**Digitrax** ®

Complete Train Control
Run Your Trains, Not Your Track!

**FN04: 4 Function FX³ 200ma Decoder**
**Built-in connector for SDH104K1 series SoundFX /motor decoders**

# FN04 FUNCTION DECODER

## Features

- **Four 200mA function outputs for lights or other functions (Peak rating is 250mA)**
- **Each function output can be operated independently**
- **Supports Both 2 Digit & 4 Digit Address Modes**
- **Digitrax FX³ Functions -** Control lights and functions
- **Programmable from DCC compatible equipment**
- **Configurable Strobe feature lets you simulate flashing lights on locos like FRED, Strobes, Mars Lights, etc. on yellow & white leads**
- **Programmable strobe effect & rate of lighting effects on yellow & white leads**
- **Standard on/off function operation on green & violet leads**

![Digitrax logo] **Complete Train Control**
**Run Your Trains, Not Your Track!**

## Parts List
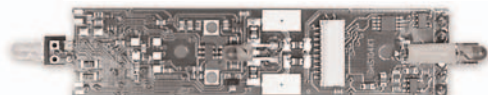
1 FN04 Function Decoder                    1 Instruction sheet
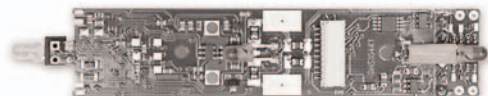
## Installation Information

The Digitrax FN04 Function Decoder has been specifically designed for use on the SDH104K1 series SoundFX decoders. Installation is straight-forward requiring only a soldering iron for attachment. To install the FN04 on a Sound FX decoder simply insert the FN04's 6 pin connector into the corresponding 6 holes in an SDH104K1A, SDH104K1B, or SDH104K1C decoder and solder. See below pictures for futher information:

*Figure 1:* SDH140K1C & FN04 Decoders

Shown: SDH104K1C: Motor/Sound Decoder

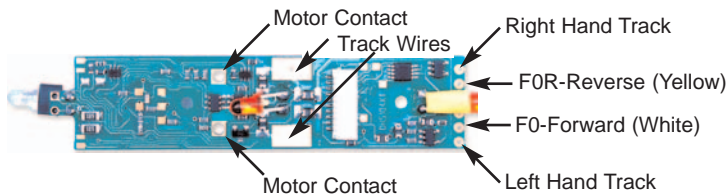FN04:
Function Decoder

SDH104K1C with FN04 Attached

For more reliable operation Digitrax recommends soldering the connections between the two decoders.

*Figure 2:* SDH140K1 Series Decoder Pin outs

Motor Contact
Track Wires
Right Hand Track
F0R-Reverse (Yellow)
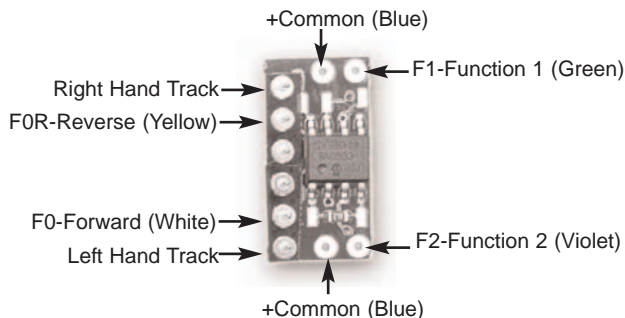F0-Forward (White)
Motor Contact
Left Hand Track

Inputs for external function decoder control to LEDs (Blue/common not needed)

## Function Control Using the FN04 Function Decoder

The SDH104K1 series of decoders have no native function control ability. The FN04 and other Digitrax function decoders can be used in conjunction with the sound and motor decoders if function control is to be used. The LEDs on the SDH104K1 series decoders will not work unless a separate function decoder is installed.

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**Figure 3:** FN04 Function Decoder Outputs



FN04 is set up to control the forward and reverse lights on the locomotive through the white lead and yellow lead using Function 0 (F0F-forward and F0R-reverse) for directional lighting. Functions F1(Green) and F2(Violet) are available on the FN04. To use these functions, solder a wire from the pad for the function you wish to use to the lamp (or other device) you wish to control. The Blue/+Common pad works the same way as the blue wire on the harness and is provided here for convenience. The wire colors indicated are the standard industry color code (you can use any color you like). These colors are important if you plan to use function remapping.

*CAUTION: When adding function wires, be very careful that the wires you add do not come into contact with any other pads or components on the board where they might create a short circuit.*

All four function outputs can be set up with Digitrax FX$^3$ lighting effects or as standard on/off functions with the following operational qualifiers:

1. Forward or Reverse direction of travel, or
2. Whether F0 is on or off, or
3. Both direction of travel and whether F0 is on or off, or
4. Whether the locomotive is stopped or moving.

## Warranty & Repair

All warranties on Digitrax products are limited to refund of purchase price, repair or replacement at Digitrax's sole discretion. Except as expressly stated in the full warranty statement, there are no warranties, express or implied, including but not limited to any warranties of merchantability or fitness for a particular purpose. For complete warranty details see www.digitrax.com.

**Damaged decoders should be returned directly to Digitrax for repair. Incorporates elements of US Patents 6220552, 6545886, 6729584, 6747579, other patents pending.**

**Go Beyond DCC With** **Digitrax** **Complete Train Control**

## Main Station

Starter Sets
LocoNet®
Power Supplies

**RADIO EQUIPPED** Available

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

*Super* Chief™

*Super* EMPIRE BUILDER™

ZEPHYR™

**LocoNet®**
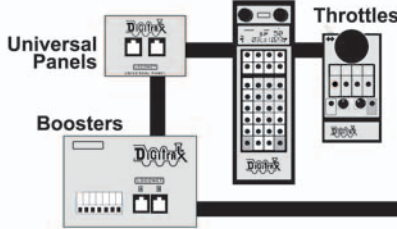**The Digitrax Difference**

## Locomotive Shops

Mobile Decoders
Function Decoders
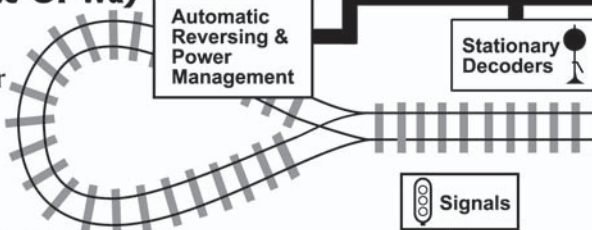SoundFX™ Decoders

Decoder   Decoder

## More Fun For Everyone

Add More Boosters,
Advanced & Simple Throttles,
Power Supplies,
Universal Panels,
IR and/or Radio
for more trains and operators.

**Universal Panels**
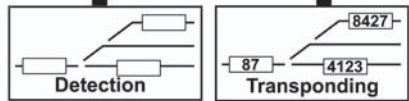
**Throttles**

**Boosters**

## Maintenance Of Way

Make your layout more fun & simpler to operate!

**Automatic Reversing & Power Management**

**Stationary Decoders**

## Computer Controls

Computer Interface
Programmer

**Signals**

## It All Adds Up To Complete Train Control

**Detection**

**Transponding**
8427
87   4123

FN04K1 FUNC DEC

1k/01/09

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