

Common CVs

CV 1: Short address
CV 2: Vstart
CV 3: Acceleration
CV 4: Deceleration
CV 5: Vhigh
CV 6: Vmid

CV 7: Mfg version
CV 8: Mfg ID (list below)

CV 9: Total PVM
CV10: BEMF Cutoff
CV11: Packet timeout
CV13: Alternate mode F1-F8
CV14: Alternate mode F9-F12, FL

CV15-16: Decoder lock
CV17-18: Long address

CV19: Consist address
CV21: Consist active F1-F8
CV22: Consist active F9-12, FL
CV23: Acceleration adjust
CV24: Deceleration adjust

CV29: Decoder configuration

CV30: Error indicator

CV65: Kick start
CV66: Forward trim
CV67-94: Speed table
CV95: Reverse trim

CV105-106: User ID

Manufacturer IDs (CV 8)

1: CML Electronics Limited
2: Train Technology
11: NCE Corporation
12: Wangrow
13: Public Domain/Do-It-Yourself Decoders
14: PSI - Dynatrol
15: Ramfixx Technologies (Wangrow)
17: Advanced IC Engineering, Inc.
18: JMIRI
19: AMW
20: T4T - Technology for Trains GmbH
21: Kreischer Datentechnik
22: KAM Industries
23: S Helper Service
24: MoBaTron.de
25: Team Digital, LLC
26: MBTronik - PiN GiTmBH
27: MTH Electric Trains, Inc.
28: Heljan A/S
29: Mistral Train Models
30: Digsight
31: Brelec
32: Regal Way Co. Ltd
33: Praecipuus
34: Aristo-Craft
35: Elektronik & Modell Produktion
36: DCCConcepts
37: NAC Services, Inc.
38: Broadway Limited Imports, LLC
39: Educational Computer, Inc
40: KATO Precision Models
41: Passmann Modellbahnzubehoer
42: Digirails
43: Ngineering
44: SPROG-DCC

DCC Shortcuts Card v1.2

Model Railroad Hobbyist (mrhmag.com) - Feb 2018 bonus

PRINT OUT AND KEEP
NEAR DCC SYSTEM

Resetting decoder to factory settings (use programming track):

- Set CV 8 to 8: Digitrax, ESU/LokSound, SoundTraxx Tsunami
- Set CV 8 to 33: Lenz
- Set CV 30 to 2: NCE, SoundTraxx DSD, TCS
- Set CV 125 to 1: MRC
- Hardware reset only: QSI (see decoder manual)

Then remove loco from track and put back on track (or power cycle the layout).

LOCO DOESN'T MOVE?

- Put loco on programming track

- Set CV19 to zero and try again

- Still doesn't move? Then ...

- Set CV29 to 2 and set CV1 to value 1-99

- Assign throttle to value in CV1

- Still doesn't move? Then ...

- Try resetting decoder to factory settings (address 3)

- Still doesn't move? Then ...

- Time to send the decoder in for repair

Accessory decoder (**OFF**=mobile on=accessory)

Reserved (not used)

Addressing digits (off=2-digit **ON**=4-digit)

Speed table (**OFF**=none on=use speed table)

DC sensing (**OFF**=none on=run on DC)

Speed steps (off=14 **ON**=28/128)

Reverse direction (**OFF**=normal on=reverse)

GETTING OPTIMUM SLOW SPEED PERFORMANCE

Lubricate and break in your loco. Do the following while the loco is still warm:

- Make sure speed step table in CV67-94 is linear with step 1 = 0 (CV67) and step 28 = 255 (CV94).

- Put the decoder in 28/128 mode and speed table on (50 in CV29). Set CV3, CV4, CV65 all to zero.

- Run the loco, then determine the slowest speed step at which it will keep running.

- Put the speed step value in Vstart (CV2).

- Set the decoder to speed table off (34 in CV29).

- Turn the throttle to speed step 1.

- Play with kick start to get the loco to move consistently at speed step 1. Tweak CV2 up if needed.

- Set CV 5 to desired top speed (128-255 common)

- Set CV 6 to desired mid-speed (40-64 common)

- Now adjust acceleration, deceleration, torque compensation, dithering, or BEMF as desired.

45: ANE Model Co., LTD.
46: GFB Designs
47: Capecom
48: Hornby Hobbies Ltd.
49: Joka Electronic
50: N & Q Electronics
51: DCC Supplies, Ltd
52: Krois-Modell
53: Rautenhaus Digital
54: TCH Technology
55: QElectronics GmbH
56: LDH
57: Rampino Elektronik
58: KRES GmbH
59: Tam Valley Depot
60: Bluecher Electronic
61: TrainModules
62: Tams Elektronik GmbH
63: Noarail
64: Digital Bahn
65: Gaugemaster
66: Railnet Solutions, LLC
67: Heller Modenbahn
68: MAWE Elektronik
69: E-Modell
70: Rocrail
71: New York Byano Limited
72: MTB Model
73: The Electric Railroad Company
74: PpP Digital
75: Digitools Elektronika, Kft
76: Auvidel
77: LS Models Sprl
78: Technologic (train-O-matic)
79: Hattons Model Railways

80: Spectrum Engineering
81: GooVerModels
82: HAG Modelleisenbahn AG
83: JSS-Elektronik
84: Railflyer Model Prototypes, Inc.
85: Uhlenbrock Elektronik GmbH
86: Wekom Engineering, GmbH
87: RR-CirKits
88: HONS Model
89: Projezdny EU
90: Shourt Line
91: Railstars Limited
92: Tawcrafts
93: Kevtronics cc
94: Electronscript, Inc.
95: Sanda Kan Industrial (1981) Ltd.
96: PRICOM Design
97: Doehler & Haas
98: Harman DCC
99: Lenz Elektronik GmbH
100: Trenes Digitales
101: Bachmann Trains
102: Integrated Signal Systems
103: Nagasue System Design Office
104: TrainTech
105: Computer Dialysis France
106: Opherline1
107: Phoenix Sound Systems, Inc.
108: Nagoden
109: Viessmann Modellspielwaren GmbH
110: AXJ Electronics
111: Haber & Koenig Electronics GmbH
112: LS Digital
113: QS Industries
114: Benezan Electronics

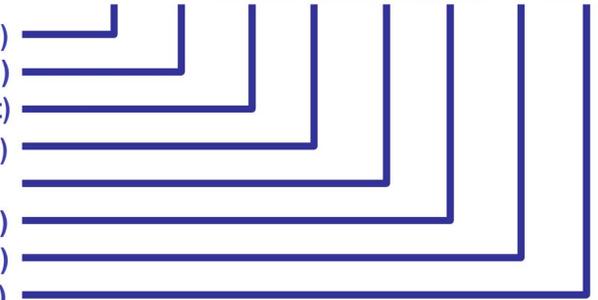
115: Dietz Modellbahntechnik
116: MyLocoSound
117: cT Elektronik
118: MUT GmbH
119: W. S. Ataras Engineering
120: csikos-muhely
122: Berros
123: Massoth Elektronik, GmbH
124: LaisDCC
125: ProfiLok Modellbahntechnik GmbH
126: Möllehem Gårdsproduktion
127: Atlas Model Railroad Co., Inc.
128: Frateschi Model Trains
129: Digitrax
130: cmOS Engineering
131: Trix Modelleisenbahn
132: ZTC Controls Ltd.
133: Intelligent Command Control
134: LaisDCC
135: CVP Products
136: NYRS
138: Train ID Systems
139: RealRail Effects
140: Desktop Station
141: Throttle-Up (Soundtraxx)
142: SLOMO Railroad Models
143: Model Rectifier Corp.
144: DCC Train Automation
145: Zimo Elektronik
146: Rails Europ Express
147: Umelec Ing. Buero
148: BLOCKsignalling
149: Rock Junction Controls
150: Wm. K. Walthers, Inc.
151: Electronic Solutions Ulm GmbH & Co KG

CV Bit Mapping

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
128	64	32	16	8	4	2	1

CV 29

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0



MRH DCC SPONSORING ADVERTISER URLS (alphabetical):

Accu-Lites acculites.com
Berrett Hill berrethillshop.com
Digitrax digitrax.com
ESU/Loksound loksound.com
Iowa Scaled Engineering iascaled.com
Model Rectifier Corp modelrectifier.com
Litchfield Station litchfieldstation.com
SoundTraxx soundtraxx.com
Southern Digital sodigi.com
Streamlined Backshop sbs4dcc.com
Tam Valley Depot tamvalleydepot.com
Tonys Trains tonystrains.com
Train Control Systems tcsdcc.com
Traintek traintekllc.com

153: Train Control Systems
154: Dapol Limited
155: Gebr. Fleischmann GmbH & Co.
156: Nucky
157: Kuehn Ing.
158: Fucik
159: LGB (Ernst Paul Lehmann Patentwerk)
160: MD Electronics
161: Modelleisenbahn GmbH (formerly Roco)
162: PIKO
163: WP Railshops
164: drM
165: Model Electronic Railway Group
170: AuroTrains
173: Arnold - Rivarossi
186: br/AWA Modellspielwaren GmbH & Co.
204: Con-Com GmbH
225: Elproma Electronics Poland
238: NMRA reserved

mrhmag.com

Brought to
you by

MRH
MODEL RAILROAD HOBBYIST