

Athearn Genesis GP40-2L/GP40-2W HO Scale

Factory Equipped with **Tsunami²**



Default Values

P.N.	Description	P.N.	Description
ATHG40958	HO GP40-2L, CN/North American #9468	ATHG40984	HO GP40-2W, GO Transit #706
ATHG40959	HO GP40-2L, CN/North American #9551	ATHG40985	HO GP40-2W, GO Transit #707
ATHG40960	HO GP40-2L, CN/ Web Address #9544	ATHG40993	HO GP40-2L, MEC/Pan Am #501
ATHG40961	HO GP40-2L, CN/Web Address #9591	ATHG40994	HO GP40-2L, MEC/Pan Am #504
ATHG40982	HO GP40-2W, GO Transit #700	ATHG40995	HO GP40-2L, MEC/Pan Am #505
ATHG40983	HO GP40-2W, GO Transit #704	ATHG40996	HO GP40-2L, MEC/Pan Am #506

Horn Selections	CV 120 Value	Horn selections	CV 120 Value
Nathan K3LA	0	Leslie A125/200 Combo	19
Nathan K3HA	1	Leslie A125-3E	20
Nathan K3L	2	Leslie A200	21
Nathan K5HL	3	Leslie A200/S3L Combo	22
Nathan K5LA (1)	4	Leslie RS3L	23
Nathan K5LA (2)	5	Leslie RS5T	24
Nathan K5LA (3)	6	Leslie S2M	25
Nathan K5LH	7	Leslie S2M/A200 Combo	26
Nathan K5LLA	8	Leslie S2M/S3L Combo	27
Nathan M3	9	Leslie S3L	28
Nathan M5	10	Leslie S5T	29
Nathan P3	11	Leslie S5T/A200 Combo	30
Nathan P5 Early	12	Wabco A2	31
Nathan P5 Modern	13	Wabco AA2	32
Nathan P5A	14	Wabco E2 (1)	33
Nathan P5A 3rd Generation	15	Wabco E2 (2)	34
Holden M3H	16	Wabco 2 Chime	35
Holden K5H	17	Hancock 4700 Air Whistle	36
Leslie A125	18		

Prime Mover Selections	CV 123 Value	Prime Mover Selections	CV 123 Value
EMD 645 8 Cylinder 2 nd Generation Turbo	0	EMD 645 12 Cylinder 2 nd Generation Turbo	3
EMD 645 12 Cylinder 2 nd Generation Non-Turbo	1	EMD 645 16 Cylinder 2 nd Generation Turbo	4
EMD 645 16 Cylinder 2 nd Generation Non-Turbo	2	EMD 645 16 Cylinder 2 nd Generation Turbo EFI	5

Default Function Assignments					
F0	Front/Rear Light	F10	Straight-to-8 & Sander Valve	F20	Steam Generator
F1	Bell	F11	Brake Set/Release	F21	(not used)
F2	Horn	F12	Brake Select	F22	(not used)
F3	Short Horn	F13	Coupler/Uncouple	F23	"All Aboard!"/Doors
F4	Dynamic Brakes	F14	Half-Speed & Momentum Override	F24	(not used)
F5	FX3 & FX4	F15	Hand Brake	F25	(not used)
F6	FX5 & FX6	F16	HEP	F26	RPM+
F7	Dimmer & Cab Chatter	F17	Fuel Loading	F27	RPM-
F8	Mute	F18	General Service	F28	(not used)
F9	Alternate Mixer (Half Volume)	F19	(not used)		

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Factory Equipped with **Tsunami2**



Default Values

Configuration Variable Default Values

CV	Description	Value	CV	Description	Value	CV	Description	Value
13	Analog Mode Functions 1	48	114	Engine Exhaust Control	103	225	EQ Control Register	3
21	Consist Function Active	136	120	Horn Select	0	233	Reverb Control Register	7
22	Consist FL Function Active	60	122	Bell Select	12	234	Reverb Output Level	54
29	Configuration Data 1	6	123	Prime Mover Select	4	235	Reverb Delay Time	255
*37	F3 Output Location	16	124	Air Compressor Select	3	236	Reverb Feedback Gain Level	128
57	Fwd. Direction Control	13	126	Coupler Select	128	*1.403	Independent/Train Brake	12
58	Rev. Direction Control	50	200	Poppet Valve Rate	90			
59	Lighting Flash Rate	7	218	Analog Motor Start Offset	25			

Note:
 * CV 37: The short horn 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.

*CV 1.403: From the factory, Tsunami2 equipped Athearn Genesis models feature three types of functioning brakes for more prototypical operation. In order to use these brake rates to slow and stop your model, you must disable the automatic brake release. Set CV 1.403 to 0 before programming any brake rates in CV 117 (Independent Brake Rate) or CV 118 (Automatic Brake Rate) to allow control of the brakes with function key 11.

Speed Table Default Values

CV	Value	CV	Value	CV	Value	CV	Value
*67	9	74	62	81	110	88	157
68	17	75	71	82	116	89	166
69	25	76	78	83	122	90	184
70	32	77	86	84	129	91	202
71	40	78	93	85	135	92	220
72	48	79	99	86	141	93	238
73	55	80	104	87	148	94	255

Note:
 *CVs 67-94 have been assigned values to allow your new Athearn Genesis Tsunami2 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, Alternate Mixer, and Reverb Mixer Settings

CV	Sound Effect	Std. Volume	Alt. Volume	CV	Sound Effect	Std. Volume	Alt. Volume
128	Master Volume	225		147	Relays	128	64
129	Horn	125	62	148	Emergency Stop	70	35
130	Bell	58	29	149	Uncouple	150	75
131	Prime Mover	255	128	150	"All Aboard!"/Doors	192	96
132	Air Compressor	30	15	153	Clickety-Clack	150	75
133	Dynamic Brakes	0	0	154	Sander Valve	10	5
134	Fan	75	37	155	Fuel Loading	50	25
135	Alarm Bell	15	7	156	Air Conditioner	20	10
137	Coupler	128	64	157	Wrench	50	25
138	Train Brake	128	64	158	Pneumatic Oiler	40	20
139	Brake Squeal	100	50	159	Toilet	20	10
140	Brake Release	70	35	160	Cab Chatter	30	7
143	Poppet Valve	16	11	161	Airhorn Reverb	100	
144	Steam Generator	50	25	162	Bell Reverb	64	
145	Cab Door	128	64				