



ID: TRIX 498.104
Filename: TRIX_498_104.xml
Road Name: Albatros
Road Number: 498.104
Manufacturer: TRIX
Owner: Martin Horak
DCC Address: 3
Decoder Model: 60975
Decoder Family: Märklin mSD/3

FUNCTION LABELS

<i>Function</i>	<i>Description</i>
0 (locked)	Headlights
1 (locked)	Smoke generator (Aux1)
2 (locked)	Operating Sounds
3 (locked)	Whistle
4 (locked)	Deactivate ABV
5 (locked)	Physical Functions (Aux 3)
6 (locked)	Physical Functions (Aux 4)
7 (locked)	Bell
8 (locked)	Telex coupler (Aux2)
9 (locked)	Squealing Brakes off
10 (locked)	Coal Shoveling
11 (locked)	Short Whistle
12 (locked)	Station Announcements
13 (locked)	Rocker Grate
14 (locked)	Rail Joints
15 (locked)	Conductor Whistle

Basic

<i>Field</i>	<i>Setting</i>
Primary Address (CV1)	3
Address Format (CV29)	Short (one byte) address
Extended Address (CV17)	128
Advanced Consist Address (CV19)	0
Locomotive Direction (CV29)	normal
Speed Steps (CV29)	28/128 speed step format (recommended)
Power Source Conversion (CV29)	DC conversion enabled
User ID #1 (0-255) (CV105)	0
User ID #2 (0-255) (CV106)	0
Manufacturer ID (CV8)	131
Decoder Version (CV7)	3

Motor

<i>Field</i>	<i>Setting</i>
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Acceleration (AV) (CV3)	9
Deceleration (BV) (CV4)	9
Motor type (CV52)	Motor – direct current DC hard
Motor Controller (CV48)	PID Controller
BEMF Control Range (CV56)	150
BEMF Reference Voltage (CV53)	90
BEMF Parameter 'K' (CV54)	60
BEMF Parameter 'I' (CV55)	55
BEMF Parameter 'D' (CV165)	0
Slow Limit (CV166)	200
BEMF Parameter Slow 'K' (CV167)	0
BEMF Parameter Slow 'I' (CV168)	0
BEMF Parameter Slow 'D' (CV169)	0
PWM-Start (CV170)	200
EMF-Maximum (CV171)	143
PWM-Offset (CV172)	90
Motor output (CV51)	normal
Track output (CV51)	normal

Basic Speed Control

Field	Setting
Vstart (CV2)	5
Vhigh (CV5)	194

Speed Table

Field	Setting
Speed Table (CV67)	1,3,7,10,14,18,23,29,36,43,50,59,69,79,89, 100,111,122,133,146,159,172,186,198,212, 225,240,255
Forward Trim (CV66)	128
Reverse Trim (CV95)	128

Function Map

Field	Setting
First Available Line : (CV33)	39
Write Line (CV37)	0
Trigger (CV34)	F0
Trigger 0 (CV17.0.260)	F0
Trigger 1 (CV17.0.263)	F0
Trigger 2 (CV17.0.266)	F1
Trigger 3 (CV17.0.269)	F2
Trigger 4 (CV17.0.272)	F4
Trigger 5 (CV17.0.275)	F5
Trigger 6 (CV17.0.278)	F6
Trigger 7 (CV17.0.281)	F7
Trigger 8 (CV17.0.284)	F9
Trigger 9 (CV17.0.287)	Sound 9
Trigger 10 (CV17.0.290)	F0
Trigger 11 (CV17.0.293)	F15
Trigger 12 (CV17.0.296)	F0
Trigger 13 (CV17.0.299)	F12

Trigger 14 (CV17.0.302)	Reserved value 74
Trigger 15 (CV17.0.305)	F0
Trigger 16 (CV17.0.308)	F3
Trigger 17 (CV17.0.311)	F8
Trigger 18 (CV17.0.314)	F10
Trigger 19 (CV17.0.317)	F11
Trigger 20 (CV17.0.320)	F13
Trigger 21 (CV17.0.323)	F14
Trigger 22 (CV17.0.326)	Reserved value 16
Trigger 23 (CV17.0.329)	Reserved value 17
Trigger 24 (CV17.0.332)	Reserved value 18
Trigger 25 (CV17.0.335)	Reserved value 19
Trigger 26 (CV17.0.338)	Reserved value 20
Trigger 27 (CV17.0.341)	Reserved value 21
Trigger 28 (CV17.0.344)	Reserved value 22
Trigger 29 (CV17.0.347)	Reserved value 23
Trigger 30 (CV17.0.350)	Reserved value 24
Trigger 31 (CV17.0.353)	Reserved value 25
Trigger 32 (CV17.0.356)	F0
Trigger 33 (CV17.0.359)	Reserved value 208
Trigger 34 (CV17.0.362)	F12
Trigger 35 (CV17.0.365)	Reserved value 26
Trigger 36 (CV17.0.368)	Reserved value 160
Trigger 37 (CV17.0.371)	Reserved value 161
Trigger 38 (CV17.0.374)	Reserved value 27
Trigger 39 (CV17.0.377)	Empty
Trigger 40 (CV17.0.380)	Empty
Trigger 41 (CV17.0.383)	Empty
Trigger 42 (CV17.0.386)	Empty
Trigger 43 (CV17.0.389)	Empty
Trigger 44 (CV17.0.392)	Empty
Trigger 45 (CV17.0.395)	Empty
Trigger 46 (CV17.0.398)	Empty
Trigger 47 (CV17.0.401)	Empty
Trigger 48 (CV17.0.404)	Empty
Trigger 49 (CV17.0.407)	Empty
Trigger 50 (CV17.0.410)	Empty
Trigger 51 (CV17.0.413)	Empty
Trigger 52 (CV17.0.416)	Empty
Trigger 53 (CV17.0.419)	Empty
Trigger 54 (CV17.0.422)	Empty
Trigger 55 (CV17.0.425)	Empty
Trigger 56 (CV17.0.428)	Empty
Trigger 57 (CV17.0.431)	Empty
Trigger 58 (CV17.0.434)	Empty
Trigger 59 (CV17.0.437)	Empty
Trigger 60 (CV17.0.440)	Empty
Trigger 61 (CV17.0.443)	Empty
Trigger 62 (CV17.0.446)	Empty
Trigger 63 (CV17.0.449)	Empty
Trigger 64 (CV17.0.452)	Empty
Trigger 65 (CV17.0.455)	Empty
Trigger 66 (CV17.0.458)	Empty
Trigger 67 (CV17.0.461)	Empty

Trigger 68 (CV17.0.464)	Empty
Trigger 69 (CV17.0.467)	Empty
Trigger 70 (CV17.0.470)	Empty
Trigger 71 (CV17.0.473)	Empty
Trigger 72 (CV17.0.476)	Empty
Trigger 73 (CV17.0.479)	Empty
Trigger 74 (CV17.0.482)	Empty
Trigger 75 (CV17.0.485)	Empty
Trigger 76 (CV17.0.488)	Empty
Trigger 77 (CV17.0.491)	Empty
Trigger 78 (CV17.0.494)	Empty
Trigger 79 (CV17.0.497)	Empty
Condition (CV35)	High level
Trigger Condition 0 (CV17.0.261)	High level
Trigger Condition 1 (CV17.0.264)	High level
Trigger Condition 2 (CV17.0.267)	High level
Trigger Condition 3 (CV17.0.270)	High level
Trigger Condition 4 (CV17.0.273)	High level
Trigger Condition 5 (CV17.0.276)	High level
Trigger Condition 6 (CV17.0.279)	High level
Trigger Condition 7 (CV17.0.282)	High level
Trigger Condition 8 (CV17.0.285)	High level
Trigger Condition 9 (CV17.0.288)	High level
Trigger Condition 10 (CV17.0.291)	High level
Trigger Condition 11 (CV17.0.294)	High level
Trigger Condition 12 (CV17.0.297)	High level
Trigger Condition 13 (CV17.0.300)	Low level
Trigger Condition 14 (CV17.0.303)	High level
Trigger Condition 15 (CV17.0.306)	High level
Trigger Condition 16 (CV17.0.309)	High level
Trigger Condition 17 (CV17.0.312)	High level
Trigger Condition 18 (CV17.0.315)	High level
Trigger Condition 19 (CV17.0.318)	High level
Trigger Condition 20 (CV17.0.321)	High level
Trigger Condition 21 (CV17.0.324)	High level
Trigger Condition 22 (CV17.0.327)	High level
Trigger Condition 23 (CV17.0.330)	High level
Trigger Condition 24 (CV17.0.333)	High level
Trigger Condition 25 (CV17.0.336)	High level
Trigger Condition 26 (CV17.0.339)	High level
Trigger Condition 27 (CV17.0.342)	High level
Trigger Condition 28 (CV17.0.345)	High level
Trigger Condition 29 (CV17.0.348)	High level
Trigger Condition 30 (CV17.0.351)	High level
Trigger Condition 31 (CV17.0.354)	High level
Trigger Condition 32 (CV17.0.357)	Low level
Trigger Condition 33 (CV17.0.360)	High level
Trigger Condition 34 (CV17.0.363)	High level
Trigger Condition 35 (CV17.0.366)	High level
Trigger Condition 36 (CV17.0.369)	High level
Trigger Condition 37 (CV17.0.372)	High level
Trigger Condition 38 (CV17.0.375)	High level
Trigger Condition 39 (CV17.0.378)	High level
Trigger Condition 40 (CV17.0.381)	High level

Trigger Condition 41	(CV17.0.384)	High level
Trigger Condition 42	(CV17.0.387)	High level
Trigger Condition 43	(CV17.0.390)	High level
Trigger Condition 44	(CV17.0.393)	High level
Trigger Condition 45	(CV17.0.396)	High level
Trigger Condition 46	(CV17.0.399)	High level
Trigger Condition 47	(CV17.0.402)	High level
Trigger Condition 48	(CV17.0.405)	High level
Trigger Condition 49	(CV17.0.408)	High level
Trigger Condition 50	(CV17.0.411)	High level
Trigger Condition 51	(CV17.0.414)	High level
Trigger Condition 52	(CV17.0.417)	High level
Trigger Condition 53	(CV17.0.420)	High level
Trigger Condition 54	(CV17.0.423)	High level
Trigger Condition 55	(CV17.0.426)	High level
Trigger Condition 56	(CV17.0.429)	High level
Trigger Condition 57	(CV17.0.432)	High level
Trigger Condition 58	(CV17.0.435)	High level
Trigger Condition 59	(CV17.0.438)	High level
Trigger Condition 60	(CV17.0.441)	High level
Trigger Condition 61	(CV17.0.444)	High level
Trigger Condition 62	(CV17.0.447)	High level
Trigger Condition 63	(CV17.0.450)	High level
Trigger Condition 64	(CV17.0.453)	High level
Trigger Condition 65	(CV17.0.456)	High level
Trigger Condition 66	(CV17.0.459)	High level
Trigger Condition 67	(CV17.0.462)	High level
Trigger Condition 68	(CV17.0.465)	High level
Trigger Condition 69	(CV17.0.468)	High level
Trigger Condition 70	(CV17.0.471)	High level
Trigger Condition 71	(CV17.0.474)	High level
Trigger Condition 72	(CV17.0.477)	High level
Trigger Condition 73	(CV17.0.480)	High level
Trigger Condition 74	(CV17.0.483)	High level
Trigger Condition 75	(CV17.0.486)	High level
Trigger Condition 76	(CV17.0.489)	High level
Trigger Condition 77	(CV17.0.492)	High level
Trigger Condition 78	(CV17.0.495)	High level
Trigger Condition 79	(CV17.0.498)	High level
Direction (CV35)		Both
Trigger Direction 0	(CV17.0.261)	Forward
Trigger Direction 1	(CV17.0.264)	Reverse
Trigger Direction 2	(CV17.0.267)	Both
Trigger Direction 3	(CV17.0.270)	Both
Trigger Direction 4	(CV17.0.273)	Both
Trigger Direction 5	(CV17.0.276)	Both
Trigger Direction 6	(CV17.0.279)	Both
Trigger Direction 7	(CV17.0.282)	Both
Trigger Direction 8	(CV17.0.285)	Both
Trigger Direction 9	(CV17.0.288)	Both
Trigger Direction 10	(CV17.0.291)	Both
Trigger Direction 11	(CV17.0.294)	Both
Trigger Direction 12	(CV17.0.297)	Both
Trigger Direction 13	(CV17.0.300)	Both

Trigger Direction 14	(CV17.0.303)	Both
Trigger Direction 15	(CV17.0.306)	Reverse
Trigger Direction 16	(CV17.0.309)	Both
Trigger Direction 17	(CV17.0.312)	Both
Trigger Direction 18	(CV17.0.315)	Both
Trigger Direction 19	(CV17.0.318)	Both
Trigger Direction 20	(CV17.0.321)	Both
Trigger Direction 21	(CV17.0.324)	Both
Trigger Direction 22	(CV17.0.327)	Both
Trigger Direction 23	(CV17.0.330)	Both
Trigger Direction 24	(CV17.0.333)	Both
Trigger Direction 25	(CV17.0.336)	Both
Trigger Direction 26	(CV17.0.339)	Both
Trigger Direction 27	(CV17.0.342)	Both
Trigger Direction 28	(CV17.0.345)	Both
Trigger Direction 29	(CV17.0.348)	Both
Trigger Direction 30	(CV17.0.351)	Both
Trigger Direction 31	(CV17.0.354)	Both
Trigger Direction 32	(CV17.0.357)	Both
Trigger Direction 33	(CV17.0.360)	Both
Trigger Direction 34	(CV17.0.363)	Both
Trigger Direction 35	(CV17.0.366)	Both
Trigger Direction 36	(CV17.0.369)	Both
Trigger Direction 37	(CV17.0.372)	Both
Trigger Direction 38	(CV17.0.375)	Both
Trigger Direction 39	(CV17.0.378)	Both
Trigger Direction 40	(CV17.0.381)	Both
Trigger Direction 41	(CV17.0.384)	Both
Trigger Direction 42	(CV17.0.387)	Both
Trigger Direction 43	(CV17.0.390)	Both
Trigger Direction 44	(CV17.0.393)	Both
Trigger Direction 45	(CV17.0.396)	Both
Trigger Direction 46	(CV17.0.399)	Both
Trigger Direction 47	(CV17.0.402)	Both
Trigger Direction 48	(CV17.0.405)	Both
Trigger Direction 49	(CV17.0.408)	Both
Trigger Direction 50	(CV17.0.411)	Both
Trigger Direction 51	(CV17.0.414)	Both
Trigger Direction 52	(CV17.0.417)	Both
Trigger Direction 53	(CV17.0.420)	Both
Trigger Direction 54	(CV17.0.423)	Both
Trigger Direction 55	(CV17.0.426)	Both
Trigger Direction 56	(CV17.0.429)	Both
Trigger Direction 57	(CV17.0.432)	Both
Trigger Direction 58	(CV17.0.435)	Both
Trigger Direction 59	(CV17.0.438)	Both
Trigger Direction 60	(CV17.0.441)	Both
Trigger Direction 61	(CV17.0.444)	Both
Trigger Direction 62	(CV17.0.447)	Both
Trigger Direction 63	(CV17.0.450)	Both
Trigger Direction 64	(CV17.0.453)	Both
Trigger Direction 65	(CV17.0.456)	Both
Trigger Direction 66	(CV17.0.459)	Both
Trigger Direction 67	(CV17.0.462)	Both

Trigger Direction 68 (CV17.0.465)	Both
Trigger Direction 69 (CV17.0.468)	Both
Trigger Direction 70 (CV17.0.471)	Both
Trigger Direction 71 (CV17.0.474)	Both
Trigger Direction 72 (CV17.0.477)	Both
Trigger Direction 73 (CV17.0.480)	Both
Trigger Direction 74 (CV17.0.483)	Both
Trigger Direction 75 (CV17.0.486)	Both
Trigger Direction 76 (CV17.0.489)	Both
Trigger Direction 77 (CV17.0.492)	Both
Trigger Direction 78 (CV17.0.495)	Both
Trigger Direction 79 (CV17.0.498)	Both
Movement (CV35)	Both
Trigger Movement 0 (CV17.0.261)	Both
Trigger Movement 1 (CV17.0.264)	Both
Trigger Movement 2 (CV17.0.267)	Both
Trigger Movement 3 (CV17.0.270)	Both
Trigger Movement 4 (CV17.0.273)	Both
Trigger Movement 5 (CV17.0.276)	Both
Trigger Movement 6 (CV17.0.279)	Both
Trigger Movement 7 (CV17.0.282)	Both
Trigger Movement 8 (CV17.0.285)	Both
Trigger Movement 9 (CV17.0.288)	Both
Trigger Movement 10 (CV17.0.291)	Both
Trigger Movement 11 (CV17.0.294)	Both
Trigger Movement 12 (CV17.0.297)	Both
Trigger Movement 13 (CV17.0.300)	Both
Trigger Movement 14 (CV17.0.303)	Both
Trigger Movement 15 (CV17.0.306)	Both
Trigger Movement 16 (CV17.0.309)	Both
Trigger Movement 17 (CV17.0.312)	Both
Trigger Movement 18 (CV17.0.315)	Both
Trigger Movement 19 (CV17.0.318)	Both
Trigger Movement 20 (CV17.0.321)	Both
Trigger Movement 21 (CV17.0.324)	Both
Trigger Movement 22 (CV17.0.327)	Both
Trigger Movement 23 (CV17.0.330)	Both
Trigger Movement 24 (CV17.0.333)	Both
Trigger Movement 25 (CV17.0.336)	Both
Trigger Movement 26 (CV17.0.339)	Both
Trigger Movement 27 (CV17.0.342)	Both
Trigger Movement 28 (CV17.0.345)	Both
Trigger Movement 29 (CV17.0.348)	Both
Trigger Movement 30 (CV17.0.351)	Both
Trigger Movement 31 (CV17.0.354)	Both
Trigger Movement 32 (CV17.0.357)	Both
Trigger Movement 33 (CV17.0.360)	Both
Trigger Movement 34 (CV17.0.363)	Both
Trigger Movement 35 (CV17.0.366)	Both
Trigger Movement 36 (CV17.0.369)	Both
Trigger Movement 37 (CV17.0.372)	Both
Trigger Movement 38 (CV17.0.375)	Both
Trigger Movement 39 (CV17.0.378)	Both
Trigger Movement 40 (CV17.0.381)	Both

Trigger Movement 41	(CV17.0.384)	Both
Trigger Movement 42	(CV17.0.387)	Both
Trigger Movement 43	(CV17.0.390)	Both
Trigger Movement 44	(CV17.0.393)	Both
Trigger Movement 45	(CV17.0.396)	Both
Trigger Movement 46	(CV17.0.399)	Both
Trigger Movement 47	(CV17.0.402)	Both
Trigger Movement 48	(CV17.0.405)	Both
Trigger Movement 49	(CV17.0.408)	Both
Trigger Movement 50	(CV17.0.411)	Both
Trigger Movement 51	(CV17.0.414)	Both
Trigger Movement 52	(CV17.0.417)	Both
Trigger Movement 53	(CV17.0.420)	Both
Trigger Movement 54	(CV17.0.423)	Both
Trigger Movement 55	(CV17.0.426)	Both
Trigger Movement 56	(CV17.0.429)	Both
Trigger Movement 57	(CV17.0.432)	Both
Trigger Movement 58	(CV17.0.435)	Both
Trigger Movement 59	(CV17.0.438)	Both
Trigger Movement 60	(CV17.0.441)	Both
Trigger Movement 61	(CV17.0.444)	Both
Trigger Movement 62	(CV17.0.447)	Both
Trigger Movement 63	(CV17.0.450)	Both
Trigger Movement 64	(CV17.0.453)	Both
Trigger Movement 65	(CV17.0.456)	Both
Trigger Movement 66	(CV17.0.459)	Both
Trigger Movement 67	(CV17.0.462)	Both
Trigger Movement 68	(CV17.0.465)	Both
Trigger Movement 69	(CV17.0.468)	Both
Trigger Movement 70	(CV17.0.471)	Both
Trigger Movement 71	(CV17.0.474)	Both
Trigger Movement 72	(CV17.0.477)	Both
Trigger Movement 73	(CV17.0.480)	Both
Trigger Movement 74	(CV17.0.483)	Both
Trigger Movement 75	(CV17.0.486)	Both
Trigger Movement 76	(CV17.0.489)	Both
Trigger Movement 77	(CV17.0.492)	Both
Trigger Movement 78	(CV17.0.495)	Both
Trigger Movement 79	(CV17.0.498)	Both
Function (CV36)		Front Light
Function Mapping 0	(CV17.0.262)	Front Light
Function Mapping 1	(CV17.0.265)	Rear Light
Function Mapping 2	(CV17.0.268)	Reserved value 129
Function Mapping 3	(CV17.0.271)	Operating Sound
Function Mapping 4	(CV17.0.274)	Deactivate ABV
Function Mapping 5	(CV17.0.277)	Brake Squeal Off
Function Mapping 6	(CV17.0.280)	Reserved value 134
Function Mapping 7	(CV17.0.283)	Reserved value 135
Function Mapping 8	(CV17.0.286)	Switching
Function Mapping 9	(CV17.0.289)	Reserved value 135
Function Mapping 10	(CV17.0.292)	And 1
Function Mapping 11	(CV17.0.295)	Sound 7
Function Mapping 12	(CV17.0.298)	Reserved value 128
Function Mapping 13	(CV17.0.301)	And 1

Function Mapping	14	(CV17.0.304)	Aux 3
Function Mapping	15	(CV17.0.307)	Aux 4
Function Mapping	16	(CV17.0.310)	Sound 1
Function Mapping	17	(CV17.0.313)	Sound 2
Function Mapping	18	(CV17.0.316)	Sound 14
Function Mapping	19	(CV17.0.319)	Sound 9
Function Mapping	20	(CV17.0.322)	Sound 10
Function Mapping	21	(CV17.0.325)	Sound 11
Function Mapping	22	(CV17.0.328)	Sound 12
Function Mapping	23	(CV17.0.331)	Sound 15
Function Mapping	24	(CV17.0.334)	Sound 16
Function Mapping	25	(CV17.0.337)	Sound 17
Function Mapping	26	(CV17.0.340)	Sound 18
Function Mapping	27	(CV17.0.343)	Sound 19
Function Mapping	28	(CV17.0.346)	Sound 20
Function Mapping	29	(CV17.0.349)	Sound 8
Function Mapping	30	(CV17.0.352)	Sound 21
Function Mapping	31	(CV17.0.355)	Sound 4
Function Mapping	32	(CV17.0.358)	And 2
Function Mapping	33	(CV17.0.361)	Reserved value 140
Function Mapping	34	(CV17.0.364)	And 2
Function Mapping	35	(CV17.0.367)	Sound 5
Function Mapping	36	(CV17.0.370)	Reserved value 208
Function Mapping	37	(CV17.0.373)	Reserved value 208
Function Mapping	38	(CV17.0.376)	Sound 6
Function Mapping	39	(CV17.0.379)	None
Function Mapping	40	(CV17.0.382)	None
Function Mapping	41	(CV17.0.385)	None
Function Mapping	42	(CV17.0.388)	None
Function Mapping	43	(CV17.0.391)	None
Function Mapping	44	(CV17.0.394)	None
Function Mapping	45	(CV17.0.397)	None
Function Mapping	46	(CV17.0.400)	None
Function Mapping	47	(CV17.0.403)	None
Function Mapping	48	(CV17.0.406)	None
Function Mapping	49	(CV17.0.409)	None
Function Mapping	50	(CV17.0.412)	None
Function Mapping	51	(CV17.0.415)	None
Function Mapping	52	(CV17.0.418)	None
Function Mapping	53	(CV17.0.421)	None
Function Mapping	54	(CV17.0.424)	None
Function Mapping	55	(CV17.0.427)	None
Function Mapping	56	(CV17.0.430)	None
Function Mapping	57	(CV17.0.433)	None
Function Mapping	58	(CV17.0.436)	None
Function Mapping	59	(CV17.0.439)	None
Function Mapping	60	(CV17.0.442)	None
Function Mapping	61	(CV17.0.445)	None
Function Mapping	62	(CV17.0.448)	None
Function Mapping	63	(CV17.0.451)	None
Function Mapping	64	(CV17.0.454)	None
Function Mapping	65	(CV17.0.457)	None
Function Mapping	66	(CV17.0.460)	None
Function Mapping	67	(CV17.0.463)	None

Function Mapping 68 (CV17.0.466)	None
Function Mapping 69 (CV17.0.469)	None
Function Mapping 70 (CV17.0.472)	None
Function Mapping 71 (CV17.0.475)	None
Function Mapping 72 (CV17.0.478)	None
Function Mapping 73 (CV17.0.481)	None
Function Mapping 74 (CV17.0.484)	None
Function Mapping 75 (CV17.0.487)	None
Function Mapping 76 (CV17.0.490)	None
Function Mapping 77 (CV17.0.493)	None
Function Mapping 78 (CV17.0.496)	None
Function Mapping 79 (CV17.0.499)	None

Lights

Field	Setting
Light output (CV51)	normal
Front Light Mode (CV112)	Dimmable
Front Light Dimmer (CV113)	255
Front Light Period (CV114)	20
Front Light Delay (CV115)	0
Rear Light Mode (CV116)	Dimmable
Rear Light Dimmer (CV117)	255
Rear Light Period (CV118)	20
Rear Light Delay (CV119)	0
Aux 1 Mode (CV120)	Dimmable
Aux 1 Dimmer (CV121)	255
Aux 1 Period (CV122)	20
Aux 1 Delay (CV123)	0
Aux 2 Mode (CV124)	Dimmable
Aux 2 Dimmer (CV125)	255
Aux 2 Period (CV126)	20
Aux 2 Delay (CV127)	0
Aux 3 Mode (CV128)	Dimmable
Aux 3 Dimmer (CV129)	255
Aux 3 Period (CV130)	20
Aux 3 Delay (CV131)	0
Aux 3 Type (CV51)	Amplified
Aux 4 Mode (CV132)	Fade In/Out
Aux 4 Dimmer (CV133)	255
Aux 4 Period (CV134)	20
Aux 4 Delay (CV135)	0
Aux 4 Type (CV51)	Amplified
Aux 5 Mode (CV136)	Dimmable
Aux 5 Dimmer (CV137)	255
Aux 5 Period (CV138)	20
Aux 5 Delay (CV139)	0
Aux 6 Mode (CV140)	Dimmable
Aux 6 Dimmer (CV141)	255
Aux 6 Period (CV142)	20
Aux 6 Delay (CV143)	0

Analog Controls

Field	Setting
Power Source Conversion (CV29)	DC conversion enabled
DC Analog Mode (CV50)	Yes
Vmin Analog DC (CV176)	40
Vmax Analog DC (CV177)	195
AC Analog Mode (CV50)	Yes
Vmin Analog AC (CV178)	60
Vmax Analog AC (CV179)	190
Motor Control Analog (CV47)	Yes
Analog Mode Function Status - F0 (CV14)	Enabled
Analog Mode Function Status - F1 (CV13)	Off
Analog Mode Function Status - F2 (CV13)	Off
Analog Mode Function Status - F3 (CV13)	Off
Analog Mode Function Status - F4 (CV13)	Off
Analog Mode Function Status - F5 (CV13)	Off
Analog Mode Function Status - F6 (CV13)	Off
Analog Mode Function Status - F7 (CV13)	Off
Analog Mode Function Status - F8 (CV13)	Off
Analog Mode Function Status - F9 (CV14)	Disabled
Analog Mode Function Status - F10 (CV14)	Disabled
Analog Mode Function Status - F11 (CV14)	Disabled
Analog Mode Function Status - F12 (CV14)	Disabled
Analog Mode Function Status - F13 (CV14)	Disabled
Analog Mode Function Status - F14 (CV14)	Disabled
Analog Mode Function Status - F15 (CV14)	Disabled

Consist	
Field	Setting
Advanced Consist Address (CV19)	0
Locomotive Direction In Consist (CV19)	normal
Consist Address Active For F0 (CV22)	Locomotive Address Only
Consist Address Active For F1 (CV21)	Locomotive Address Only
Consist Address Active For F2 (CV21)	Locomotive Address Only

Consist Address Active For F3 (CV21)	Locomotive Address Only
Consist Address Active For F4 (CV21)	Locomotive Address Only
Consist Address Active For F5 (CV21)	Locomotive Address Only
Consist Address Active For F6 (CV21)	Locomotive Address Only
Consist Address Active For F7 (CV21)	Locomotive Address Only
Consist Address Active For F8 (CV21)	Locomotive Address Only
Consist Address Active for F9 (CV22)	Locomotive Address Only
Consist Address Active for F10 (CV22)	Locomotive Address Only
Consist Address Active for F11 (CV22)	Locomotive Address Only
Consist Address Active for F12 (CV22)	Locomotive Address Only
Consist Address Active for F13 (CV22)	Locomotive Address Only
Consist Address Active for F14 (CV22)	Locomotive Address Only
Consist Address Active for F15 (CV22)	Locomotive Address Only

Advanced

Field	Setting
fx (Motorola®) Protocol (CV50)	On
mfx Protocol (CV50)	On
mfx+ Protocol (CV50)	Off
Storing Function States (CV173)	Yes
Storing Speed (CV173)	Yes
Storing Start up with ABV (CV173)	Yes
Storing Direction of Travel (CV174)	Yes
Brake on DC, polarity same direction (CV27)	Off
Brake on DC, polarity against direction (CV27)	Off
Switching Range (CV145)	128
Timer 1 (CV17.1.261)	1
Timer 2 (CV17.1.262)	1
Timer 3 (CV17.1.263)	1
Timer 4 (CV17.1.264)	1
Random Clock (CV17.1.271)	10
Random Mean (CV17.1.272)	15
Random Deviation (CV17.1.273)	5

Sound

Field	Setting
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Threshold for brake squealing (CV64)	15
Chuff interval at speed step 1 (CV57)	45
Chuff interval at speed step >1 (CV58)	160
Min. Random Sound Interval (CV61)	30
Max. Random Sound Interval (CV62)	50
Number of Stations (CV60)	1
Turn (CV60)	No
Direction (CV60)	No
Sequence (CV60)	Normal

Sound Levels

Field	Setting
Total Volume (CV63)	255
Volume of Brake Squealing (CV146)	60
Volume of Operating Sounds (CV16.0.300)	255
Sound at Change of Direction (CV59)	0
Sound 1 Volume (CV16.0.301)	245
Sound 2 Volume (CV16.0.302)	245
Sound 3 Volume (CV16.0.303)	180
Sound 4 Volume (CV16.0.304)	120
Sound 5 Volume (CV16.0.305)	120
Sound 6 Volume (CV16.0.306)	120
Sound 7 Volume (CV16.0.307)	120
Sound 8 Volume (CV16.0.308)	80
Sound 9 Volume (CV16.0.309)	110
Sound 10 Volume (CV16.0.310)	180
Sound 11 Volume (CV16.0.311)	120
Sound 12 Volume (CV16.0.312)	100
Sound 13 Volume (CV16.0.313)	180
Sound 14 Volume (CV16.0.314)	120
Sound 15 Volume (CV16.0.315)	100
Sound 16 Volume (CV16.0.316)	90
Sound 17 Volume (CV16.0.317)	60
Sound 18 Volume (CV16.0.318)	90
Sound 19 Volume (CV16.0.319)	100
Sound 20 Volume (CV16.0.320)	100
Sound 21 Volume (CV16.0.321)	120
Sound 22 Volume (CV16.0.322)	175
Sound 23 Volume (CV16.0.323)	180
Sound 24 Volume (CV16.0.324)	180
Sound 25 Volume (CV16.0.325)	180
Sound 26 Volume (CV16.0.326)	180
Sound 27 Volume (CV16.0.327)	180
Sound 28 Volume (CV16.0.328)	180

CVs**Value****Value****Value**

CV Dec Hex

1 3 03
 2 5 05
 3 9 09
 4 9 09
 5 194 C2
 7 3 03
 8 131 83
 13 0 00
 14 1 01
 17 192 C0
 18 128 80
 19 0 00
 21 0 00
 22 0 00
 27 32 20
 29 6 06
 31 255 FF
 32 255 FF
 33 39 27
 34 0 00
 35 0 00
 36 80 50
 37 0 00
 47 1 01
 48 2 02
 50 15 0F
 51 0 00
 52 6 06
 53 90 5A
 54 60 3C
 55 55 37
 56 150 96
 57 45 2D
 58 160 A0
 59 0 00
 60 1 01
 61 30 1E
 62 50 32
 63 255 FF
 64 15 0F
 66 128 80
 67 1 01
 68 3 03
 69 7 07
 70 10 0A
 71 14 0E
 72 18 12
 73 23 17
 74 29 1D
 75 36 24
 76 43 2B
 77 50 32
 78 59 3B

CV Dec Hex

16.0.316 90 5A
 16.0.317 60 3C
 16.0.318 90 5A
 16.0.319 100 64
 16.0.320 100 64
 16.0.321 120 78
 16.0.322 175 AF
 16.0.323 180 B4
 16.0.324 180 B4
 16.0.325 180 B4
 16.0.326 180 B4
 16.0.327 180 B4
 16.0.328 180 B4
 17.0.260 0 00
 17.0.261 16 10
 17.0.262 80 50
 17.0.263 0 00
 17.0.264 32 20
 17.0.265 81 51
 17.0.266 1 01
 17.0.267 0 00
 17.0.268 129 81
 17.0.269 2 02
 17.0.270 0 00
 17.0.271 176 B0
 17.0.272 4 04
 17.0.273 0 00
 17.0.274 112 70
 17.0.275 5 05
 17.0.276 0 00
 17.0.277 114 72
 17.0.278 6 06
 17.0.279 0 00
 17.0.280 134 86
 17.0.281 7 07
 17.0.282 0 00
 17.0.283 135 87
 17.0.284 9 09
 17.0.285 0 00
 17.0.286 113 71
 17.0.287 185 B9
 17.0.288 0 00
 17.0.289 135 87
 17.0.290 0 00
 17.0.291 0 00
 17.0.292 160 A0
 17.0.293 15 0F
 17.0.294 0 00
 17.0.295 183 B7
 17.0.296 0 00
 17.0.297 0 00
 17.0.298 128 80
 17.0.299 12 0C

CV Dec Hex

17.0.383 255 FF
 17.0.384 0 00
 17.0.385 255 FF
 17.0.386 255 FF
 17.0.387 0 00
 17.0.388 255 FF
 17.0.389 255 FF
 17.0.390 0 00
 17.0.391 255 FF
 17.0.392 255 FF
 17.0.393 0 00
 17.0.394 255 FF
 17.0.395 255 FF
 17.0.396 0 00
 17.0.397 255 FF
 17.0.398 255 FF
 17.0.399 0 00
 17.0.400 255 FF
 17.0.401 255 FF
 17.0.402 0 00
 17.0.403 255 FF
 17.0.404 255 FF
 17.0.405 0 00
 17.0.406 255 FF
 17.0.407 255 FF
 17.0.408 0 00
 17.0.409 255 FF
 17.0.410 255 FF
 17.0.411 0 00
 17.0.412 255 FF
 17.0.413 255 FF
 17.0.414 0 00
 17.0.415 255 FF
 17.0.416 255 FF
 17.0.417 0 00
 17.0.418 255 FF
 17.0.419 255 FF
 17.0.420 0 00
 17.0.421 255 FF
 17.0.422 255 FF
 17.0.423 0 00
 17.0.424 255 FF
 17.0.425 255 FF
 17.0.426 0 00
 17.0.427 255 FF
 17.0.428 255 FF
 17.0.429 0 00
 17.0.430 255 FF
 17.0.431 255 FF
 17.0.432 0 00
 17.0.433 255 FF
 17.0.434 255 FF
 17.0.435 0 00

79	69	45	17.0.300	64	40	17.0.436	255	FF
80	79	4F	17.0.301	160	A0	17.0.437	255	FF
81	89	59	17.0.302	74	4A	17.0.438	0	00
82	100	64	17.0.303	0	00	17.0.439	255	FF
83	111	6F	17.0.304	84	54	17.0.440	255	FF
84	122	7A	17.0.305	0	00	17.0.441	0	00
85	133	85	17.0.306	32	20	17.0.442	255	FF
86	146	92	17.0.307	85	55	17.0.443	255	FF
87	159	9F	17.0.308	3	03	17.0.444	0	00
88	172	AC	17.0.309	0	00	17.0.445	255	FF
89	186	BA	17.0.310	177	B1	17.0.446	255	FF
90	198	C6	17.0.311	8	08	17.0.447	0	00
91	212	D4	17.0.312	0	00	17.0.448	255	FF
92	225	E1	17.0.313	178	B2	17.0.449	255	FF
93	240	F0	17.0.314	10	0A	17.0.450	0	00
94	255	FF	17.0.315	0	00	17.0.451	255	FF
95	128	80	17.0.316	190	BE	17.0.452	255	FF
105	0	00	17.0.317	11	0B	17.0.453	0	00
106	0	00	17.0.318	0	00	17.0.454	255	FF
112	1	01	17.0.319	185	B9	17.0.455	255	FF
113	255	FF	17.0.320	13	0D	17.0.456	0	00
114	20	14	17.0.321	0	00	17.0.457	255	FF
115	0	00	17.0.322	186	BA	17.0.458	255	FF
116	1	01	17.0.323	14	0E	17.0.459	0	00
117	255	FF	17.0.324	0	00	17.0.460	255	FF
118	20	14	17.0.325	187	BB	17.0.461	255	FF
119	0	00	17.0.326	16	10	17.0.462	0	00
120	1	01	17.0.327	0	00	17.0.463	255	FF
121	255	FF	17.0.328	188	BC	17.0.464	255	FF
122	20	14	17.0.329	17	11	17.0.465	0	00
123	0	00	17.0.330	0	00	17.0.466	255	FF
124	1	01	17.0.331	191	BF	17.0.467	255	FF
125	255	FF	17.0.332	18	12	17.0.468	0	00
126	20	14	17.0.333	0	00	17.0.469	255	FF
127	0	00	17.0.334	192	C0	17.0.470	255	FF
128	1	01	17.0.335	19	13	17.0.471	0	00
129	255	FF	17.0.336	0	00	17.0.472	255	FF
130	20	14	17.0.337	193	C1	17.0.473	255	FF
131	0	00	17.0.338	20	14	17.0.474	0	00
132	8	08	17.0.339	0	00	17.0.475	255	FF
133	255	FF	17.0.340	194	C2	17.0.476	255	FF
134	20	14	17.0.341	21	15	17.0.477	0	00
135	0	00	17.0.342	0	00	17.0.478	255	FF
136	1	01	17.0.343	195	C3	17.0.479	255	FF
137	255	FF	17.0.344	22	16	17.0.480	0	00
138	20	14	17.0.345	0	00	17.0.481	255	FF
139	0	00	17.0.346	196	C4	17.0.482	255	FF
140	1	01	17.0.347	23	17	17.0.483	0	00
141	255	FF	17.0.348	0	00	17.0.484	255	FF
142	20	14	17.0.349	184	B8	17.0.485	255	FF
143	0	00	17.0.350	24	18	17.0.486	0	00
145	128	80	17.0.351	0	00	17.0.487	255	FF
146	60	3C	17.0.352	197	C5	17.0.488	255	FF
165	0	00	17.0.353	25	19	17.0.489	0	00

166	200	C8	17.0.354	0	00	17.0.490	255	FF
167	0	00	17.0.355	180	B4	17.0.491	255	FF
168	0	00	17.0.356	0	00	17.0.492	0	00
169	0	00	17.0.357	64	40	17.0.493	255	FF
170	200	C8	17.0.358	161	A1	17.0.494	255	FF
171	143	8F	17.0.359	208	D0	17.0.495	0	00
172	90	5A	17.0.360	0	00	17.0.496	255	FF
173	7	07	17.0.361	140	8C	17.0.497	255	FF
174	1	01	17.0.362	12	0C	17.0.498	0	00
176	40	28	17.0.363	0	00	17.0.499	255	FF
177	195	C3	17.0.364	161	A1	17.1.261	1	01
178	60	3C	17.0.365	26	1A	17.1.262	1	01
179	190	BE	17.0.366	0	00	17.1.263	1	01
16.0.300	255	FF	17.0.367	181	B5	17.1.264	1	01
16.0.301	245	F5	17.0.368	160	A0	17.1.271	10	0A
16.0.302	245	F5	17.0.369	0	00	17.1.272	15	0F
16.0.303	180	B4	17.0.370	208	D0	17.1.273	5	05
16.0.304	120	78	17.0.371	161	A1	255.255.260	131	83
16.0.305	120	78	17.0.372	0	00	255.255.261	0	00
16.0.306	120	78	17.0.373	208	D0	255.255.262	5	05
16.0.307	120	78	17.0.374	27	1B	255.255.263	77	4D
16.0.308	80	50	17.0.375	0	00	255.255.264	71	47
16.0.309	110	6E	17.0.376	182	B6	255.255.270	245	F5
16.0.310	180	B4	17.0.377	255	FF	255.255.271	3	03
16.0.311	120	78	17.0.378	0	00	255.255.272	2	02
16.0.312	100	64	17.0.379	255	FF	255.255.273	2	02
16.0.313	180	B4	17.0.380	255	FF	255.255.274	1	01
16.0.314	120	78	17.0.381	0	00			
16.0.315	100	64	17.0.382	255	FF			

Information

Field	Setting
Manufacturer (CV255.255.260)	131
Decoder Type Byte 1 (CV255.255.261)	0
Decoder Type Byte 2 (CV255.255.262)	5
Decoder Type Byte 3 (CV255.255.263)	77
Decoder Type Byte 4 (CV255.255.264)	71
Firmware Type (CV255.255.270)	245
Firmware Version Byte 1 (CV255.255.271)	3
Firmware Version Byte 2 (CV255.255.272)	2
Firmware Version Byte 3 (CV255.255.273)	2
Firmware Version Byte 4 (CV255.255.274)	1