



## DH187D

Fits many HO locomotives

### HO Scale

Mobile Decoder

Digitrax 9-Pin Harness Socket

1.0 Amp/2 Amps Peak

8 FX<sup>7</sup> Functions, 300ma Output

### Features:

- 9-Pin and 6-pin Harnesses allow decoder to be moved between different locomotives.
- Series 7 Enhanced Decoder Features.
- Firmware may be user updated using a Digitrax USB equipped Command Station with Sound Loader software in decoder IPL mode.
- 8 Digitrax FX<sup>7</sup> Functions-Control lights and functions for prototypical lighting effects and on/off control.
- Configurable FX<sup>7</sup> Pulse Function available on all function outputs.
- Digitrax LocoMotion<sup>®</sup> 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, with or without speed table reset.
- 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 9V minimum. to 22V maximum.

### Parts List:

1 DH187D Mobile Decoder

1 Instruction Sheet

1 9-pin track/motor/function harness

1 6-pin auxiliary connector harness

**Installation Instructions:** Visit [www.digitrax.com](http://www.digitrax.com) for the latest information and technical updates. Refer to Figure 1 for the decoder layout.



**Figure 1: DH187D Decoder** showing 9-pin Track/Motor, Function harness, 6-pin auxiliary function harness.

To install, follow these steps:

1. Isolate the locomotive motor(s) wires from the track feed wires. *Motor connections must be isolated from the track feed or other voltages.* Refer to figure 2 for decoder connections.
2. Connect the 9-pin harness wires; RED to RH track power, BLACK to LH track power, ORANGE to the isolated motor + lead (was connected to RH track) and GRAY to isolated motor - leads.
3. Connect the function wires that are to be used for e.g. lights. Insulate any unused wires so they cannot short to the locomotive frame or track power. Be sure to use current setting resistors with LED lamps. Refer to locomotive documentation for any lamp requirements.
4. The 6 pin auxiliary connector has F3,F4,F5 and F6 wires, and also connections to other items such as a PX-112 power extender.

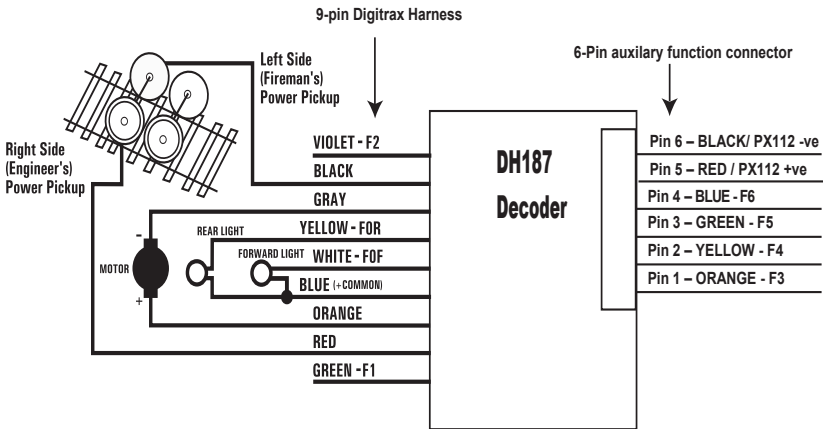
### Customizing Your Decoder:

This decoder will initially operate at factory default address 03. 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 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. 0= Off	0-60	6
17/18	4 Digit Address		0000
19	Consist 2 digit Address	1-127	0
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
51	FX setting Green/F1 lead	0-255	0
52	FX setting Violet/F2 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
113	FX setting F3 lead	0-255	0
114	FX setting F4 lead	0-255	0
115	FX setting F5 lead	0-255	0
116	FX setting F6 lead	0-255	0
120	Decoder type- HO 9-pin /6-pin aux		41
253	IPL download version		>4

**Figure 2:** DH187D: connection diagram



## Warranty & Repair

Digitrax gives a one year *Warranty* against manufacturing defects for this product. Visit [www.digitrax.com](http://www.digitrax.com) 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](mailto:helpdesk.digitrax.com)

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