DN147K2

Fits many Kato N-locomotives

N Scale

Mobile Decoder
1.0 Amp/2 Amps Peak
4 FX³ Functions, 200ma output

Features:

- Drop-in light board replacement decoder for Kato "K2" form-factor boards, allows decoder to be moved between different locomotives.
- Series 7 Enhanced Decoder Features.
- XF expanded function capability, allows user remap of function keys 0-28 to function output leads.
- Firmware may be user updated using a Digitrax USB equipped Command Station with Sound Loader software in decoder IPL mode.
- 4 Digitrax FX³ Functions-Control lights and functions for prototypical lighting effects and on/off control.
- Configurable FX³ Pulse Function available on all function outputs.
- On board white leds for headlights.
- Digitrax LocoMotion® System Lets your trains run like the real thing!
- 2 Digit and 4 Digit Addressing.
- Basic, Advanced & UniVersal Consisting.
- SuperSonic motor drive for silent operation.
- Direct and Operations Mode programming.
- Program CVs using any Digitrax Compatible Control system without having to buy any extra equipment. Decoder Reset by CV8.
- Transponder Equipped ready for transponding ID on your layout.
- Power-on Motor Isolation Protection, helps prevent damage to your decoder.
- DCC Compatible.
- FCC Part 15, Class B RFI compliant.
- Operates on DCC track voltage typical 9V minimum. to 22V maximum.

Parts List:

1 DN147K2 Kato "K2" style light board replacement decoder,

1 Instruction Sheet

CAUTION: This "K2" form factor decoder fits many older legacy Kato N-locomotives. More recent versions of the same shell/locomotive type may require a different decoder. Check before purchasing.

Installation Instructions:

Visit <u>www.digitrax.com</u> for the latest information and technical updates. Refer to Figure 1 for the decoder layout.

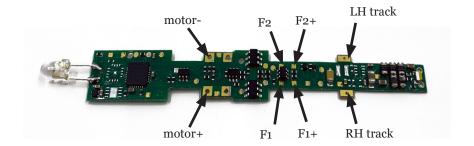


Figure 1: DN147K2 Decoder showing Track/Motor, Function pads

To install, follow these steps:

- 1. Carefully remove the Locomotive shell.
- 2. Slide the factory light board to the rear of the locomotive frame, then lift up gently to disengage motor tabs and track pads.
- 3. Transfer the two motor tabs from the factory light board to the motor+ and motor- pads of the decoder.
- 4. Align and place the decoder in to the top of the frames, in the reverse of removal steps and slide the decoder forward until it stops. Be sure the two motor leads go to the inside of the motor tabs, so they are retained and do not short to frame, and will not catch on the replaced shell.
- 5. Place the loco on an active DCC track powered by a compatible DCC system and set to the factory default address o3 to select for testing. Turn on and off the lights/Fo and ensure the leds respond. Test the motor runs.
- 6. After confirming the decoder is functional, carefully replace the locomotive shell, making sure that the decoder and parts are not damaged and nothing shorts to powered frames.

Customizing Your Decoder:

This decoder will initially operate at factory default address o3. For customizing, the following CV table gives the common CVs used by this decoder. Reading CV8 on a programming track, or Digitrax Mainline Operations mode will return CV8 = 129, confirming the decoder is functional.

See the Digitrax web site for more information on programming Series7 and XF CVs.

CV#	Control Usage	Range	Default
1	2 Digit Address	1-127	03
2	Vstart	0-255	0
3	Acceleration Rate	0-32	0
4	Deceleration Rate	0-32	0
5	Vhigh	0-255	255
6	Vmid	0-255	128
7	Product ID- Series7 standard mobile decoder		204
8	Manufacturer ID- Digitrax		129
9	Motor Drive frequency in KHz	4-50	0->16
10	Motor feedback voltage trim	32-127	0->64
11	Packet timeout, in seconds. o= Off	0-60	6
17/18	4 Digit Address		0000
19	Consist 2 digit Address	1-127	О
29	Decoder Primary Configuration		6
33-46	Function to Output Lead mapping		
49	FX setting White/FoF lead	0-255	0
50	FX setting Yellow/FoR lead	0-255	0
65	Kick Start	0-255	0
66	Forward Trim	0-255	127
67-94	Speed Table	0-255	
95	Reverse Trim	0-255	127
120	Decoder type- N-K2 light board		4
253	IPL download version		>5

For F_1/F_2 function pads, the positive F_1+ and F_2+ pads are provided with current setting resistors to connect to e.g. white leds.

Warranty & Repair

Digitrax gives a one year *Warranty* against manufacturing defects for this product. Visit <u>www.digitrax.com</u> for instructions for tech support and returning items for repair.

Please return warranty items directly to Digitrax - DO NOT return items to place of purchase. errors and omissions excepted.



Made in the USA

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Need Support? helpdesk.digitrax.com



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