Athearn RTR SD40T-2 & SD40 HO Scale (2018-2025 Releases)

Factory Equipped with Econami™



Default Values

P.N.	Description	P.N.	Description
ATH1255	HO SD40-2, LN #3572	**ATH86818**	HO RTR SD40, SP/Daylight Red/Orange #7342
ATH1271	HO SD40-2, LN #3567	**ATH86819**	HO RTR SD40, SP/Red & Grey #8448
ATH1272	HO SD40-2, LN #3568	**ATH86820**	HO RTR SD40, SP/Red & Grey #8457
ATH86791	HO SD40T-2, D&RGW #535	**ATH86821**	HO RTR SD40, SP/Red & Grey #8462
ATH86792	HO SD40T-2, D&RGW #5387	**ATH86822**	HO RTR SD40,SP/Red/Grey/SP on Nose #8411
ATH86793	HO SD40T-2, D&RGW #5392	**ATH86823**	HO RTR SD40,SP/Red/Grey/SP on Nose #8437
ATH86794	HO SD40T-2, D&RGW #5394	**ATH86824**	HO RTR SD40,SP/Red/Grey/SP on Nose #8451
ATH86817	HO RTR SD40, SP/Orange #7342		

Airhorn Selections	CV 120 Value	Airhorn Selections	CV 120 Value
Nathan K3LA	0	Nathan P5A	8
Nathan K3L	1	Leslie A125	9
Nathan K5LA (1)	2	Leslie RS3L	10
Nathan K5LA (2)	3	Leslie S2M	11
Nathan M3	4	Leslie S3L	12
Nathan M5	5	Leslie S5T	13
Nathan P3	6	Wabco E2	14
Nathan P5 Early	7	Hancock 4700 Air Whistle	15

Bell Selections	CV 122 Value	Bell Selections	CV 122 Value
EMD #1	0-3	EMD #4	12-15
EMD #2	4-7	Canadian Brass Bell	16-19
EMD #3	8-11	Western-Cullen Hayes Gong Bell	20-23

Prime Mover Selections	CV 123 Value
EMD 645 Non-Turbo	0
EMD 645 12 Cylinder Turbo	1
EMD 645 2nd Generation Turbo	2
EMD 645 16 Cylinder 2nd Generation Turbo EFI	3

Default Function Assignments					
F0	Headlight/Backup Light	F10	(not used)	F20	(not used)
F1	Bell	F11	Brake Squeal/Release	F21	(not used)
F2	Airhorn	F12	(not used)	F22	(not used)
F3	Short Airhorn	F13	Coupler/Uncouple	F23	“All Aboard!”/Coach Doors
F4	Dynamic Brake	F14	Switching Mode	F24	(not used)
F5	FX3: On/Off Light	F15	(not used)	F25	(not used)
F6	FX4: On/Off Light	F16	(not used)	F26	RPM+
F7	Dimmer	F17	(not used)	F27	RPM-
F8	Mute	F18	(not used)	F28	(not used)
F9	(not used)	F19	(not used)		

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Configuration Variable Default Values

CV	Description	Value	CV	Description	Value	CV	Description	Value
13	Analog Mode Functions 1	48	58	Rev Direction Control	10	226	62Hz Cut/Boost	0
21	Consist Function Enable 1	136	59	Lighting Flash Rate	5	227	125Hz Cut/Boost	0
22	Consist Function Enable 2	60	63	Dimmer Level	130	228	250Hz Cut/Boost	150
25	Speed Table Enable	16	106	User Identifier 2	6	229	500Hz Cut/Boost	175
29	Configuration Data 1	6	114	Engine Exhaust Control	103	230	1kHz Cut/Boost	100
*37	F3 Output Location	16	124	Compressor Select / Shaft Driven	1	231	2kHz Cut/Boost	150
49	Headlight Configuration	143	195	Coach Door Count	0	232	4kHz Cut/Boost	150
50	Backup Light Configuration	143	197	Analog Auto Sound Enable	4	1.261	FX5 Function Mapping	255
51	FX3: Gyralite	131	200	Poppet Valve Release Rate	90	1.262	FX6 Function Mapping	255
52	FX4: Gyralite	131	218	Analog Motor Start Voltage	25	1.278	Grade Crossing Effect	3
57	Fwd Direction Control	5	225	EQ Control Register	7			

Note:

* CV 37 : The short airhorn function can be changed to a grade crossing horn sequence by changing CV 37 to 0. If you would like to re-map the short horn function to another key using SoundTraxx' Flex-Map™ function mapping, CV 37 must also be set to 0 to prevent the short horn function from being activated with function key 3.

Speed Table Default Values

CV	Value	CV	Value	CV	Value	CV	Value
*67	11	74	80	81	152	88	187
68	21	75	89	82	154	89	192
69	30	76	98	83	159	90	198
70	40	77	109	84	166	91	205
71	50	78	120	85	171	92	210
72	60	79	130	86	177	93	215
73	70	80	140	87	182	94	220

Note:

*CVs 67-94 have been assigned values to allow your new Athearn RTR Econami equipped model to operate with earlier models released with Tsunami technology. To enable this custom speed curve, program CV 25 to a value of 16 and ensure the Speed Table Enable bit in CV 29 is turned on.

Default Volume Settings

CV	Sound Effect	Volume	CV	Sound Effect	Volume
128	Master Volume	150	137	Coupler	128
129	Airhorn	75	139	Brake Squeal	100
130	Bell	40	140	Brake Release	70
131	Prime Mover	135	143	Poppet Valve	16
132	Air Compressor	30	148	Emergency Stop	70
133	Dynamic Brake	100	149	Glad Hand	150
134	Radiator Fan	75	150	"All Aboard!"/Coach Doors	192

If a CV or a sound selection is not listed within this documentation, the default value or selection choices match those of aftermarket SoundTraxx products. For more information about unlisted items, please refer to the Econami product documentation found on our website.

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