Digitrax ®

Complete Train Control
Run Your Trains, Not Your Track!

DH123PS

HO Scale

**Fits Many HO
Locomotives**

**Mobile Decoder
DCC Plug 'N Play with 1.0" Harness
1.5 Amp/2 Amp Peak
2 FX³ Functions, 0.5 Amp**

Features:

- **Digitrax LocoMotion® System-**Your locomotives look like the real thing. The Digitrax LocoMotion System makes them run like the real thing, too!
  Torque Compensation for smooth as silk silent operation.
  128 Speed Step operation (14 or 28 steps can also be used).
  Momentum with acceleration and deceleration.
  Normal Direction of Travel is user selectable.
  Switching Speed feature for easier and faster access to yard speeds.
  3 Step Speed Tables set start, mid and max voltage for custom control.
  28 Step Speed Tables with 256 level resolution for precise control.
- **SuperSonic** motor drive for silent operation.
- **FX³** Function outputs for prototypical lighting effects and on/off control:
  Constant Brightness Lighting with directional or independent control.
  Realistic Effects like Ditch lights, Mars lights, strobes, and many more.
  FX³ & Standard Function Qualifiers operate functions based on direction, F0 on or off, direction and F0, and whether loco is moving.
  Function Remapping for custom function setup.
  Master Light Switch turns off all lights & functions with one keystroke.
- **Plug 'N Play** Digitrax 9 Pin to DCC Medium Plug 1.0" harness
- **Transponder ID Equipped** ready for transponding on your Layout
  Compatible with digital surround sound systems
- **All Mode Programming**
- **Decoder Reset CV** with or without speed table reset.
- **Motor Isolation Protection** helps prevent damage to your decoder.
- **Basic, Advanced & UniVersal Consisting**
- **2 Digit and 4 Digit Addressing**
- **DCC Compatible**
- **FCC Part 15, Class B RFI compliant**

Parts List

1 DH123D Decoder	1 Instruction sheet
1 DHWHPS 1" Harness, 9 Pin Plug to DCC Medium Plug	

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Installation Information

See the Digitrax Decoder Manual for complete decoder test procedures, installation instructions, programming and technical information. Digitrax manuals and instructions are updated periodically. Please visit www.digitrax.com for the latest versions, technical updates and additional locomotive-specific installations.

Installation Instructions

1. Carefully remove the locomotive's shell from the frame. Notice the orientation of the shell to the frame so that you can reinstall correctly.
2. The DH123D uses the DHWHP Digitrax Easy Connect 9 Pin Harness System which consists of a 1.0" harness that has a Digitrax 9-pin plug on one end and a DCC medium plug on the other. Remove the jumper plugs from the DCC medium socket on the factory light board and plug in the DCC plug end of the harness.
3. Plug the 9 Pin plug on the DHWHP harness into the socket on the decoder. The plug is notched to fit easily into the socket in only one orientation.
4. Replace the loco shell. You are now ready to run your locomotive. The DH123D is factory programmed to address 03. You can easily customize the address and other features. See section "Customizing Your Decoder" that follows.

Figure 1. DH123PS Wiring Diagram

NOTE: The Violet and Green leads of the harness are not used by this decoder.
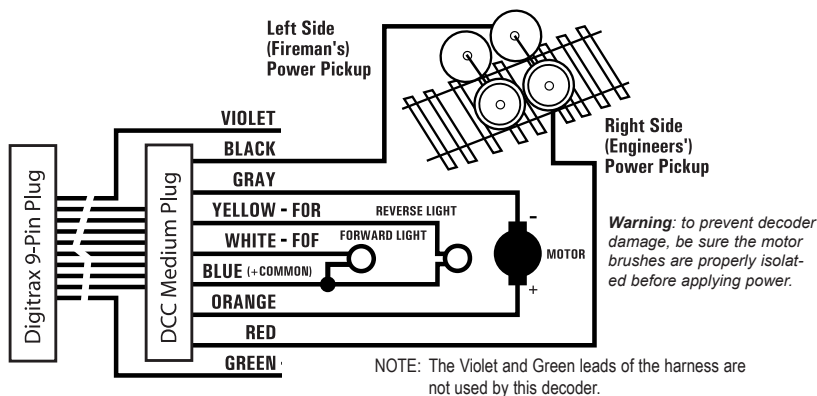
Installation Notes:
1. Do not exceed the decoder's 500mA total function output rating.
2. To use a function output with an inductive (coil) type load, see the Digitrax Decoder Manual for more information to avoid damage to the decoder.
3. See the Digitrax Decoder Manual for full details of wiring 12-16V lamps, 1.5V lamps, and LEDs. Lamps that draw more than 80 mA when running require a 22 ohm 1/4 watt resistor in series with the directional light function lead to protect the decoder.

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Customizing Your Decoder

Your Digitrax decoder is ready to run and will operate using address 03 with no additional programming. For a more prototypical railroading experience, your decoder can be customized for your specific locomotive by programming some of the Configuration Variables, or CVs, available. See the Digitrax Decoder Manual or the Digitrax web site for more information.

Changing the Decoder Address

The first CV most people change is the decoder address. This allows you to independently control each loco with a unique address. Digitrax decoders are shipped with CV01 (AD2), the two digit address, set to 03. Following is a brief description of how to change the decoder address with a Digitrax DT series throttle. See your Starter Set Manual for complete programming instructions.

1. Place the loco on the programming track. Go into Program Mode on your system. On DT400/DT402 press **PROG**. On DT300, DT100 & DT200 press **RUN/STOP & FN/F0.**

2. Choose AD2 for 2 digit addressing or AD4 for 4 digit addressing (DT400/DT402 and DT300). (Ad for DT100 & DT200, see set manual for 4 digit instructions).

3. Choose the address you want to set up for the decoder.

4. Complete address programming. On DT400/DT402 press **ENTER**. On DT300, DT100 & DT200 press **SEL**.

Note: CV29 must also be programmed to enable 4 digit addressing, this is done automatically by the DT400/DT402 & DT300 but not on earlier throttles.

Decoder Reset CV08

Decoder reset lets you reset all CV values to the initial factory settings. To reset all CV values, program CV08 to a value of 008. You also have the option of resetting all values except the 28 speed step tables. To do this, program CV08 to a value of 009.

Warranty & Repair

Digitrax gives a one year *"No Worries" Warranty* against manufacturing defects and accidental customer damage on all Digitrax products.

That's it! A simple, straightforward warranty with no tricky language!

Visit www.digitrax.com for complete warranty details and instructions for returning items for repair.

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DH123PS Decoder
Fits A Variety Of DCC Ready Locos

Go Beyond DCC With Digitrax®

Complete
Train
Control

Main Station

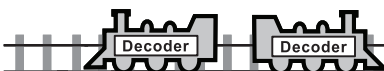Starter Sets
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Your Digitrax LocoNet® Starter Set is just the beginning of an exciting trip! Pick the one that's right for you!

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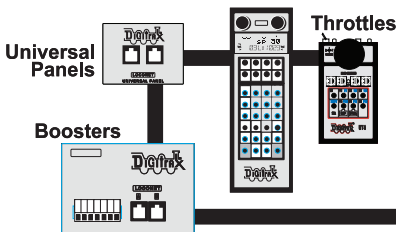**The Digitrax Difference**

Locomotive Shops

Mobile Decoders
Function Decoders
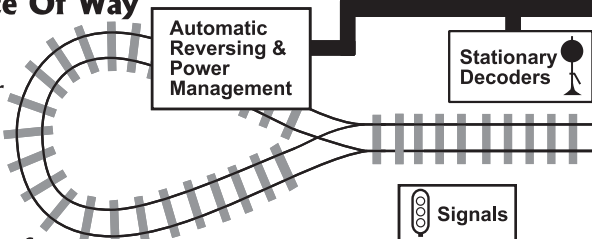SoundFX™ Decoders

Decoder   Decoder

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Advanced & Simple Throttles,
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Universal Panels,
IR and/or Radio
for more trains and operators.

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Boosters

Throttles

Maintenance Of Way

Make your layout more fun & simpler to operate!

Automatic Reversing & Power Management

Stationary Decoders

Computer Controls

Computer Interface
Decoder Programmer
Sound Programmer

Signals

It All Adds Up To
Complete Train Control

Detection   Transponding

8427
87   4123

DH123PS