

Decoder Comparison Matrix (See explanation of terms on the back)

November 2004



Scale	Mfg	Model Name	Wired	JST Header	Internal 8-pin Plug	NMRA 8-pin Plug	NMRA Small Plug	PnP	Max Motor Current	Peak Motor Current	# Functions	Standard Function	Special FX	Standard Motor Drive	Silent	Back EMF	Length	Width	Height	Factory Reset	NMRA Compatible	NMRA Conformance	MFG Warranty	MSRP	
Z	Digitrax	DZ123	X						1	2	2		X	X	X		0.57	0.38	0.13					\$15.95	
Z	Digitrax	DZ123PS					X		1	2	2		X	X	X		0.57	0.38	0.13					\$19.50	
Z	Digitrax	DZ143	X						1	1.5	4		X	X	X		.36"	.55"	.13"		X		A	\$34.95	
Z	Digitrax	DZ143PS	X			X			1	1.5	4		X	X	X		.36"	.55"	.13"		X		A	\$37.95	
N	Digitrax	DN123IP NOT YETRELEASED																						\$15.95	
N	Digitrax	DN163K2					X		1.5	2	6		X	X	X		3.11"	.426"	.195"	X	X		A	\$29.75	
N	Digitrax	DN163PS NOT YET RELEASED																						\$27.50	
N	Digitrax	DN122K2 (Kato RDC)					X		1	1.5	2		X								X		A	\$44.95	
N	Digitrax	DN141E2 (ER Sharknose)					X		1	1.5	4		X	X	X						X		A	\$45.99	
N	Digitrax	DN163A0 (Ati U25b)					X		1	1.5	6		X	X	X						X	X	A	\$34.95	
N	Digitrax	DN163A1 (Ati SD50)					X		1	1.5	6		X	X	X						X	X	A	\$34.95	
N	Digitrax	DN163K0a (Kato P42)					X		1	1.5	6		X	X	X						X	X	A	\$34.95	
N	Digitrax	DN163K0b (Kato F3 A+B)					X		1	1.5	6		X	X	X						X	X	A	\$34.95	
N	Digitrax	DN163K1A (Kato)					X		1	1.5	6		X	X	X						X	X	A	\$34.95	
N	Digitrax	DN163K0a (Kato SD80/90MAC)					X		1	2	6		X	X	X						X	X	A	\$34.95	
N	Digitrax	DN163MO (Micro Trains)					X		1	1.5	6		X	X	X						X	X	A	\$34.95	
HO	Digitrax	DH123D	X	X					1.5	2	2		X	X			.66"	1.2"	.25"		X		A	\$19.95	
HO	Digitrax	DH123P/PS	X	X					1.5	2	2		X	X			.66"	1.2"	.25"		X		A	\$22.99	
HO	Digitrax	DH123AT	X	X					1.5	2	2		X	X			.66"	1.2"	.25"		X		A	\$24.99	
HO	Digitrax	DH163D	X	X					1.5	2	6		X	X	X		.66"	1.2"	.25"		X	X	A	\$29.99	
HO	Digitrax	DH163P/PS	X	X		X			1.5	2	6		X	X	X		.66"	1.2"	.25"		X	X	A	\$32.99	
HO	Digitrax	DH163AT	X	X					1.5	2	6		X	X	X		.66"	1.2"	.25"		X	X	A	\$34.99	
HO	Digitrax	DH163LO (LL GP30)			X		X		1.5	2	6		X	X	X						X	X	A	\$29.99	
HO	Digitrax	DH163A0 (Ati diesel)					X		1.5	2	6		X	X	X						X	X	A	\$29.99	
HO	Digitrax	DH163K0 (Kato diesel)					X		1.5	2	6		X	X	X						X	X	A	\$33.99	
HO	Digitrax	DH163IP			X	X			1.5	2	6		X	X	X		.66"	1.2"	.25"		X	X	A	\$29.99	
S/O/G	Digitrax	DG383AR (Aristocraft)					X		3.5	5	8		X	X							X		A	\$59.99	
S/O/G	Digitrax	DG583AR (Aristocraft)					X		5	10	8		X	X	X						X		A	\$64.99	
S/O/G	Digitrax	DG583S	X						5	10	8		X	X	X						X		A	\$66.99	
N	Lenz	LE062XF					X		1	B	2			X	X						X	X	X	A	\$26.95
HO/G	Lenz	LE135	X						1.3	B	3		X	X			1.12"	.83"	.22"		X	X	X	A	\$67.95
HO	Lenz	LE1035MP				X			1	B	4		X	X	X		.85"	.65"	.26"		X	X	X	A	\$31.95
HO	Lenz	LE1035WH		X					1	B	4		X	X	X		.85"	.65"	.26"		X	X	X	A	\$31.95
N/Z	Lenz	LE0511	X						0.5	B	2		X	P	X		.52"	.36"	.14"		X	X	X	A	\$28.95
N/Z	Lenz	LE0521	X						0.5	B	2		X		X		.51"	.36"	.14"		X	X	X	A	\$49.95
N	Lenz	LE0521D					X		0.5	B	2		X		X		.51"	.36"	.14"		X	X	X	A	\$49.95
HO	Lenz	LE10000	X						1	B	1		X				.9"	.63"	.13"		X	X	X	A	\$15.95
HO	Lenz	LE1014-JST	X	X					1	B	4		X	P	X		1.4"	.63"	.19"		X	X	X	A	\$21.95
HO	Lenz	LE1014-WH	X						1	B	4		X	P	X		1.3"	.63"	.14"		X	X	X	A	\$22.95
HO	Lenz	LE1014-MP	X			X			1	B	4		X	P	X		1.3"	.63"	.14"		X	X	X	A	\$22.95
HO	Lenz	LE1024W	X						1	B	4		X		X		1.24"	.64"	.14"		X	X	X	A	\$32.95
HO	Lenz	LE1024MP	X			X			1	B	4		X		X		1.24"	.64"	.14"		X	X	X	A	\$32.95
HO	Lenz	LE1025XF-JST		X					1	B	4		X		X		.88"	.62"	.25"		X	X	X	A	\$31.95
HO	Lenz	LE1025XF-WH	X	X					1	B	4		X		X		.88"	.62"	.25"		X	X	X	A	\$33.95
HO	Lenz	LE1025XF-MP/LP		X		X			1	B	4		X		X		.88"	.62"	.25"		X	X	X	A	\$36.95
HO/G	Lenz	LE1835	X						1.8	B	4		X				1.5"	.69"	.16"		X	X	X	A	\$39.95
N	NCE	N12A1					X		1.3	2	2		X	X			2.65"	.37"	.12"		X		A	\$25.95	
N	NCE	N12A0					X		1.3	2	2		X	X			2.65"	.37"	.12"		X		A	\$25.95	
N	NCE	N12SR	X						1	1.25	2		X	X			.34"	.70"	.12"		X		A	\$34.95	
N	NCE	N12SRP				X			1	1.25	2		X	X			.34"	.70"	.12"		X		A	\$29.95	
N	NCE	NIMFT-A					X		1	1.25	2		X	X							X		A	\$25.95	

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N	NCE	NIMFT-B						X	1	1.25	2		X	X						X		A	\$25.95	
N	NCE	N141P			X			X	1.3	2	4		X	X	X		1.0"	.38"	.13"	X		A	\$29.95	
N	NCE	N14SR	X						1.3	2	4		X	X	X		1.0"	.38"	.13"	X		A	\$29.95	
N	NCE	N14SRP	X						1.3	2	4		X	X	X		1.0"	.38"	.13"	X		A	\$29.95	
HO	NCE	ATL-S4						X	1.3	2	2		X	X							X		A	\$29.95
HO	NCE	P2K-SR			X	X		X	1.3	2	4		X		X		1.9"	.63"	.12"	X		A	\$29.95	
HO	NCE	KRS-SR			X	X		X	1.3	2	4		X		X		1.9"	.65"	.12"	X		A	\$29.95	
HO	NCE	SW9SR						X	1.3	2	3		X		X						X		A	\$29.95
HO	NCE	D13SR	X						1.3	2	3		X	X	X		1.6"	.67"	.13"	X		A	\$24.95	
HO	NCE	D13SRp				X			1.3	2	3		X	X	X		1.6"	.67"	.13"	X		A	\$29.95	
HO	NCE	D13SRJ	X	X					1.3	2	4		X	X	X		1.68"	.63"	.25"	X		A	\$19.95	
HO	NCE	D14SRp			X				1.3	2	4		X	X	X		.90"	.63"	.13"	X		A	\$29.95	
HO	NCE	D15SR	X	X					1.3	2	5		X	X	X		1.08"	.63"	.27"	X		A	\$29.95	
HO	NCE	D15SRp		X		X			1.3	2	5		X	X	X		1.08"	.63"	.27"	X		A	\$34.95	
HO	NCE	DASR (Atl/Kato diesel)						X	1.3	2	4		X	X	X						X		A	\$29.95
O/S/G	NCE	D408SR	X	X					4	8	8		X	X	X		2.25"	1.20"	.35"	X		A	\$89.95	
O/S/G	NCE	D808SR	X	X					8	30	8		X	X	X						X		A	\$129.95
N	TCS	M1	X						1	2	2		X			X	.565"	.35"	.125"	X	X	A	\$19.95	
N	TCS	M1P				X			1	2	2		X		X		.565"	.35"	.125"	X	X	A	\$25.95	
N	TCS	M2	X						1	2	3		X		X		.57"	.355"	.135"	X	X	A	\$32.95	
N	TCS	MC2					X	X	1	2	2		X		X		.71"	.41"	.19"	X	X	A	\$26.95	
HO	TCS	T1P		X		X			1.3	2	2		X		X		1.0"	.68"	.25"	X	X	A	\$19.95	
HO	TCS	A1						X	1.3	2	4		X		X						X	X	A	\$24.95
HO	TCS	T1	X	X					1.3	2	2		X		X		1.0"	.68"	.25"	X	X	A	\$19.95	
HO	TCS	T2	X	X					1.3	2	5		X		X		1.0"	.68"	.25"	X	X	A	\$32.95	
HO	TCS	T2P		X		X			1.3	2	5		X		X		1.0"	.68"	.25"	X	X	A	\$37.95	
HO	TCS	TH150W	X		X				1.3	2	5		X		X		.7"	.85"	.2"	X	X	A	\$34.95	
HO	TCS	TH150DP (LL GP30)						X	1.3	2	5		X		X						X	X	A	\$29.95
HO	TCS	TH141	X	X					1.3	2	4		X		X		1.0"	.68"	.25"	X	X	A	\$29.95	
HO	TCS	TH141P		X		X			1.3	2	4		X		X		1.0"	.68"	.25"	X	X	A	\$35.95	

Explanation of Decoder Terms

Scale

The Size of the locomotive the decoder is designed for, HO, Z, N, O/G/S.

Mfg

Name of the manufacture for the specific Decoder, Tony's, Digitrax, North Coast Eng, Lenz, TCS, Zimo.

Model Name (PnP Loco)

The manufacture's identification for the decoder. The parenthesis indicate Plug and Play locomotive application, see below.

Wired

Indicates wires from the decoder to be soldered to motor contacts, pick-up and lites.

JST Header

A small female straight 9 pin micro connector mounted to the decoder circuit board. This connector accepts various wire harnesses that have the JST male connector like the Digitrax DHWHP.

Internal Plug

Indicates the decoder has an 8 pin NMRA plug mounted directly on the board.

NMRA Plug

Indicates the decoder has NMRA plug either on the board itself or at the end of the wire harness.

PnP (Plug and Play)

Indicates the decoder can be installed by simple plug-in play steps.

Max Motor Current

Indicates the maximum motor amperage allowed for safe operation of the decoders. Range is from .5 Amps to 5+ Amps! The industry does not provide a standard for measuring max motor current and

practices differ according to mfg.

Peak Motor Current

Indicates the maximum motor peak draw amperage before the decoder is "smoked". Range is from is from .75 Amps to 5+ Amps! The industry does not provide a standard for peak max motor current and practices differ according to mfg.

#Functions

Indicates the number of user programmable functions for the decoder. Functions can be used to operate smoke units, lights, and other on/off devices. Range is from 2 to 12 different functions.

Special FX

Indicates the number of special effects functions that can be programmed into the decoder. These features include, but are not limited to, ditch lites, mars lites, beacon lites and other flashy/prototypical features.

Standard Motor Drive (P)

Indicates the decoder is capable of powering a locomotive comparable to DC performance. Precision glide, (P), indicates smooth low speed performance.

Silent

Indicates the decoder is capable of running the locomotive's motor without the low speed hum associated with typical decoders.

Back EMF

Also known as Load Compensated & Speed Stabilization, Indicates the decoder is capable of running at a constant speed regardless of load. Provides great performance with constant speed on grades or hills and creates superior low speed

control.

Length, Width, and Height

Provides the physical dimensions of the decoder in fractions of inches. Please note Zimo decoders are listed in millimeters. Range is from .1" to 2.5"

Factory Reset

Indicates the decoder has the capability of being returned to the programmed condition it was in upon leaving the factory.

NMRA Compliant

Indicates the decoder's mfg has made every attempt to insure the decoder meets all applicable DCC standards. Does not imply NMRA conforming.

NMRA Conformance

This decoder was submitted to the NMRA C&I Testing and has received an NMRA Conformance Warrant, indicating that the product completely adheres to all NMRA DCC Standards and applicable Recommended Practices.

Manufacturer warranty

A- Lenz Warranty

Year 1- "goof Proof" no cost

Year 2-3 \$3.00 shipping and handling

Year 4+ service charge plus \$3.00 S&H

B- Lenz rates their decoders on long term maximum continuous current for the model the decoder is installed in. The short term peak or stall current can be several times the maximum continuous current.

C: Dimming and blinking only

D: Dimming, blinking, and Ditch