



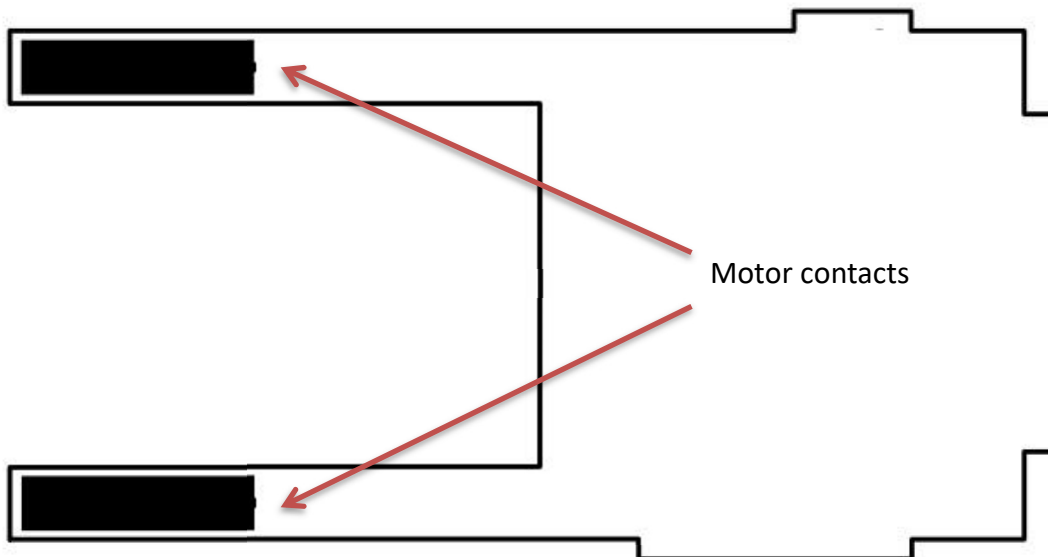
**ND-DE131 Digital decoder**

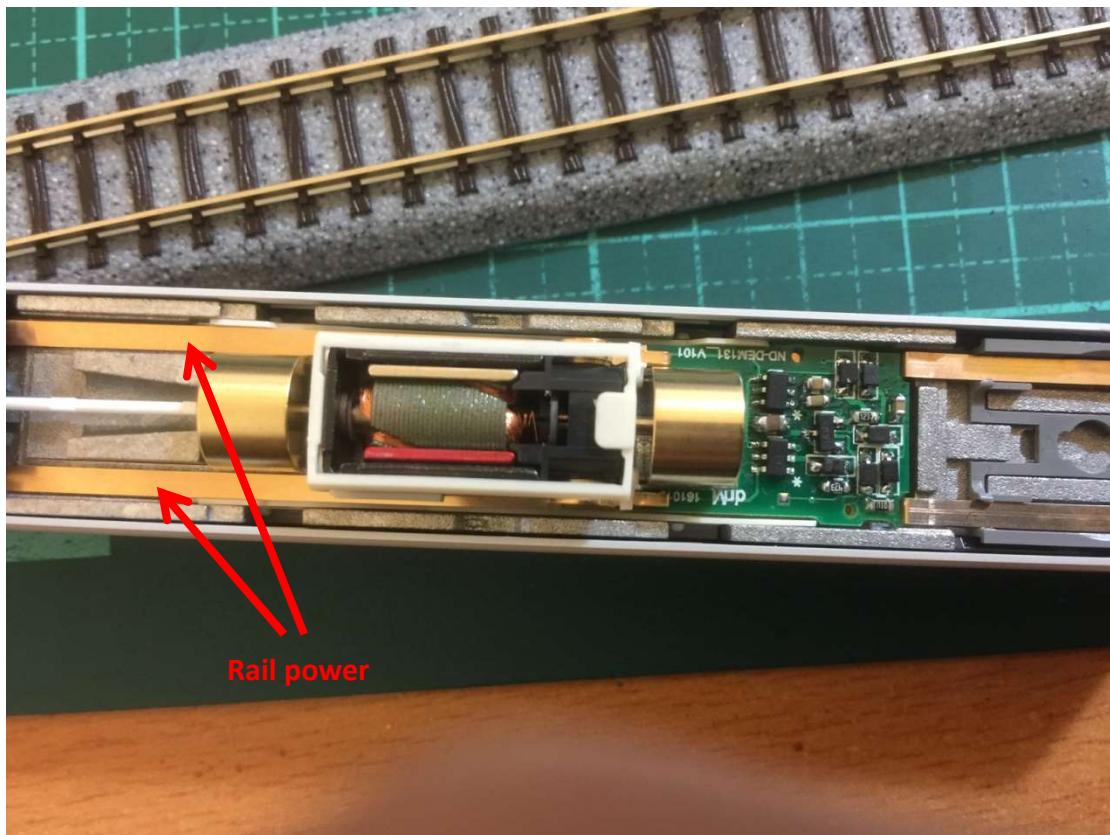
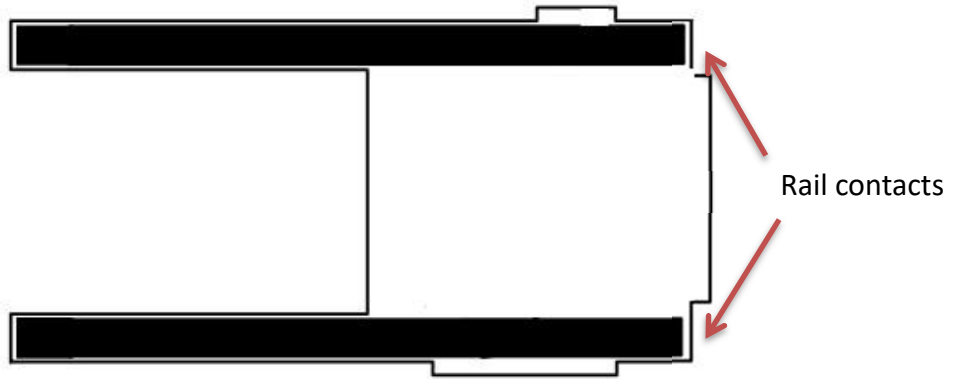
**Ver1.05**

## Features

1. Only use N gauge
2. The power high voltage to 18V
3. 28,128 speed operation.
4. 0.8A motor current output, the maximum peak value is 1.5A.
5. 1~9999 Vehicle number selection.

## Installation Notes





**Some DC motors have parallel capacitors at both ends, please remove this capacitor.**

**Do not connect the power and motor terminals in reverse to avoid decoder burns.**

## Reset decoder

1. To reset the factory settings, please write CV8 to 8. After power on again, restore the factory settings.

## CV list

CV	Description	Range	Factory setting
1	Short address	1-127	3
2	Minimum start speed	0-255	0
3	Acceleration delay	0-255	5
4	Deceleration delay	0-255	5
5	Maximum speed	0-255	220
6	Mid-speed	0-255	127
7	SW version		
8	Reset / NMRA assigned manufacturer ID for drM : 164 (10100100)	8	164
17	Long address, Hi byte	192-231	
18	Long address, Low byte	0-255	
29	Basic settings Bit 0 - Vehicle direction:      0 = Forward, 1 = Reverse Bit 2 – Analog option:          0 = off    1 = on Bit 4 –Speed curve table:      0 = off, Use CV # 2, 5, 6. # 67 – 94 Bit 5 – Short/Long address:    0 = Short address CV #1		4

	CV #17+18	1 = long address	
107	Motor start setting	0-30	0

## Decoder programming

Decoder editing can be used to read CV values or write CV values in the editing mode of each brand's controller. For the CV editing method of the controller, please refer to the instructions of the controller.

Please refer to the description of the CV value list for the content of the CV value. The factory address of the decoder is No. 3, and the decoder can be directly operated with the No. 3 car number.

## Precautions

- Do not place any conductive materials (liquid, metal...) on the decoder.
- Please install the vehicle when the power is off during installation.
- Do not remove or replace any components under the decoder.
- The overall output of the chip should not exceed 1000mA.
- The occurrence of the above situation will cause the decoder to be damaged.
- This product is not a toy, please do not give it to 14-year-old children.