

Kato Digitrax DCC Decoder.

29-352 Decoder To Control Head & Tail Lights On End Cars.

This can be installed in head/end cars so that one can turn on and off at will through A DCC System. For instance the head/tail lights can be turned on at will or they can be turned off even while the DCC fitted set is running.

Please read this instruction sheet carefully prior to the use.

- How to install the Decoder
 1. Please remove the floor board cover near the top of the car on the bottom side while pressing it in the direction indicated by the arrow.
 2. Please remove the switch if pre-installed (Some cars are not installed with the switch.)
 3. Please insert the decoder with A or B headed toward the top of the car.

Chipped off (for marking the direction)

4. In the way that this side can be seen from outside, please insert the decoder in the body of the car.
 5. Please be sure that decoder is inserted firmly to the very end.
- Depending on which way, namely whether with A or B near the car top, the decoder is inserted, it is decided which light, head or tail light, can be turned on. Please change the way of inserting decoder so that the light is changed to head and tail light correctly, according to the direction that the train heads for.
6. After installation of the decoder in the car, please make sure of running the train with cover fitted to the floor bottom. Without the cover fitted, no power might be supplied to the decoder and it might not work.
- Rating and function of FL12 decoder for turning on/off head/tail lights in electric train type model.

Default address value: 03 (Range it can be changed in: 01~9983)

Function Circuits: 2 circuits (head/tail lights): With F0 key, it can be turned ON/OFF (Can be changed.)

Maximum Current: 125mA for each circuit

Automatic switching to head or tail light corresponding to the direction, the train runs in, complete with transponding (train position detecting) function.

The decoder can be customized in the function by changing the following program values.

Program items and their values			
CV	Default value	Function	Value range or Value Setting Example
CV01	03	2 digit address	01 ~ 127
CV61	02	Combination of CV61 and CV64 determines the function Key	
CV64	00	No. for turning on/off the light.	
Default (initial) setting is "F0". With "F0" Key, the light can be turned on/off.			
The light changes corresponding to the direction of the train, whether it runs forward or backward.			

In case of changing the function No. (key),

Please select the item to set, according to the below table, and program the values of CV61 and CV63 in the decoder:

CV61	CV64	Function No. for turning on/off light	Transponding (Position Detection)
00	00	F0	OFF
02	00	F0	ON (Default value)
02	01	F3	ON
02	02	F5	ON
00	01	F3	OFF
00	02	F5	OFF

*The CV values in the decoder can be only written in and cannot be read out.

- Compliance, Warnings & Handling.

Please use this decoder in combination with devices complying with NMRA DCC rules. With controlling devices employing another digital system, it will not work.

This product is an electronic device. So rough handling, water or static electricity may break the chip.

As it is a p.c.board, it has tiny and pointed parts. Please store the product where small children cannot reach their hands to.

Train car installed with the DCC decoder can be run on analog-operated track as well, but may not run when the power pack controller does not match with it.

The specifications and price of the product is subject to change without preannouncement.

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