DH167IP

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

HO Scale
Mobile Decoder
Fits Medium 8-pin Socket
1.0 Amp/2 Amps Peak
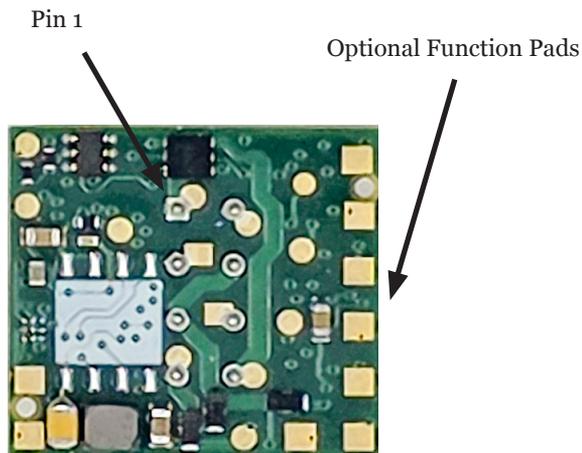6 FX^7 Functions, 300ma Output

Features:

- Integrated DCC Medium Plug for track, motor and function control, allows-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.

- 6 Digitrax FX^7 Functions-Control lights and functions for prototypical lighting effects and on/off control.

- Configurable FX^7 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 DH167IP compact HO Mobile Decoder with Integrated 8 pin Plug
1 Instruction Sheet

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

Figure 1: DH167IP Decoder *showing decoder from top and Pin 1 position*

Pin 1

Optional Function Pads

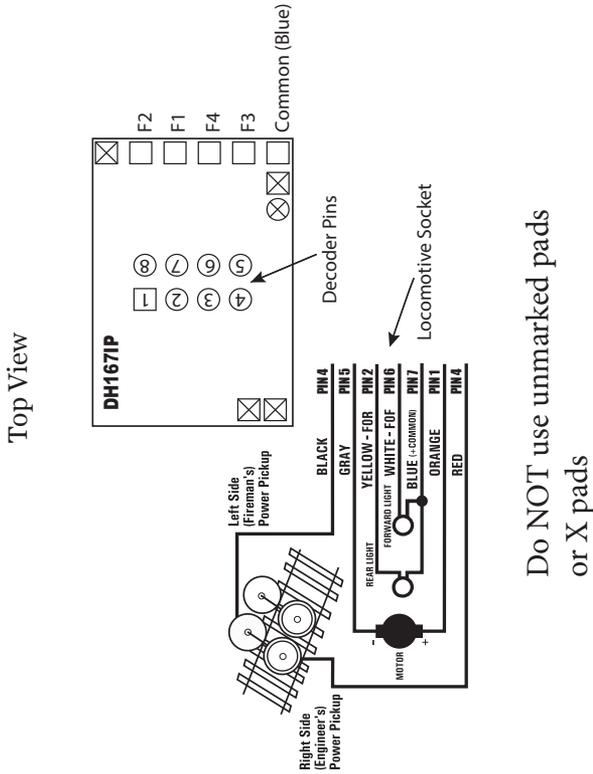To install, follow these steps:

1. Remove the factory analog plug or connection pins to free up the 8-pin Medium socket on the Locomotive PCB.
2. Plug in the 8-pin Integrated Medium plug into the locomotive medium socket. Pin 1 on the decoder has a square pad. Seat the decoder firmly in the socket.
3. Connect the function F1/F2/F3/F4 pads if they are used for e.g. extra lights. Be sure to use current setting resistors with LED lamps. Refer to locomotive documentation for any lamp requirements.
4. 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/F0F lead	0-255	0
50	FX setting Yellow/F0R 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 Interface HO – 8pin medium plug		44
253	IPL download version		>=13

Figure 2: DH167IP: connection diagram top view

Do NOT use unmarked pads or X pads

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.

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