



DH187P

**Fits many 8-pin Medium Socket
DCC-Ready HO locomotives**

HO Scale

Mobile Decoder
Digitrax 9-Pin Socket and P-Harness
1.0 Amp/2 Amps Peak
8 FX⁷ Functions, 300ma Output

Features:

- 9-Pin and 6-pin Harnesses allow decoder to be moved between different locomotives.
- Digitrax Easy Connect 9 Pin to locomotive DCC Medium-Plug 3” harness
- 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 FX⁷ Functions-Control lights and functions for prototypical light-effects and on/off control.
- Configurable FX⁷ Pulse Function available on all function outputs.
- 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, with or without speed table reset.
- Transponder Equipped ready for transponding ID and Operations Mode CV read-back when your layout is instrumented for Digitrax Transponding.
- 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 DH187 compact HO Mobile Decoder with 9-pin socket
1 Instruction Sheet
1 P-type 9-pin to 8-pin Medium-plug 3” harness
1 6-pin auxiliary connector harness

Installation Instructions: Visit www.digitrax.com for the latest information and technical updates. Refer to Figure 1 for the decoder layout.



Figure 1: DH187P Decoder showing 9-pin Track/Motor, Function harness, 6-pin auxiliary function harness.

To install, follow these steps:

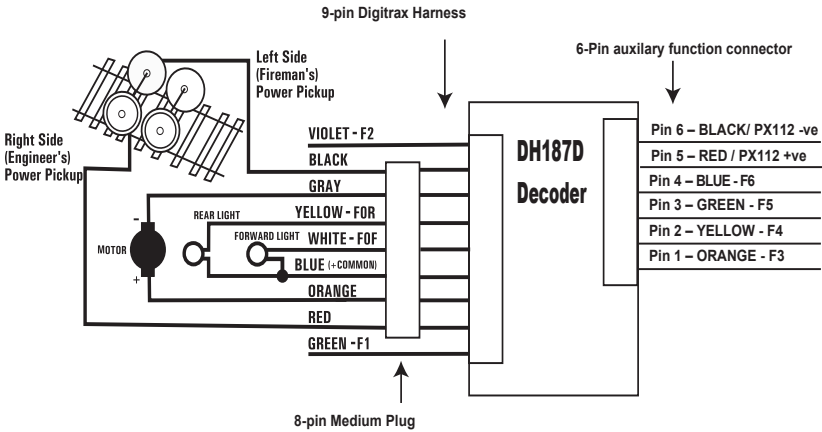
1. Remove the factory analog plug or connection pins to free up the 8-pin Medium socket on the Locomotive PCB. Ensure the 9-pin harness is plugged into the DH187PS socket.
2. Plug in the harness 8-pin Medium plug into the locomotive medium socket. Pin1 on the plug is the orange wire and the pin1 location of the locomotive socket is typically marked. Refer to figure 2 for decoder connections. If the 8-pin plug is rotated 180 degrees the pin1 orange wire will be replaced by the gray wire on the locomotive pin1 position. This will reverse the motor direction for DCC forward. This allows e.g. a normal short-hood forward to be changed to long hood forward, etc.
3. Connect the function F3/F4/F5/F6 wires if they are used for e.g. extra 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 connector allows optional connection of e.g. a PX112 power extender. The PX112 pin1 is the negative/black wire, pin2 is positive/red wire.
5. We recommend testing the installed decoder and locomotive on a programming track with limited current in case of any problems.

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. Set the decoder address you plan to use. 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		>=5

Figure 2: DH187P: connection diagram



Warranty & Repair

Digitrax gives a one year *Warranty* against manufacturing defects for this product. Visit 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



2443 Transmitter Road
Panama City, FL 32404

www.digitrax.com

Need Support?

helpdesk.digitrax.com

DH187P



6 52667 06045 5

307-DH187P-0000