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DIGITAL COMMAND CONTROL THE WAVE OF THE FUTURE

## DH83

### 2 Amp Digital Command Control Mobile Decoder

*Designed for use with HO, O, S, O-27 & G Scale Locomotives*

2.0 Amp (4.0 Amp Peak) Mobile DCC Decoder

Compatible with the baseline NMRA DCC Standard  
Interoperable with other DCC systems

Open address range with full 236 address capability

User programmable Address, Acceleration, Deceleration,  
Start-voltage & Mid-point voltage

Programmable from DCC compatible equipment without opening the loco

Smooth conversion to analog operation

Controllable constant brightness directional lighting outputs rated at 200ma

Smooth locomotive speed control with user selectable  
14, 28, or 128 forward & reverse speed step capabilities

User loadable speed tables for customized speed control

3 function outputs rated at 200ma

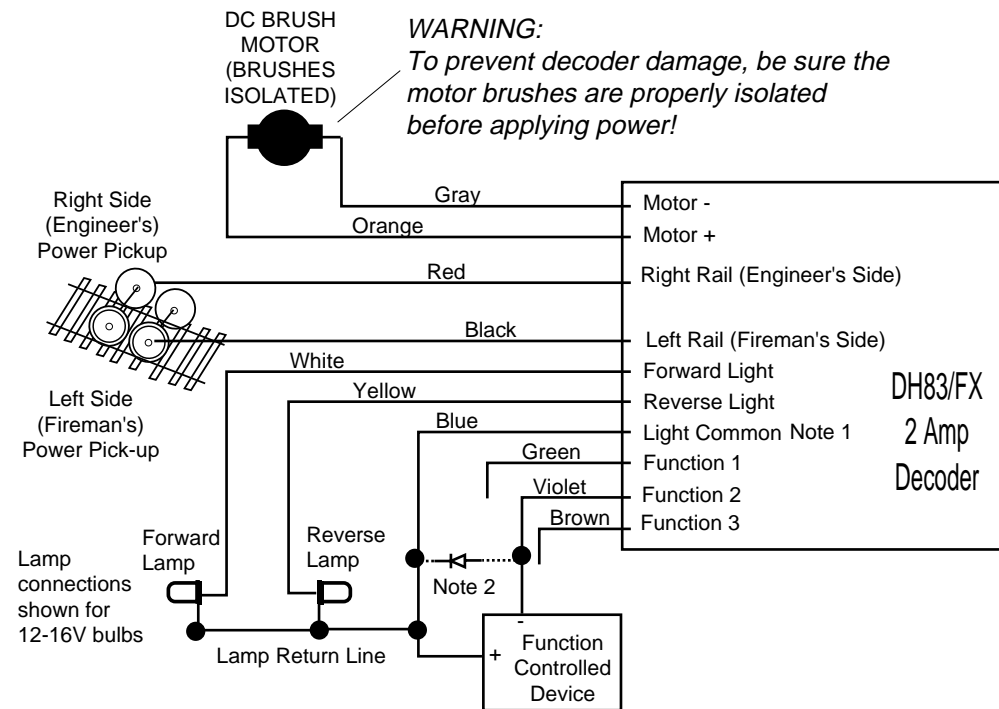
Heavy duty motor drive output  
Actively protected against motor short circuits

Smooth deceleration to stop before changing direction  
when locomotive is reversed while moving



## Decoder Installation Wiring Diagram DH83 & DH83FX

See Digitrax Decoder Users Manual for complete decoder test procedures, installation instructions and technical information. This manual is available at no charge from your dealer. If your dealer is out of these manuals, call Digitrax at (770) 441-7992 and we will gladly send you a copy.



#### Notes:

1. Light Common is the positive lead for "full wave" function power operation. Do not exceed the 200ma rating of the function outputs. If Light Common is not used, power the lamp or function from either track power pick-up for "half-wave" operation by connecting the Lamp Return Line to either track pickup.
2. If you use an inductive(coil) type load, you should place an inductive kick-back suppression diode across the coil with the cathode(banded) end connected to the Light Common side. A small signal diode such as IN4148 or rectifier such as IN4001 is ideal. Be careful because an incorrectly connected diode can damage the function output.
3. See the Decoder Users Manual for full details of wiring 12-16V lamps, 1.5V lamps, & LED's for full and half wave operation. Lamps that draw more than 80ma when running require a 22 ohm 1/4 watt resistor in series with the directional light function lead to protect the decoder.

Damaged decoders should be returned directly to Digitrax for repair.  
The standard repair charge is \$17.