

# Digitrax Decoder Specification Sheet

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## SDXN146K1E Premium 16-Bit SoundFX Mobile Decoder



<b>Physical Size</b>	0.426" x 3.11" x 0.195" 10.9mm x 79.0mm x 4.7mm	<b>Current Rating</b>	1.25/2.0 Amps
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Interface	Decoder End	Wires	Locomotive End/Plug
Board Repl	Board Replacement	None	Board Replacement

<b># Functions</b>	4	<b>Function Current Rating</b>	500mA	<b>Function Type</b>	FX <sup>3</sup>
<b>Prod Date</b>	12/15/2016	<b>Discontinued</b>	Current	<b>Replaced By</b>	Current
<b>MSRP</b>	US\$85.00	<b>Feature Set</b>	Series 6	<b>SKU</b>	

**FX<sup>3</sup> decoders** have motor isolation protection. If the decoder senses that the motor is not isolated, it will not run the motor. In this case, you will be able to control the loco's functions but the motor will not work.

CV#	Used For	Range	Default Value
01	2 Digit Address		03
11	Sound Time Out, 06=Sound ends when loco address is de-selected, 00=Sound stays on after loco is de-selected		06
29	Configuration Register – Advanced or Standard speed steps, 2 or 4 digit addressing, Analog Mode, Normal direction of travel, speed tables		06
49	Forward Light (FOF) - Headlight		00
50	Reverse Light (FOR) – Reverse Light		00
51	Function 1		
52	Function 2		00
58	Master Volume (F8 used for Mute) 1=min 00=max	00-15	09
60	Scheme 0=Steam 1=GP38	00-01	00
132	Steam Chuff/CAM config, 128=>EXT cam, 1-127=>DRIVER dia in inches	01-128	63
134	Steam Gear Ration Trim, 32 = 100% Ratio	00-255	32
135	Mute Volume	00-64	00
140	Prime Mover / Chuff Volume	00-64	60
141	Bell Volume	00-64	25
142	Horn/Whistle Volume	00-64	60
143	Time-Scattered Air Effects Volume	00-64	30
145	Misc Vols	00-64	40
146	Bell Ring Rate (1=24 milliseconds)	01-100	07
147	Air Drier Rate (1-about 2 seconds)	01-64	02
148	Compressor Run Rate	00-255	30
149	Air Compress On Time	00-255	20
150	Horn/Whistle Setup (Default=0, Playable Horn=1, Alternate Horn=2=128 for playable volume.)	00-07 or 128-135	00
151	Auto Coupler Sequence Threshold Value-Peak speed to allow auto coupler/brake when direction change occurs and F3 is on	00-64	60
152	Project Author ID, Digitrax=221		221
153	Project ID, Steam/SD38-2		02
154	Steam Blow Down / Safety Volume	0-64	60
155	Notching/Slip Mode: 00=Automatic		00
157	Bell Selector	00-03	00

<b>Function</b>	<b>Used For</b>	<b>Notes</b>
F0	Lights	
F1	Bell	
F2	Horn/Whistle	CV150 sets mode
F3	Coupler crash	Auto coupler/brake set by CV151 max speed
F4	Air Feature disabled	F4 off enables pop-off, drier and starts compressor/airpump
F5	Diesel = Dynamic brake Fans Steam = Water Pump turbine	
F6	Diesel = Notch Up Steam = Blowdown	Notch UP if CB155=01 or 02
F7	Crossing Gate Airhorn or; Diesel = Notch DOWN Steam = Wheelslip	Notch DOWN, if CV155 = 01 or 02 (Crossing Gate active in Diesel mode and CV155=0)
F8	Mute Control	F8 ON is mute
F9	Brake squeal	
F10	Crossing Gate Airhorn Sequence	
F11	Steam = Greaser	
F12	Steam = Safety Blowoff	

<b>CV60 set to</b>	<b>Sound Scheme</b>	<b>CV150 set to</b>	<b>CV 157 set to</b>
0	GP38 Diesel	0= default 1-7= alt horns 128-135 = Playable horns	0=Default 1-3 = alt bells
1	GE Evolution Diesel	1= default 0-7= alt horns 128-135 = Playable horns	0=Default 1-3 = alt bells
2	SD70 Diesel	2= default 0-7= alt horns 128-135 = Playable horns	0=Default 1-3 = alt bells
3	GP10 Diesel	3= default 0-7= alt horns 128-135 = Playable horns	0=Default 1-3 = alt bells
4	RS1 Diesel	4= default 0-7= alt horns 128-135 = Playable horns	0=Default 1-3 = alt bells
5	C420 Diesel	5= default 0-7= alt horns 128-135 = Playable horns	0=Default 1-3 = alt bells
6	Steam type 1 (based on 3985)	0= default 0-2= alt whistles 128-130 = Playable horns	0=Default 1-3 = alt bells
7	Steam type 2 (based on K27)	1= default 0-2= alt whistles 128-130 = Playable horns	0=Default 1-3 = alt bells

Information provided here is correct to the best of our knowledge.

