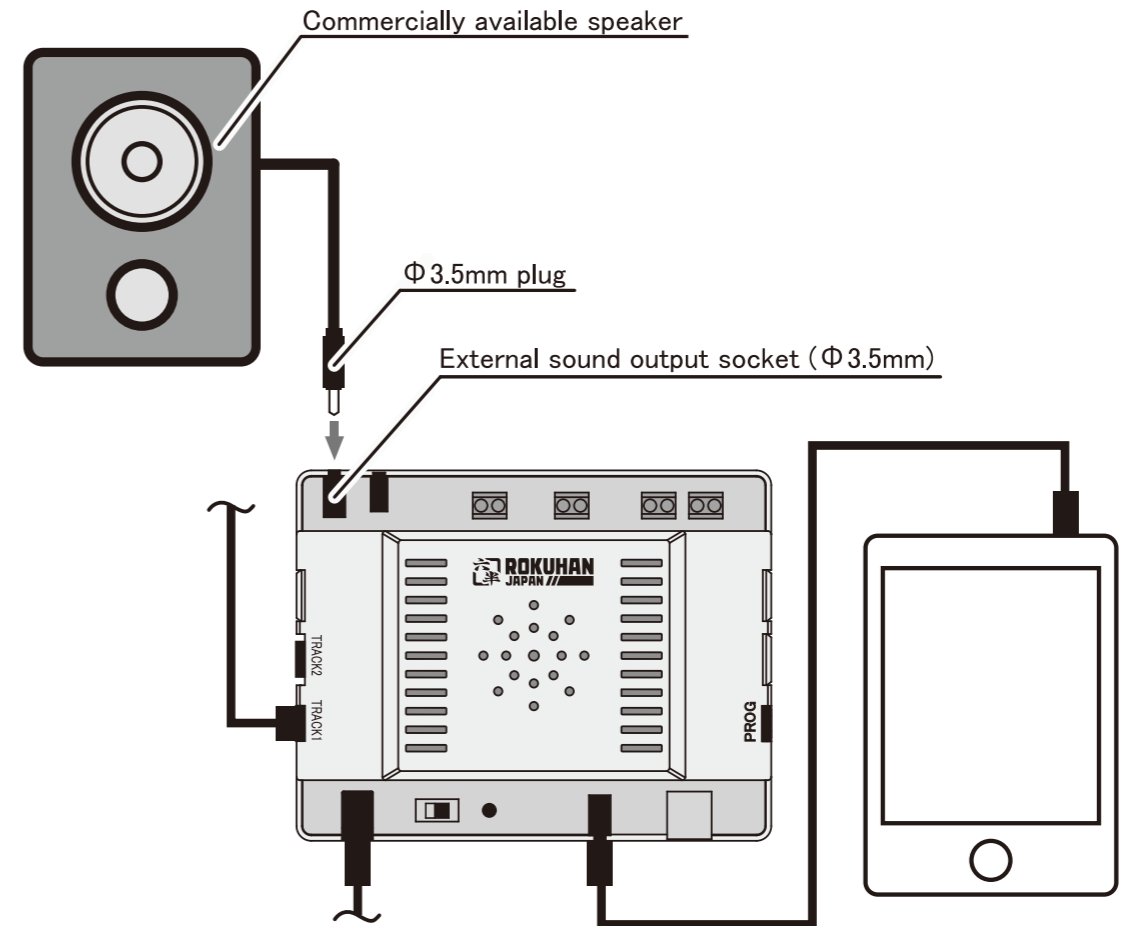
① Control a DC locomotive.

- ① **Forward / Reverse button**
Switch the direction to forward or reverse by touching the button.
- ② **Speed control bar**
Slide up or down to adjust the speed.
- ③ **Emergency stop button**
Touch the button to stop the locomotive.
- ④ **Sound icon**
Touch the icon to proceed to the sound control screen. Each sound effect can be played by touching the sound effect icon. (See 12-1. Sound Control, 12-2. Music Library)

Audio output
Please make sure that “Headphones” is in blue color.

You can enjoy more powerful sounds by connecting a commercially available external speaker to the e-Train controller.

【Step 1】 Setting up the external speaker

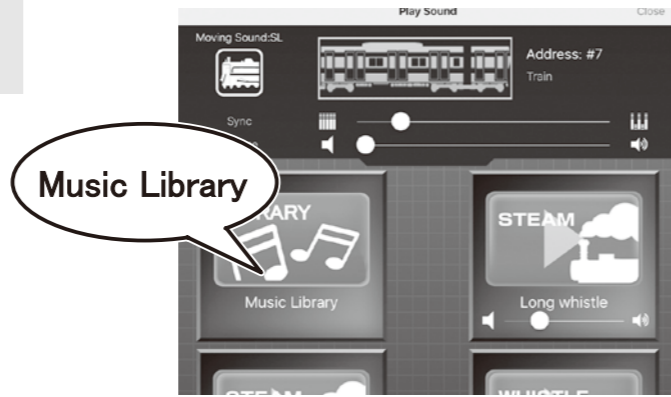


⚠ When connecting to an external speaker, the sound is not emitted by internal speaker of the e-Train controller.

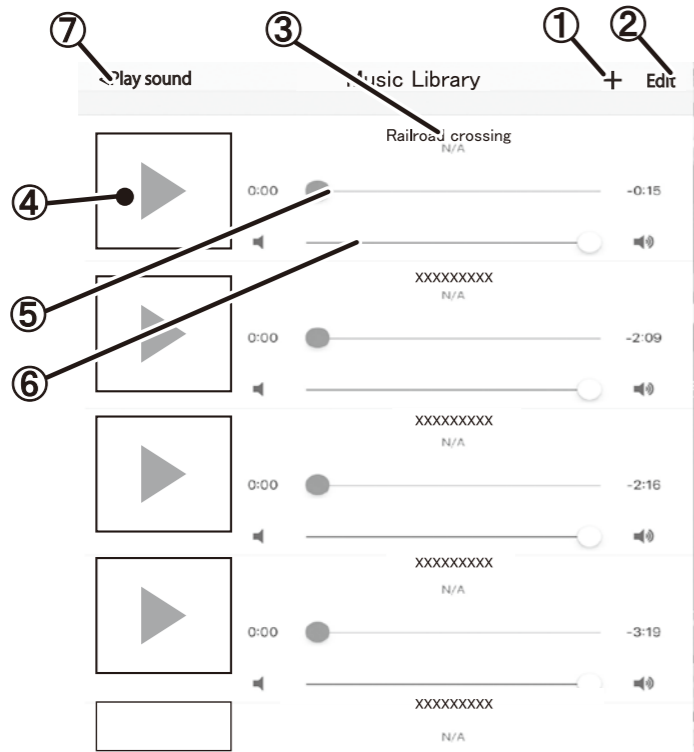
In Music Library, you can play music stored in your tablet device with e-Train controller.

【Step 1】 View of the Music Library screen

① Touch "Music Library" on the sound control screen.



② Music Library will be displayed.



① Add music icon
Touch the icon to add music stored in your tablet device into the Music Library in the App.

② Edit icon
Touch the edit icon. mark will be shown on the left of the Play/Stop button. Touch the mark to delete the music in Music Library.

③ Music title
The music title stored in the App will be shown.

④ Play / Stop button
Touch the button to play/stop the music.

⑤ Seek bar
It shows the current percent of completion position of the sound byte. You can change the position by dragging the slider.

⑥ Sound volume adjustment bar
Adjust the sound volume by dragging the slider.

⑦ Close button
Touch the button to close the Music Library and go back to sound screen.

When you registered multiple sounds or music, you can scroll the screen by swiping up and down.

<Audio file formats corresponding to Music Library>

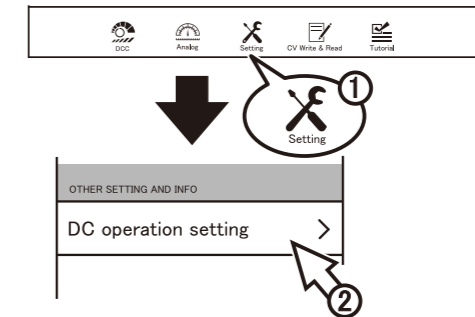
For Android devices, the supported audio formats, WAV, MP3, MIDI, AAC etc, are available. For iOS devices, the only audio formats which can be stored in "Music" folder of iOS are available. (WAV, MP3, AAC, etc)

! Depending on the file format, some music stored in your tablet device may not be added into the Music Library.

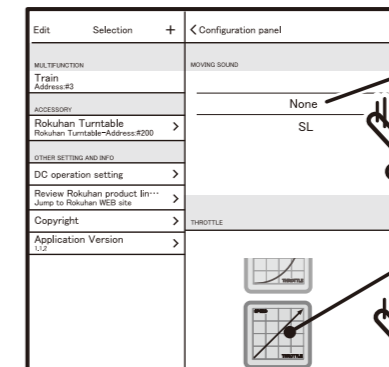
You can control the speed curve and sound of DC Locomotives.

【Step 1】 View of setting screen for DC control

① Touch "Setting" in the bottom menu on the screen and touch "DC operation setting".



② Setting screen for DC control will open.



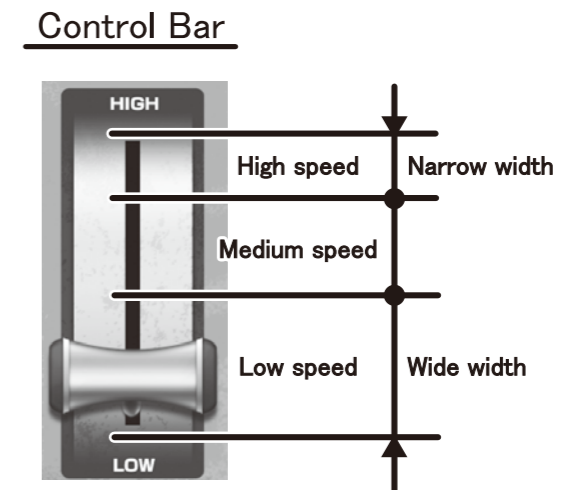
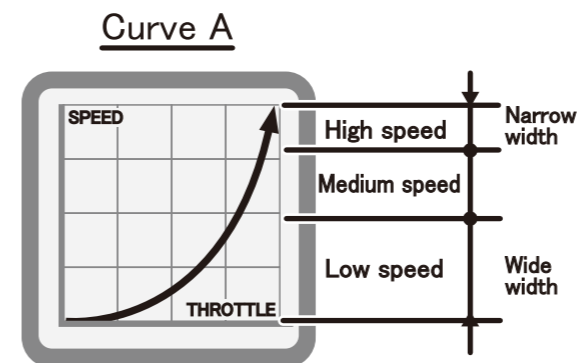
① Set the running locomotive sound
Select the running sound or select None.

② Set the throttle and speed
Select the speed curve for running.

【Step 2】 Throttle setting (Speed curve)

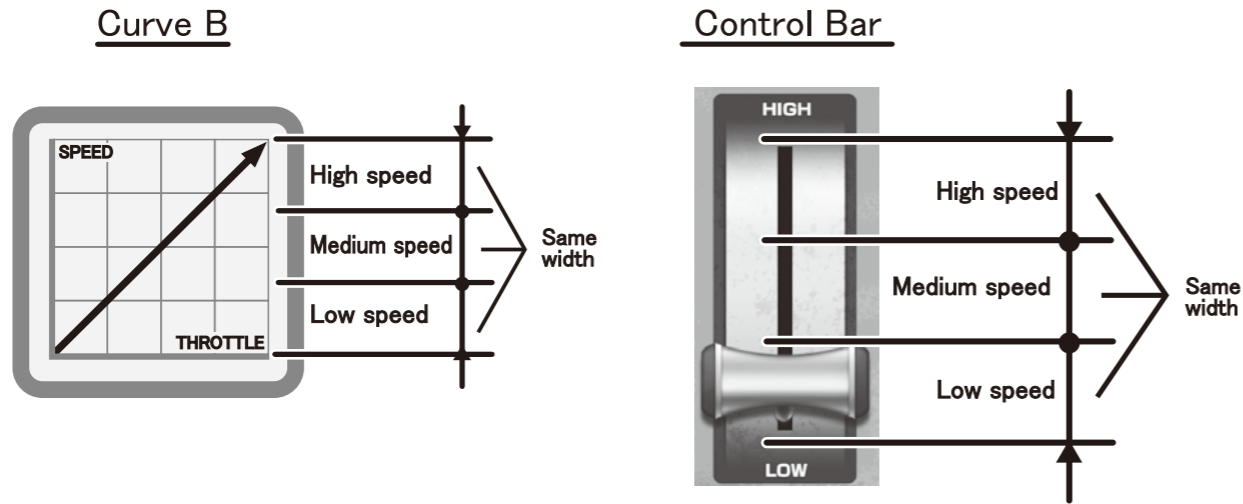
Throttle setting is a function that matches a speed curve to each DC locomotive.

【Curve A】 The control range of low speed is wide, and that of high speed is narrow. (This Curve A setting is recommended for Rokuhan Z gauge locomotives.)

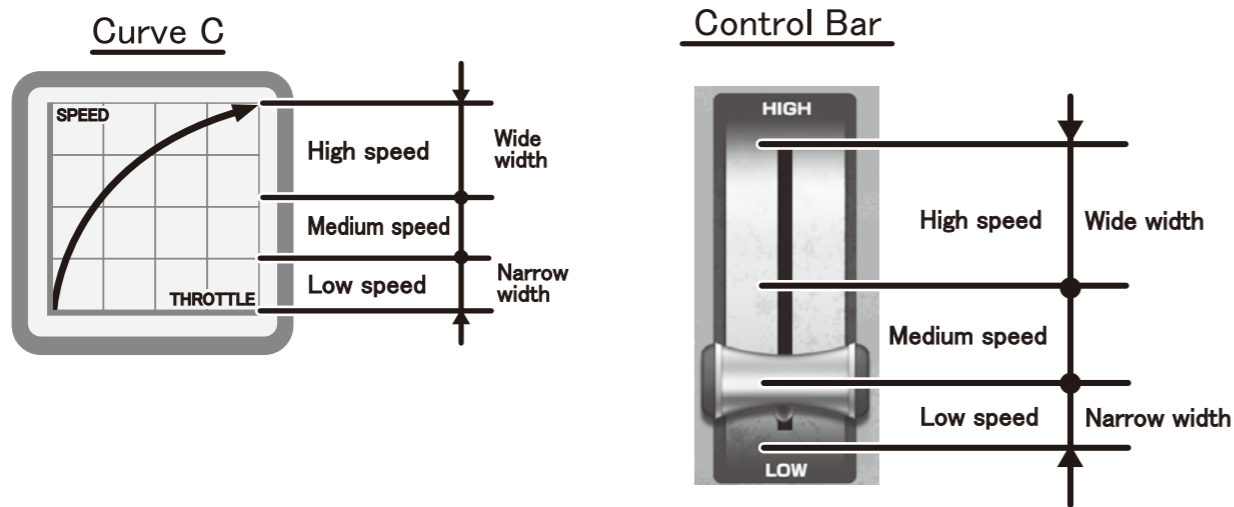


* By default, the throttle has been set to Curve A.

【Curve B】 The control range of low speed and high speed are the same.



【Curve C】 Contrary to Curve A, the control range of high speed is wide, and that of low speed is narrow.



DCC DC 12-1. Sound Control

You can play various sounds (sound effects) while operating your locomotives. (DC/DCC)

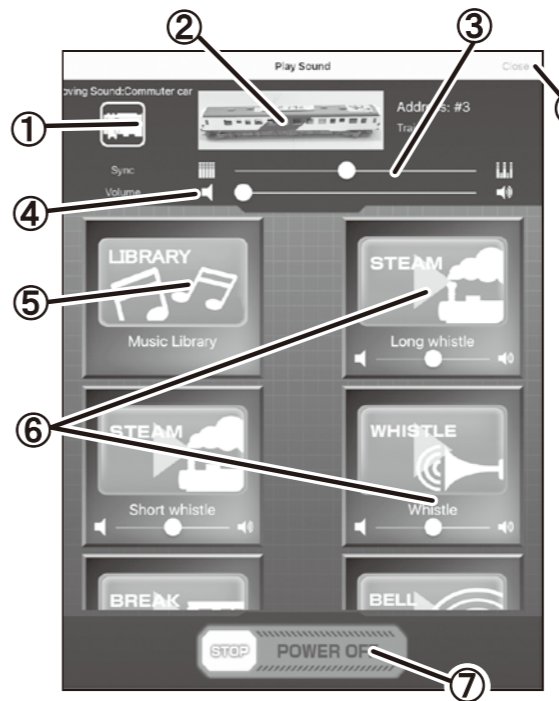
【Step 1】 View of the sound screen

① Touch “SOUND” icon displayed on the screen in DC mode or DCC mode.



【Step 2】 Operation of sound screen

① You can play your favorite sound effects by touching the sound icons.



- ① **The locomotive sound**
The sound icon of the locomotive currently selected will be displayed. ※It has not been set by default.
- ② **Locomotive window**
The locomotive currently selected will be displayed. ※A standard locomotive icon is displayed by default in DCC mode.
- ③ **Sound sync adjustment bar**
You can adjust the sound pitch depending on the locomotive speed by dragging the slider left or right and synchronize with the locomotive.
- ④ **Sound volume adjustment bar**
You can adjust the sound volume by dragging the slider.
- ⑤ **Music Library icon**
You can play sounds/music stored in your tablet device. (See 12-2. Music Library)
- ⑥ **Sound effect buttons.**
Touch the button to play sound effects, touch it again to stop. The volume can be changed by the slider.
- ⑦ **Stop button**
Touch the button to stop the sound /music.
- ⑧ **Close button**
Touch the button to close the sound mode and go back to operation screen.




❗ You can scroll the screen by swiping up and down.

DCC

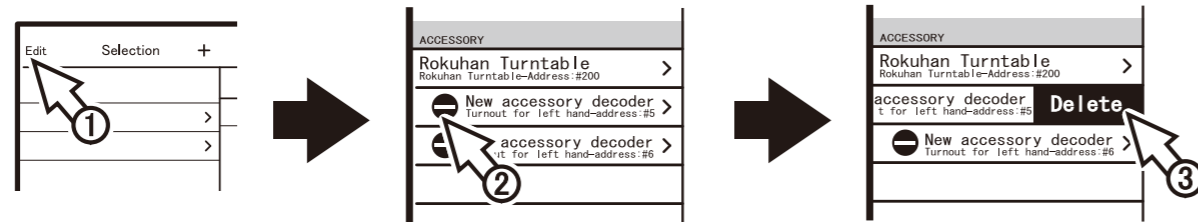
10-3. Delete Accessories

This is how to delete a registered accessory.
Please follow the instruction below on the accessories programming screen
<See 10-1. Programming and operation of accessories>.

① Touch "Edit".

② Touch  mark of the accessory you desire to delete.

③ Then the icon to be deleted, will be shown. Touch the icon to delete the accessory.



DCC

DC

11. Tutorial / Demonstration Movie

The App includes a "Tutorial" function that is convenient if you have some questions or no instruction manual at hand while operating.

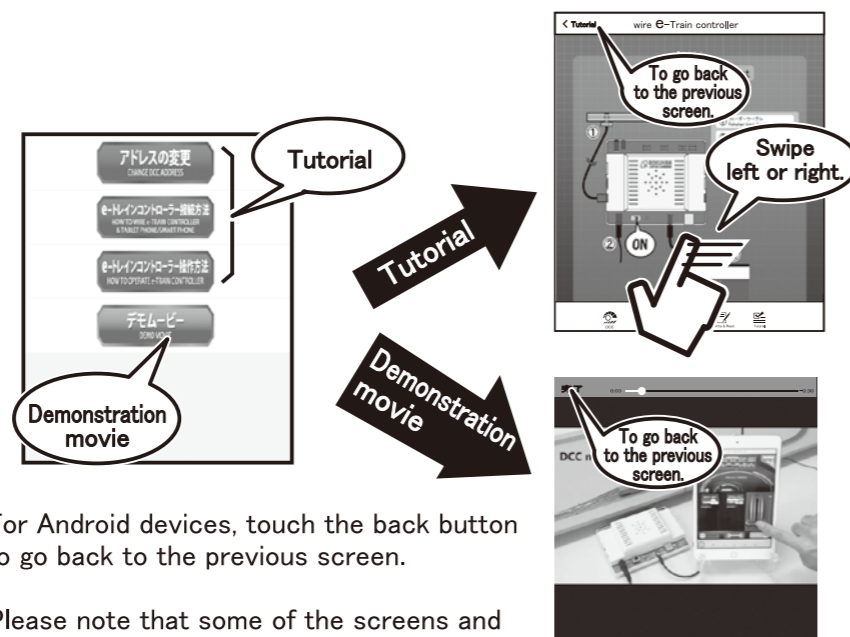
【Step 1】 View of the Tutorial screen.

① Touch "Tutorial" in the bottom menu of the screen.



【Step 2】 Operation of the Tutorial screen.

② Select the item you desire to check, swipe left or right to see the next pages.



※For Android devices, touch the back button to go back to the previous screen.

※Please note that some of the screens and movies in the App includes images of products under development, they may be slightly different from the actual product.

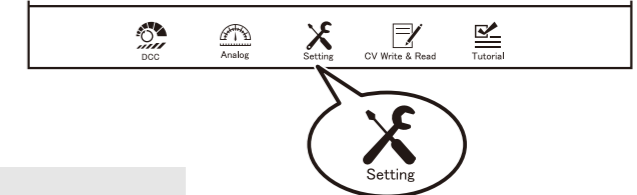
DCC

9-1. Setting for DCC Locomotive (Tablet device side)

DCC locomotives cannot be operated by just having a programmed decoder. In order to operate locomotives, "programming of the DCC locomotive" on the App is required.

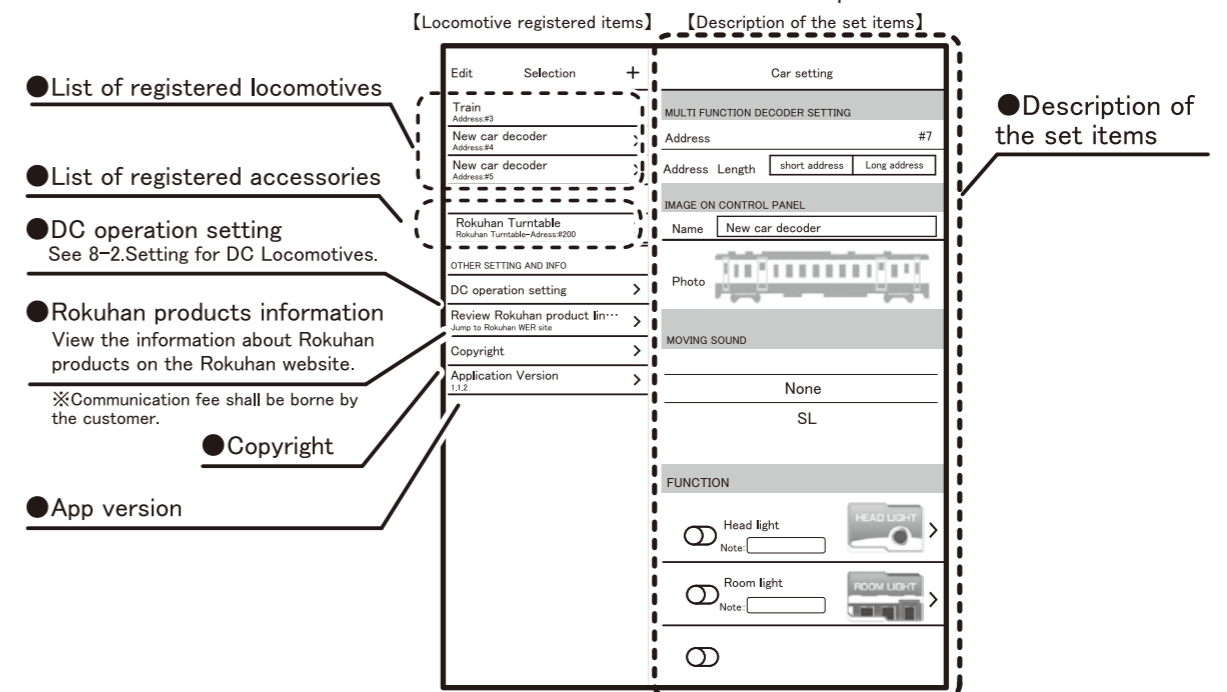
【Step 1】 View of setting screen

① Touch "Setting" in the bottom menu of the screen.



② The setting screen will open.
The contents will be reflected on the operation screen.

The contents will be reflected on the operation screen.



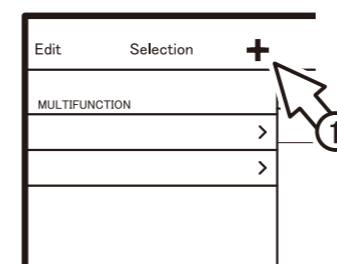
※Depending on the models of tablet device, only "Locomotive registered items" may be displayed. By the touching on each item, "Description of the set items" will be displayed.

【Step 2】 Registration of DCC locomotives

You can add and register the accessories and locomotives you desire to operate by touching "+" icon in the locomotive registered items screen.

To Register a locomotive.

① Touch "+" mark.

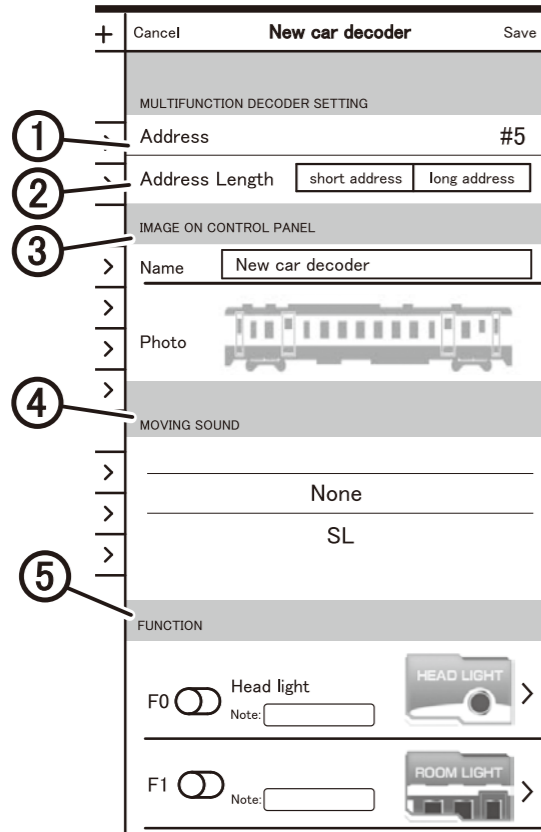


② The Select car image window will open.
Touch "Multifunction".



【Step 3】 Programming of DCC locomotives

Set up the locomotive to register.



①Address

The number (address) given to the digital decoder installed in the registered locomotive will be displayed.

②Address Length

Touch "Short address" for address #0 - 127, "long address" for address from #128.

③Image on control panel

1. Name: Touch the box and you can change the registered locomotive name.
2. Photo: You can change the registered locomotive photo.
If you touch the picture of locomotive, below items will be shown.

●Select an image from photo album.

Use the photos saved on your tablet device.
Please adjust the photo size to height: 1x width: 3 (about panoramic size).
For other sizes, the photo will functionally be stretched on the App.
(You can use the photos you have taken by yourself.)

●Select an image from List.

Select and display the locomotive image registered in the App.

④Moving sound

Set the running locomotive sound type / with or without sound.

⑤Function (0 ~ 12)

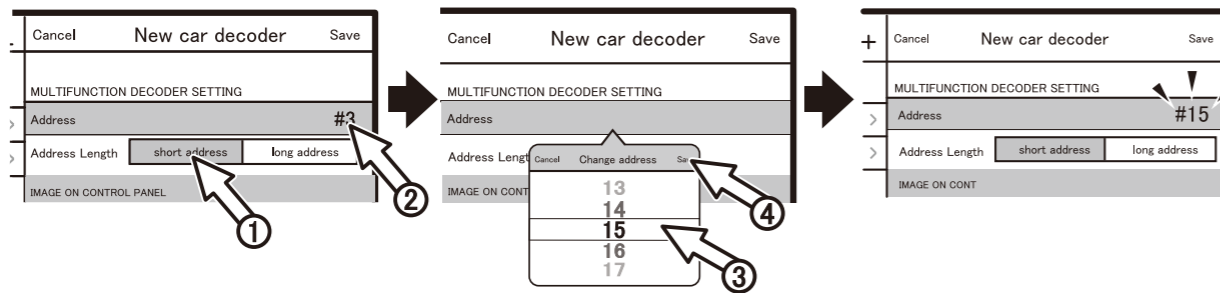
In DCC system, in addition to the motor operation, there is an individual operation, such as headlight or sound, which is called a function.
The functions programmed in the digital decoder will be activated by setting function icons to the locomotive.
Also you can add the names by touching "Note".
*Please refer to the instruction manual of the locomotive decoder.

【Step 4】 How to program the address. (Example: Set the address #15)

①Touch the address number. Select "short address" to program 15 this time.

②The "Change address" window will open. Select "15" and touch the Save button.

③The address has been set to 15.

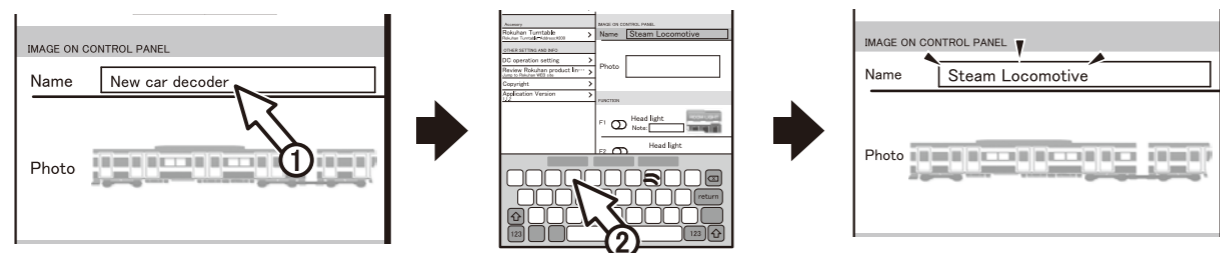


【Step 5】 Image on Control Panel: Name setting.

①Touch the Name box.

②The key board will be shown. Input the name you like.

③The name has been changed.

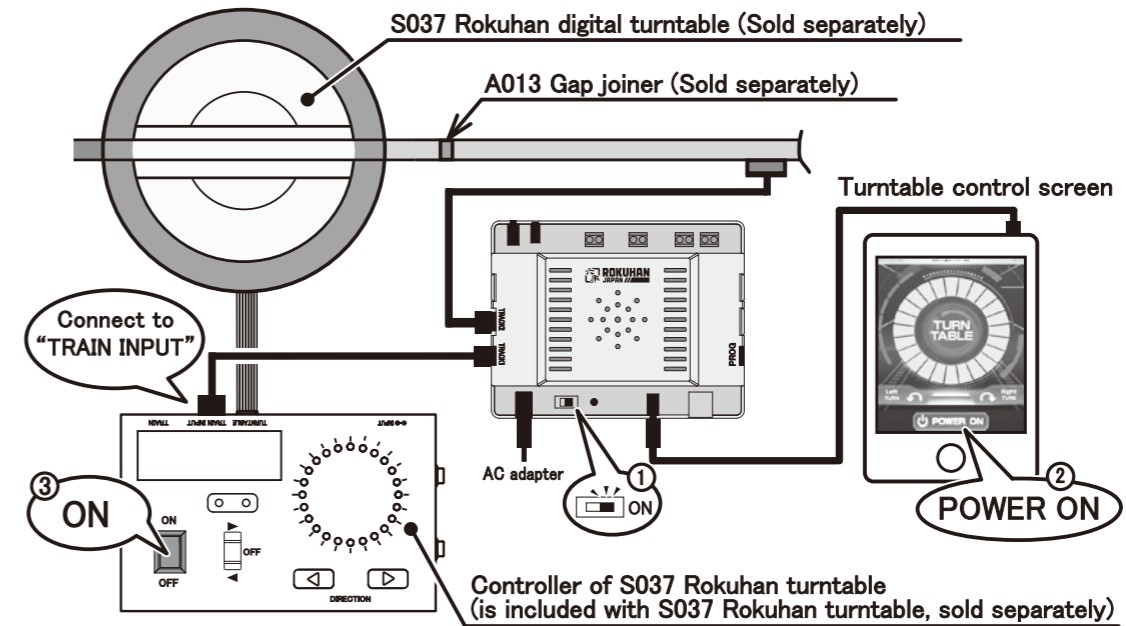


DCC

10-2. Programming and operation of accessories (Turntable)

Rokuhan turntable(sold separately) can be operated without any attachments.
In addition, programming of the Rokuhan turntable is not necessary because the address has been fixed at # 200.
Please note that you cannot edit or delete the Rokuhan turntable in the App.

【Step 1】 Setting up the Rokuhan turntable



❗ When setting up the Rokuhan turntable for operation, the AC adapter should be attached to the E-Train controller only. (No need to connect a separate AC adapter to the controller of the turntable.)

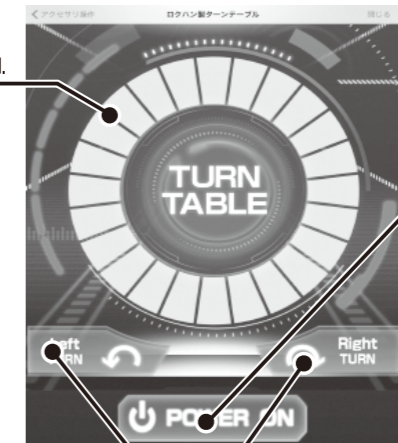
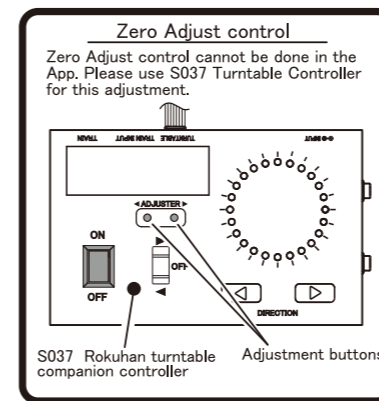
【Step 2】 Control the Rokuhan turntable

①Touch the "Turntable" icon displayed on accessory control screen.

②Control the Rokuhan turntable.

●Turntable buttons

The circumference of the icon includes 24 buttons. The turntable will rotate to the corresponding position of the button being pressed.



●Emergency stop button

●Rotate buttons (Left turn/Right turn)

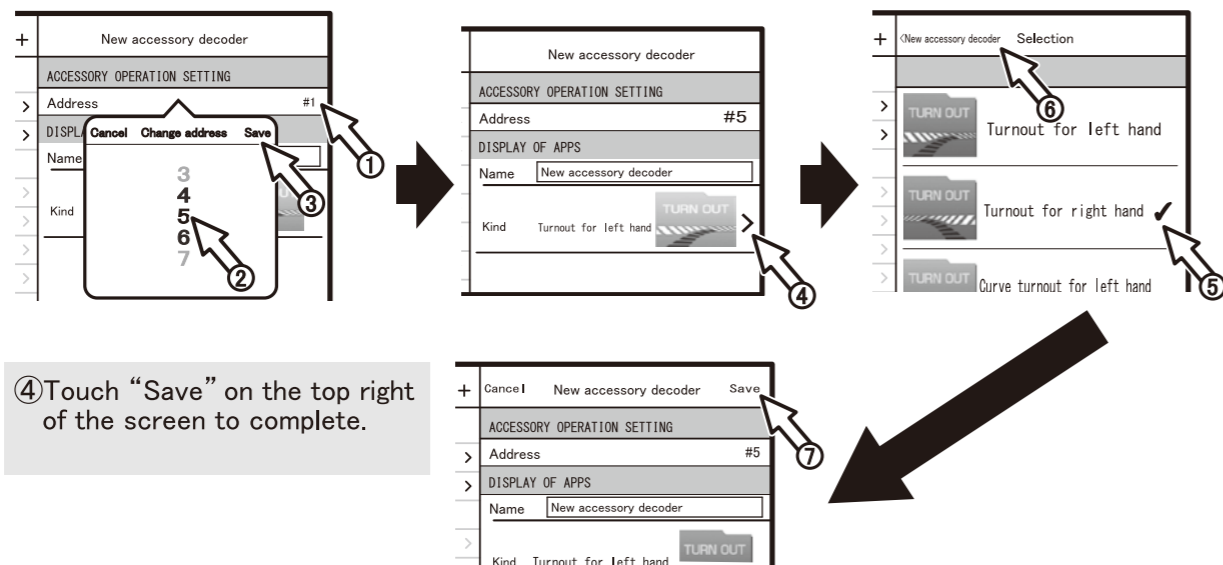
Each time a rotate button is pressed, the turntable will move one position.

【Step 3】 Registration of accessories

① Touch the address number, select your preferred address and touch "Save".

② Touch the ">" mark next to the icon.

③ Select your preferred icon and touch "New accessory decoder" on top left to go back to the previous screen.



④ Touch "Save" on the top right of the screen to complete.

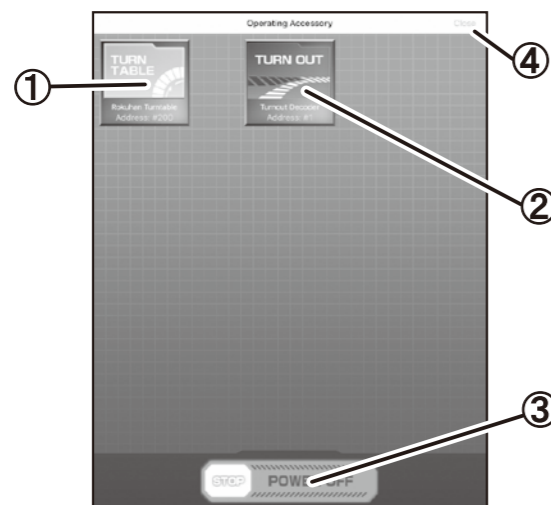
⚠ When registering multiple accessories, repeat the process above.

【Step 4】 Control the DCC accessories (turnout)

① Touch "Accessories" displayed on DCC control screen to switch to the accessory control screen.



② Control the DCC accessories



① **Rokuhan turntable icon**
Touch to proceed to "Turntable control screen".

② **Accessory icon**
Accessory icons registered in the "accessory programming screen" will be displayed. The accessory (turnout) will be activated by touching the icon.

③ **Emergency stop button**

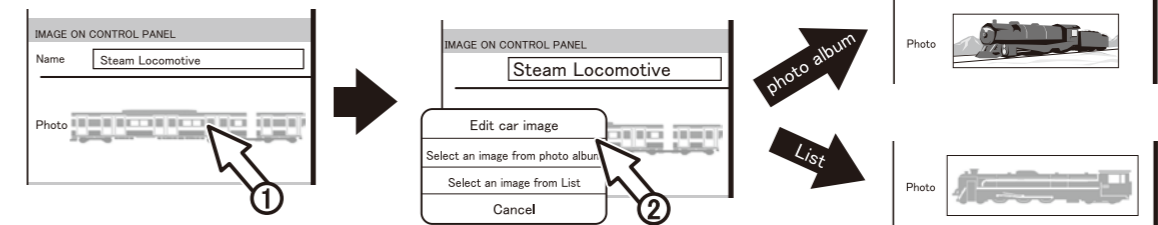
④ **Close button**
Touch the button to go back to "DCC control screen".

【Step 6】 Image on Control Panel: Photo selection

① Touch the photo image.

② Select your favorite photo or image from the album or list of locomotives.

③ The photo has been changed.

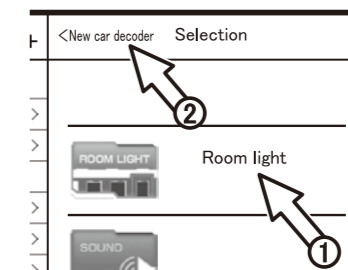
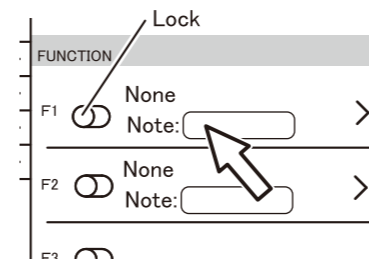


【Step 7】 Programming the functions (Method at F1)

For example, set F1 to control Room light on/off (Function 1) on the App.

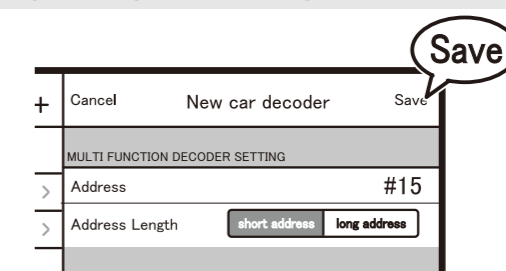
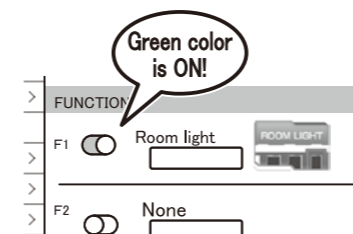
① Touch F1. (Function 1)

② Touch "Room light" from the icon list, go back to the previous screen by touching "New car decoder" on the top left of the screen.



③ Room light has been allocated to F1. Unlock the F1 switch.

④ Touch "Save" on the top right of the screen and the programming has been completed. The programming can be changed anytime.



⚠ When registering multiple locomotives, repeat the process above. From setting F2, refer to the specifications of each decoder to program.

⚠ As for F0 (Function 0), many DCC decoders are allocated to F0 to control the Head light.

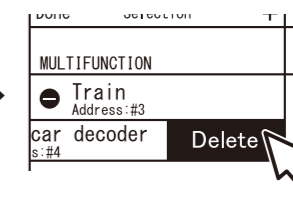
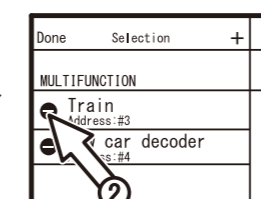
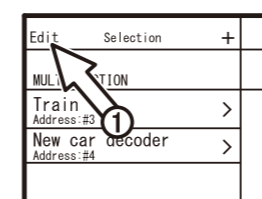
【Step 8】 Delete the registered locomotives

Touch "Edit" on the top left of the screen to delete the registered locomotives (accessories).

① Touch "Edit".

② Touch the icon of locomotive desired to delete.

③ The delete icon will be shown. Touch the icon to delete.

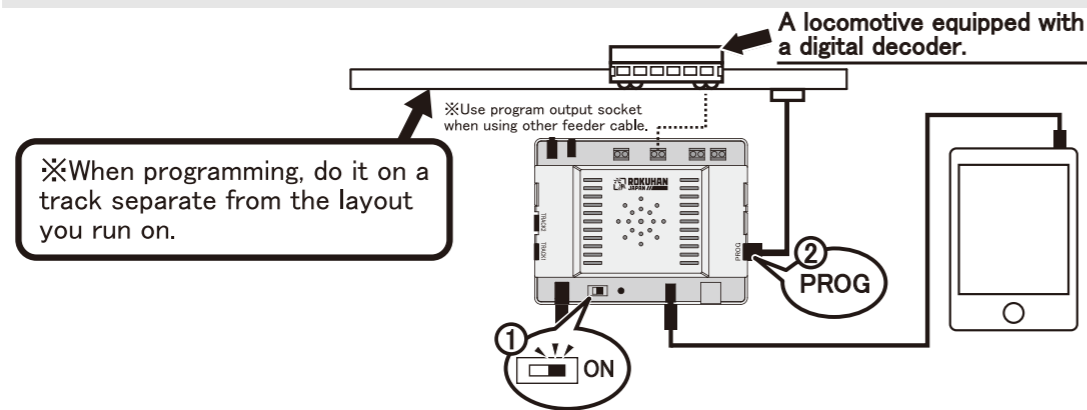


DCC 9-2. Reading the address of DCC Locomotives Easy checker

This is how to use “Easy checker” function to easily check the current address.
(Not available for wireless type using the Bluetooth audio receiver.)

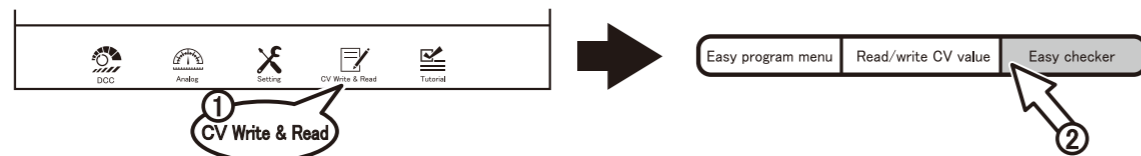
【Step 1】 Setting up for Easy checker of DCC locomotives.

Place the locomotive to read on the track, turn the main switch on, and connect the feeder cable to the program output socket.

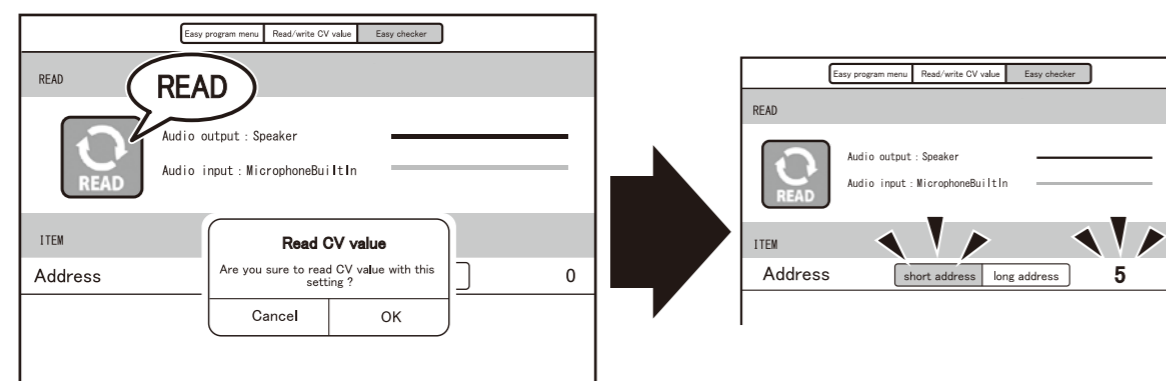


【Step 2】 Check the address of the DCC locomotive. (Easy checker)

① Touch “CV Write & Read” in the bottom menu and select “Easy checker” on top menu of the program screen.



② Easy checker screen will open. Press the “READ” button and the “Read CV value” window will open. Touch the OK button and the address of the locomotive will be shown.



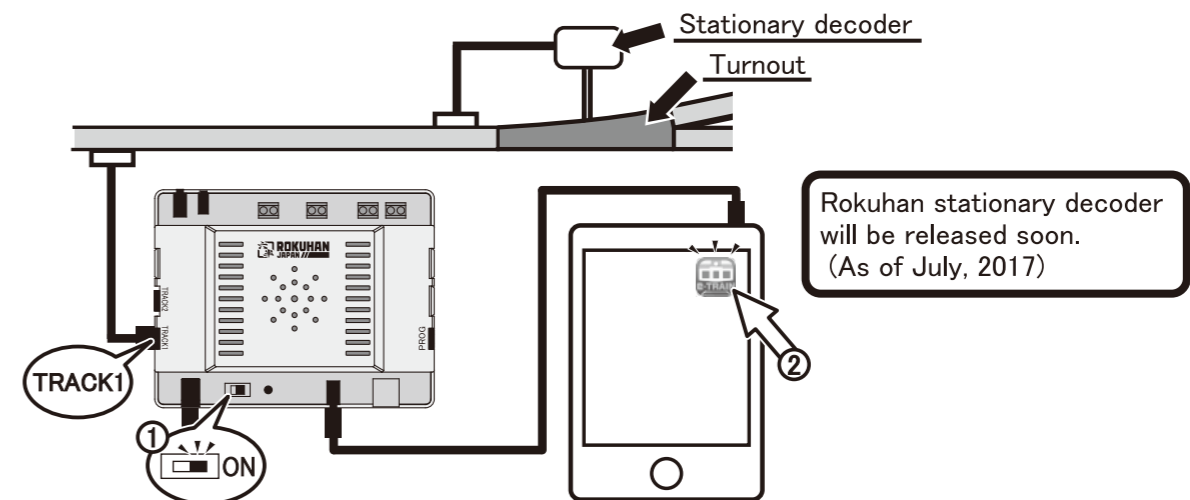
- ⓘ While reading CVs, the locomotive will move slightly, this is normal behavior when writing/reading is occurring. It is not a fault. Do not touch the locomotive until the reading complete and message has been displayed. When controlling the locomotive, please change the connection from “Program output socket” to “Track output socket”.
* Please note that depending on decoder make and model, program may not be able to read the decoder CVs.

DCC 10-1. Programming and operation of accessories (Turnout)

You can easily control turnouts equipped with a digital decoder with your tablet device.
※In order to operate a DCC layout, turnouts, stationary decoders, and locomotives with mobile decoders are required.

【Step 1】 Setting up DCC accessories (Turnout)

① Connect the turnout with the stationary decoder to the track. When using Rokuhan turnout track (sold separately), insert the screws supplied to convert turnout to non power routing (Refer to each instruction manual of the turnout)



The above figure is an example.

For detailed information about layout setup, please refer to the instruction manuals of the turnout and the stationary decoder.

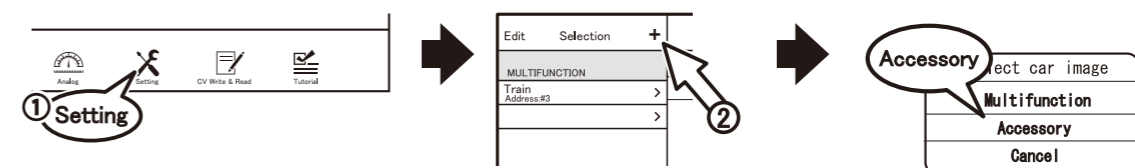
【Step 2】 View of the accessory programming screen

In order to operate the turnout equipped with a stationary decoder, “programming of the accessory” is required.

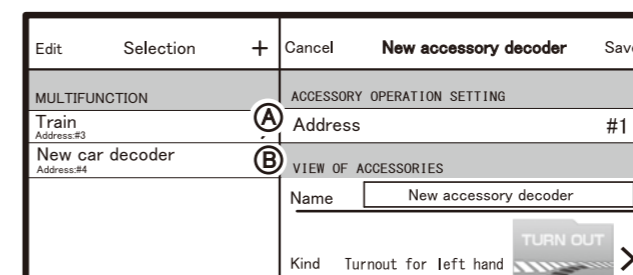
① Touch “Setting”.

② Touch “+” mark.

③ The Select car image window will open. Touch “Accessory”.



④ The accessory programming screen will open.



Ⓐ Address

Ⓑ Display of Apps

1. Name: Touch the box and you can change the accessory name to register.
2. Item: You can select the accessory icon to use.

This is the list for CV read / write. Please refer to the list below as the address range of CV values are determined for each CV number.

CV number / Contents	CV value / Address range
1 Short address	Short Address (2-digit) of locomotive. The address range is from 1 to 127.
2 Minimum voltage	Set the voltage when the locomotive starts to move. The address range is from 0 to 255. 【volts0%(0) - 100%(255)】
3 Acceleration rate	Set the acceleration rate when the speed control bar is raised. The address range is from 0 to 31. 【Accelerate quickly(0) ~ slowly(31)】
4 Deceleration rate	Set the deceleration rate when the speed control bar is lowered. The address range is from 0 to 31. 【Decelerate quickly(0) ~ slowly(31)】
5 Top voltage	Set the maximum voltage when the speed bar is raised in maximum. The address range is from 0 to 255. 【volts0%(0) - 100%(255)】
6 Mid voltage	Set the mid voltage when the speed bar is in the middle. The address range is from 0 to 255. 【volts0%(0) - 100%(255)】
17,18 Extended Address	Long Address (4-digit) of locomotives. The address range is from 128 to 9999.
29 For basic programming	Programming basic decoder functions.

Please see below for more detailed information about CV17, 18, and CV29.

CV17,18 When programming locomotives with long address at “CV Write & Read”, the number must be programmed in two parts. The calculation is as below. (This programming is not necessary for Easy programming.)

Example: Set the address #1000 to CV17, CV18.

1000 ÷ 256 = 3.90625 is the result
(desired address) (constant number)

➡ Parsing the result 3.90625 into 2 parts

192 + 3 = 195
(constant number) CV17 CV18

#1 CV17 3 is the whole number. The “Whole number” is to the left of decimal in the result above 192(constant number) + 3 = 195

#2 CV18 0.90625 is the remainder
 256 (constant number) x 0.90625 = 232
 From the calculation above,
 ● The value of CV17 is 195
 ● The value of CV18 is 232
 By programming these numbers, you can set the address #1000.

calculating CV29 CV29 is for basic programmings. The sum of value ①~⑦ will be the CV value.

- ①+0/+1 : Direction : Forward / Reverse
- ②+0/+2 : Speed steps : 14 / 28, 128
- ③+0/+4 : DC operation : Off / On
- ④+0/+8 : Transponding : Off / On
- ⑤+0/+16 : Speed table : Off / On
- ⑥+0/+32 : Short address / Long address
- ⑦+0/+128 : Multifunction (Locomotives) / accessories

Values	Typical for a forward facing locomotive
1	0 direction forward = 0
2	2 steps 128 = 2
3	0 DC 0 off = 0
4	0 transponding off = 0
5	0 speed table off = 0
6	32 address long = 32
7	0 multi function off = 0
total	34 CV29 total = 34
* minimum value for CV29 is 2 for best performance	

Example:

①+0/+1 : Forward/Reverse

②+0/+2 : 14 / 28, 128 steps

① If you want to program “Reverse direction”, set the value of CV29 part 1 to “1” in calculation table.
 ② If you want to program “14 speed steps”, set the value of CV29 part 2 to “0” in the calculation table.
 Continue to select the value of each section of CV29 # ①~⑦, then add the values of 1 ~ 7 to get actual value to program into CV29.

※Depending on the decoder make and model, the contents of each CV may be changed.

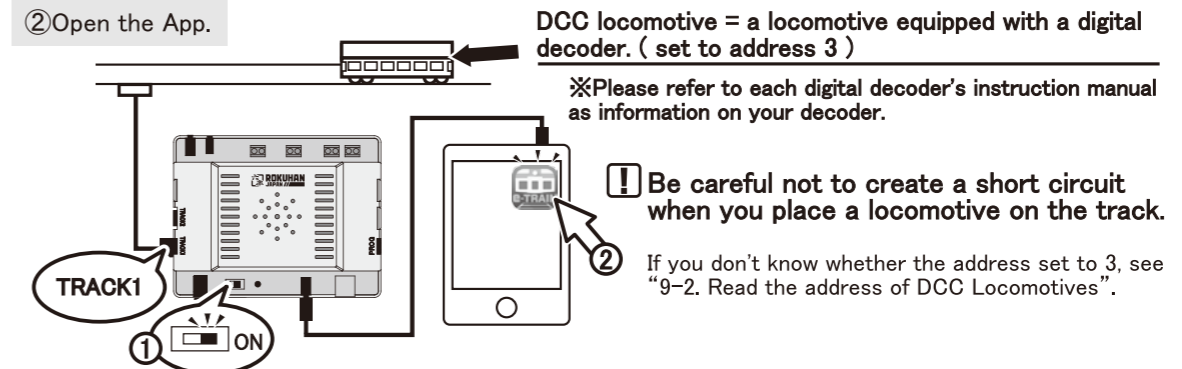
You can operate DCC locomotives with your own tablet device! The decoder in locomotive usually comes pre-programmed to a factory default address of “3”. e-Train controller has been set to address 3 as well. You can operate it without any difficult programming.

※ In order to run locomotives in DCC system, the locomotive needs to be equipped with a digital decoder.

【Step 1】 Setting up for running DCC locomotives.

① Place a DCC locomotive on the track, turn the main switch on.

② Open the App.



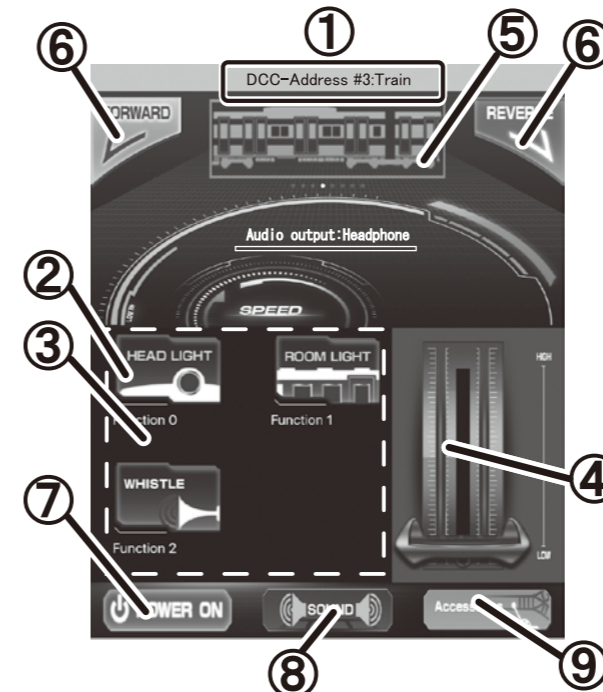
③ Touch “DCC” in the bottom menu. The programming process has been completed.



【Step 2】 DCC Locomotives operations

① Control the DCC locomotive

The following explanations shall be in the state of address 3 which is the default value of digital decoders and e-Train controller. Please make sure that Audio output “Headphones” is in blue color.



①Address, name of the locomotive.

View the address and the name of the locomotive that have been set in setting screen.

②Head light button, Room light button

Turn on/off the head light and the room light. ※Wiring to the digital decoder is required.

③Function area

View “Function icons” that have been set in setting screen. By default, only “HEAD LIGHT” and “ROOM LIGHT” icons are displayed.

④Speed control bar

Slide up or down to adjust the locomotive speed.

⑤Locomotive window

The “photo” which has been set in the setting screen will be reflected. (By default, “standard” locomotive icon is displayed.)

⑥Forward / Reverse button

Touch the button to switch the direction.

⑦Emergency stop button

Stop the running locomotive.

⑧Sound icon

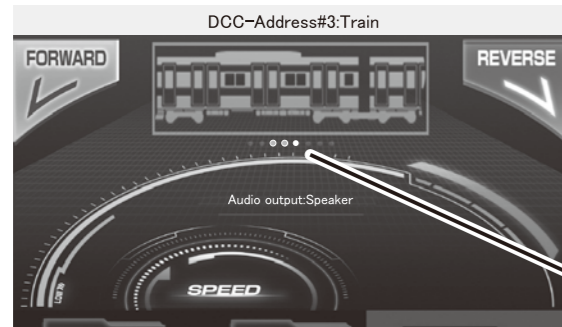
Touch the icon to proceed to the sound control screen. Each sound effect will be played by touching the sound effect icon. (See 12-1. Sound Control, 12-2. Music Library)

⑨Accessories icon

Touch the icon to proceed to the accessories control screen. (See 10-1. Programming and operation of accessories, (Turnout) 10-2. Programming and operation of accessories, (Turntable)

DCC 9-4. Switching the Running DCC Locomotives

If you registered multiple locomotives, you can call up each locomotive according to the following three methods. (①~③) In addition, when the tablet is set to landscape, it becomes horizontal display mode that can help you to operate multiple locomotives simultaneously on one screen.

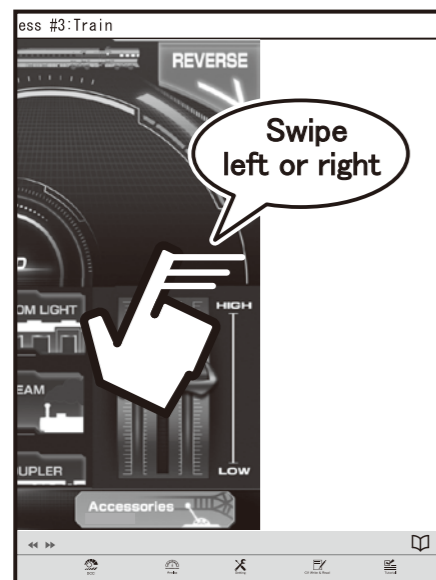


※When using fixed display mode on your tablet device, it won't switch to the horizontal display mode.

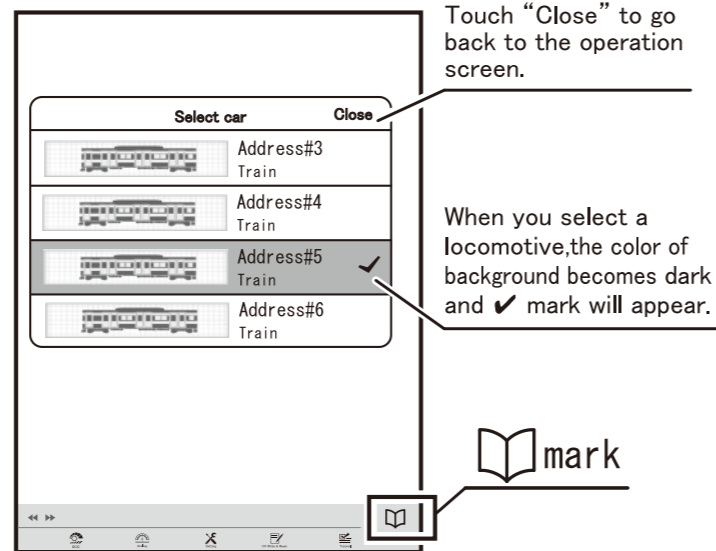
※When multiple locomotives are registered, “●” mark will be displayed. “●” is the registered locomotive number. “○” is the locomotive currently being operated.

【Step 1】 How to switch the operating locomotive in vertical display mode (3 ways)

①Swipe the screen.



②Touch the book mark.



③Touch the arrow mark.

Similarly with ①Swipe the screen, you can switch the locomotives by tapping the arrow mark on the bottom left of the screen.



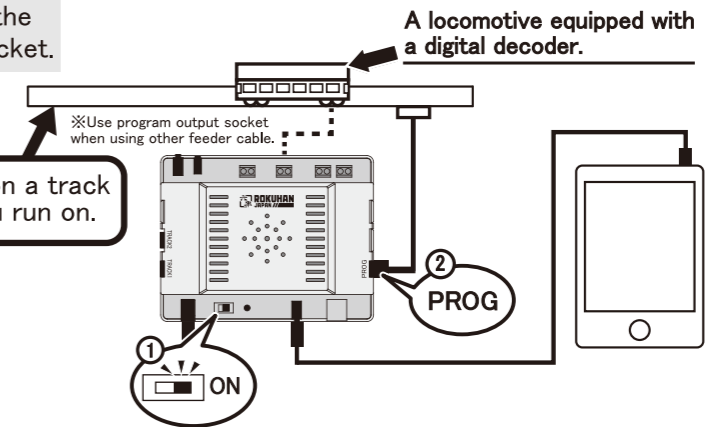
DCC 9-7. Reading CV of a DCC Locomotive decoder CV reading / writing

This is how to use “Reading function” to check the CV value currently selected. (Not available for wireless type using Bluetooth audio receiver.)

【Step 1】 Setting up for reading CV value of a DCC locomotive decoder.

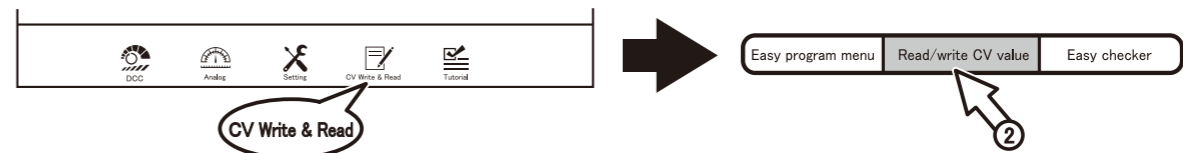
Place the locomotive to read on the track, turn the main switch on, and connect the feeder cable to the program output socket.

※When programming, do it on a track separate from the layout you run on.



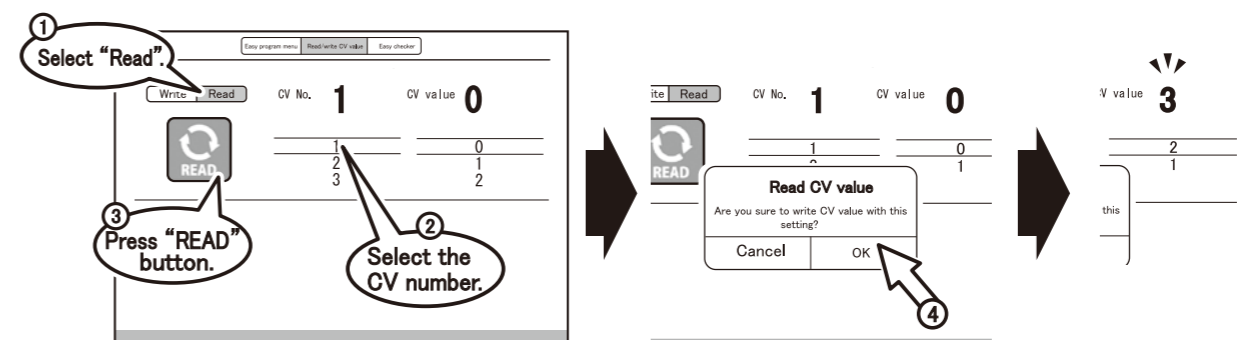
【Step 2】 Read CV value of the DCC locomotive.

①Touch “CV Write & Read” in the bottom menu and select “Read / write CV value” on top menu of the program screen.



②“Read / write CV value” screen will open.

Select CV number to read, press “READ” button, then “Read CV value” window will open. Touch the OK button and the CV value will be shown.



- ⓘ While reading CVs, the locomotive will move slightly, this is normal behavior when writing/reading is occurring. It is not a fault. Do not touch the locomotive until the reading complete and message has been displayed. When controlling the locomotive, please change the connection from “Program output socket” to “Track output socket”.
*Please note that depending on the decoder make and model, program may not be able to read the decoder CVs.

This is how to use the function of “CV Write & Read” that you use to program each DCC locomotive. The difference from Easy programming is that you can program the CV value for each item individually. (Not available for wireless type using Bluetooth audio receiver.)

CV is a variable you can change to alter the performance of a locomotive or accessory equipped with decoder. There are two parts to a CV, the CV number and the CV value.

By programming these variables, you can adjust the actions of your locomotive to be closer to actual trains.

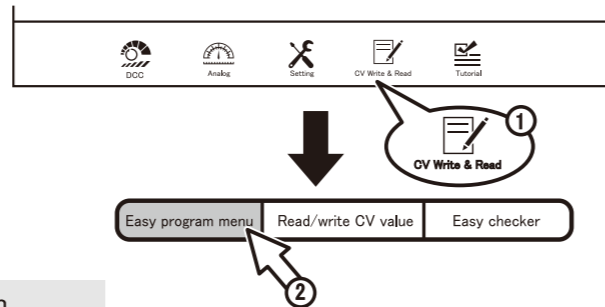
● CV number The item numbers for programming basic performance of the digital decoder.

● CV value The contents that you will change to get a specific action from the decoder.

For more information about “CVs”, see “9-8 List of CV number and CV value”.

【Step 1】 Preparation for writing to the DCC locomotive

① Touch “CV Write & Read” on the bottom menu, select “Read / write CV value” on top menu of the program screen.



② “Read / write CV value” screen will open. Change the CV number, CV value for each item. For contents of each CV number, see “9-8 List of CV number and CV value”.

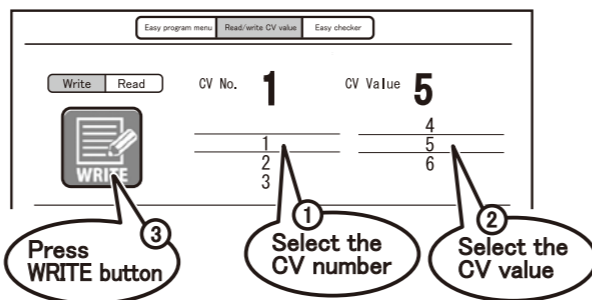
- Switch button to write / read
Select writing or reading.
- WRITE button
When you finish changing the CV number and CV value, press this button to complete.
- Detailed information about
Currently selected CV number.
- CV number currently selected.
- CV value currently selected.
- CV value
Swipe up or down to change the value.
- CV number
Swipe up or down to change the number.
- View of Audio output /Audio input

When the input cable for tablet device is connected properly, it will be displayed in blue color. When you see the color in red, it is not connected properly. Please check the connection in that case.

【Step 2】 Writing to the DCC locomotive decoder

① The process of writing, select the CV number, then the CV value, and press the WRITE button to complete.

❗ While writing CVs, the locomotive will move slightly, this is normal behavior when writing/reading is occurring. It is not a fault. Do not touch the locomotive until the writing complete and message has been displayed. When controlling the locomotive, please change the connection from “Program output socket” to “Track output socket”.



【Step 2】 How to operate in horizontal display mode

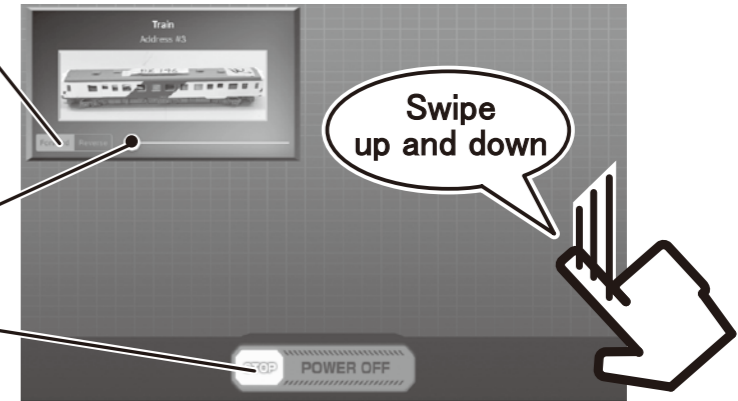
Multiple registered locomotives are displayed and you can control them simultaneously. 4 locomotives are displayed at once. If you register more than 4 locomotives, swipe the screen up and down to display.

In horizontal display mode, you can control the locomotive only for running.

● Forward / Reverse button
Touch the button to switch the direction.

● Speed control bar
Slide left or right to adjust the locomotive speed.

● Emergency stop button
Stop all the running locomotives.



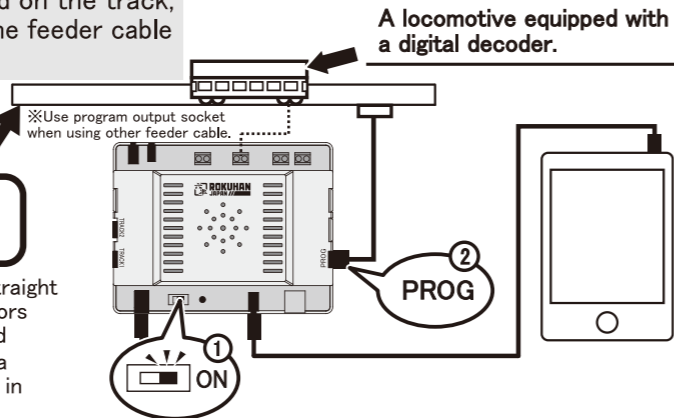
❗ When operating multiple locomotives at the same time with each sound setting, all the multiple sounds will be output from speaker of the E-Train controller. Please adjust the volume of each running sound individually.

DCC 9-5. Setting for DCC Locomotives (Locomotive side) Easy programming

At the Easy programming, you can change the address and change the running acceleration. (Not available for wireless type using Bluetooth audio receiver.)

【Step 1】 Setting up for programming DCC locomotives.

- Place the locomotive to be programmed on the track, turn the main switch on, and connect the feeder cable to the "Program output socket".

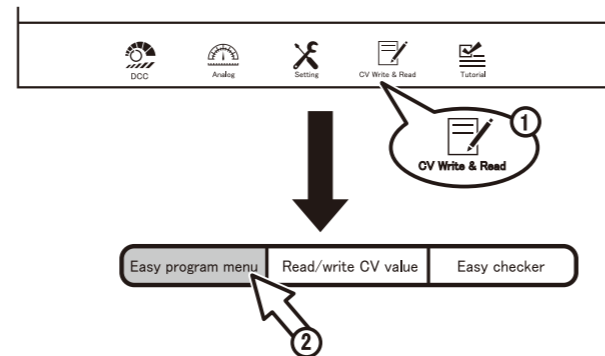


※When programming, do it on a track separate from the layout you run on.

Please place the locomotive in the center on the straight piece of track of over 440mm length to prevent errors when reading/writing. This operation should be used when the notation of "When programming, do it on a track separate from the layout you run on" appears in this manual from this point forward.

【Step 2】 View of Easy programming screen

- Touch "CV Write & Read" on the bottom menu, and select "Easy program menu" on the top menu of the program screen.



- Easy program screen will open.

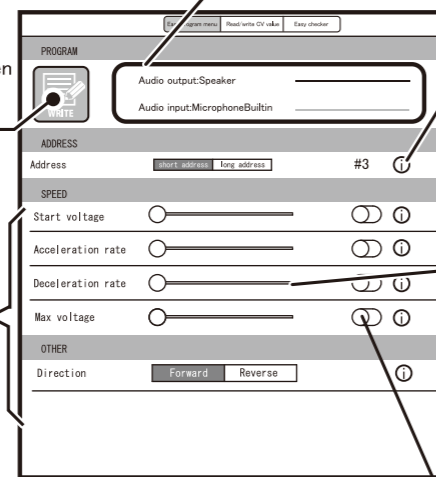
● View of Audio output / Audio input

When the audio cable is connected to your tablet device properly, it will be displayed in blue color. When you see the color in red, it is not connected properly. Please check the connection in that case.

● WRITE button

Setting programs will be written to the decoder by pressing this button.

● Adjustable items for the operation.

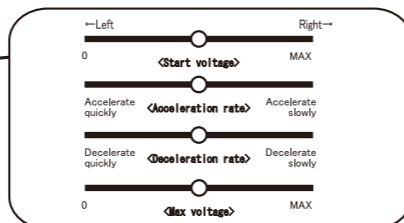


● Contact information

Shows the details of contents for each item.

● Setting value bars for each item about running locomotive.

The locomotive performance will be changed by adjusting these bars. You can control these bars only when "Item switch" is ON.



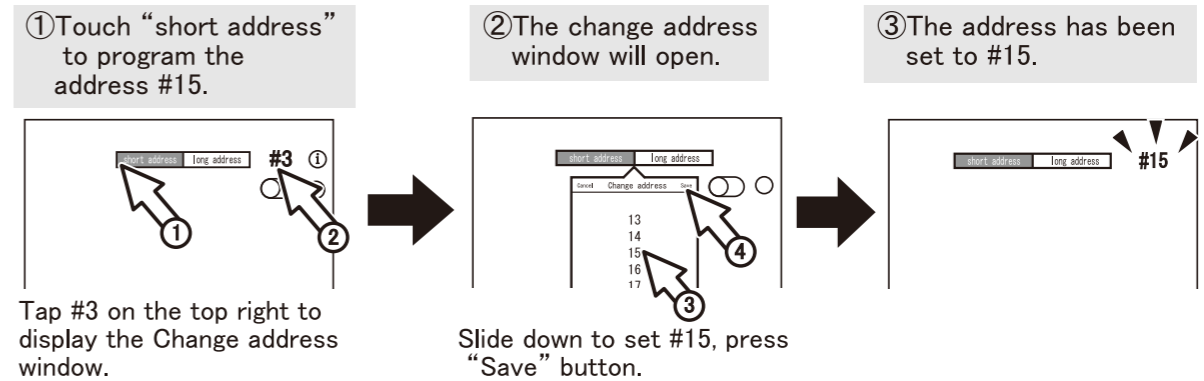
● Item switch

Swipe the switch ON (turns green) to activate each item. Swipe the switch OFF to cancel.

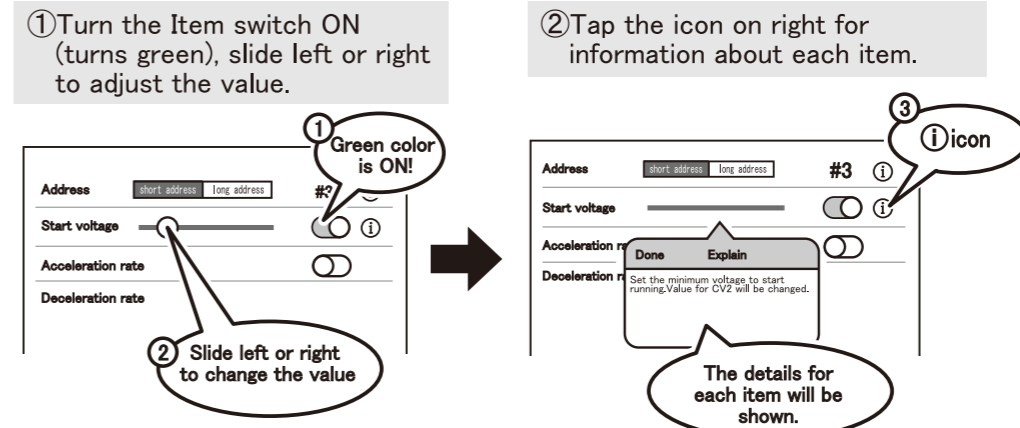
【Step 3】 Address Change

DCC Locomotives operated on DCC layout need to be programmed with individual numbers called " the Address", which is necessary for all locomotives equipped with a digital decoder, not limited to self-powered trains. Touch "short address" for programming the address to #0-127, and "long address" for programming the address to #128-9999.

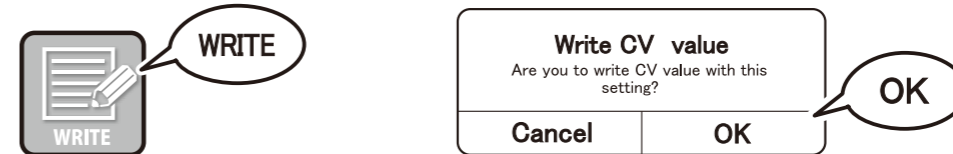
Example: Program the address #15.



Example: When changing the other items.



When you finish programming each item, press the WRITE button to complete.



Similarly when changing the other items, press the WRITE button to complete.

- When controlling the locomotive, please change the connection from "Program socket" to "Output socket".

※As for CV, please see 9-6. Writing to DCC Locomotives.

- While writing, the locomotive will move slightly, this is normal behavior when writing/reading is occurring. It is not a fault. Do not touch the locomotive until the writing complete and message has been displayed.

