# Athearn Genesis GP7 HO Scale (2026 Releases)

Factory Equipped with Tsunami2

**Default Values**




| P.N. | Description | P.N. | Description |
|---|---|---|---|
| **ATHG-2294** | HO GEN GP7, SCL #837 | **ATHG-2296** | HO GEN GP7, SCL #952 |
| **ATHG-2295** | HO GEN GP7, SCL #846 | | |

| Airhorn Selections | CV 120 Value | Airhorn Selections | CV 120 Value | Airhorn Selections | CV 120 Value |
|---|---|---|---|---|---|
| Nathan K3LA (1) | 0 | Nathan P5A | 14 | Leslie S3L | 28 |
| Nathan K3LA (2) | 1 | Nathan P5A 3rd Generation | 15 | Leslie S5T | 29 |
| Nathan K3L | 2 | Holden M3H | 16 | Leslie S5T/A200 Combo | 30 |
| Nathan K5HL | 3 | Holden K5H | 17 | Wabco A2 | 31 |
| Nathan K5LA (1) | 4 | Leslie A125 | 18 | Wabco AA2 | 32 |
| Nathan K5LA (2) | 5 | Leslie A125/200 Combo | 19 | Wabco E2 (1) | 33 |
| Nathan K5LA (3) | 6 | Leslie A125-3E | 20 | Wabco E2 (2) | 34 |
| Nathan K5LH | 7 | Leslie A200 | 21 | Wabco 2 Chime | 35 |
| Nathan K5LLA | 8 | Leslie A200/S3L Combo | 22 | Hancock 4700 Air Whistle | 36 |
| Nathan M3 | 9 | Leslie RS3L | 23 | Leslie S4T | 37 |
| Nathan M5 | 10 | Leslie RS5T | 24 | Leslie S3LR | 38 |
| Nathan P3 | 11 | Leslie S2M | 25 | Leslie RS3K | 39 |
| Nathan P5 Early | 12 | Leslie S2M/A200 Combo | 26 | | |
| Nathan P5 Modern | 13 | Leslie S2M/S3L Combo | 27 | | |

| Prime Mover Selections | CV 123 Value | Prime Mover Selections | CV 123 Value |
|---|---|---|---|
| EMD 567 Non-Transition Switcher | 0 | EMD 567 1st Generation Version 2 | 3 |
| EMD 567 Non-Transition 12 Cylinder | 1 | EMD 567D Turbo | 4 |
| EMD 567 1st Generation Version 1 | 2 | | |

## Default Function Assignments

| | | | | | |
|---|---|---|---|---|---|
| F0 | Headlight/Backup Light | F8 | Mute | F18 | General Service |
| F1 | Bell | F9 | Alternate Mixer (Half Volume) | F19 | Straight-to-Idle |
| F2 | Airhorn | F10 | Straight-to-Eight & Sander Valve | F20 | Steam Generator/AUX HEP Generator |
| F3 | Short Airhorn | F11 | Independent/Train Brake | F21 | (not used) |
| F4 | Dynamic Brake | F12 | Brake Select/Train Line Charge | F22 | (not used) |
| F5 | FX5: On/Off Light | F13 | Couple/Uncouple | F23 | “All Aboard!”/Coach Doors |
| | FX8: On/Off Light | F14 | Switching Mode | F24 | FX3: Western Cullen D312 Rotary Beacon |
| F6 | FX6: Pyle-National Gyralite | F15 | Handbrake | F25 | FX4: Prime Stratolite |
| | FX7: Pyle-National Gyralite | F16 | HEP Mode | F26 | RPM+ |
| F7 | Dimmer & Cab Chatter | F17 | Fuel Loading | F27 | RPM- |

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## Configuration Variable Default Values

| CV | Description | Value | CV | Description | Value | CV | Description | Value |
|---|---|---|---|---|---|---|---|---|
| 13 | Analog Mode Functions 1 | 48 | 57 | Forward Direction Enable | 205 | 223 | Prime Mover Pitch | 188 |
| 21 | Consist Function Enable 1 | 136 | 59 | Lighting Flash Rate | 5 | 225 | EQ Control Register | 3 |
| 22 | Consist Function Enable 2 | 60 | 61 | Brightness Register 1 | 50 | 233 | Reverb Control Register | 7 |
| 25 | Speed Table Enable | 16 | 62 | Brightness Register 2 | 70 | 234 | Reverb Output Level | 54 |
| 29 | Configuration Data 1 | 6 | 64 | Master Brightness | 192 | 235 | Reverb Delay Time | 255 |
| *37 | F3 Output Location | 16 | 106 | User Identifier 2 | 2 | 236 | Reverb Feedback Gain Level | 128 |
| 49 | Headlight Configuration | 143 | 114 | Engine Exhaust Control | 103 | 242 | Analog Mode Function Enable 4 | 24 |
| 50 | Backup Light Configuration | 143 | 123 | Exhaust Select | 3 | 243 | Analog Mode Function Enable 5 | 15 |
| 51 | FX3: Western Cullen D312 Rotary | 135 | 124 | Air Compressor Select | 0 | 246 | Consist Function Enable 4 | 24 |
| 52 | FX4: Prime Stratolite | 136 | 125 | Poppet Valve Select | 0 | 247 | Consist Function Enable 5 | 31 |
| 53 | FX5: On/Off Light | 128 | 195 | Coach Door Count | 0 | 1.263 | FX7 Effect | 6 |
| 54 | FX6: Pyle-National Gyralite | 131 | 197 | Analog Auto Sound Enable | 4 | 1.264 | FX8 Effect | 5 |
| 55 | FX7: Pyle-National Gyralite | 131 | 200 | Poppet Valve Release Rate | 90 | *1.403 | Independent/Train Brake | 12 |
| 56 | FX8: On/Off Light | 128 | 218 | Analog Motor Start Voltage | 25 | 2.504 | DDE Load Slope | 186 |

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

**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.

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## 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 | 235 | | 147 | Relays | 128 | 64 |
| 129 | Airhorn | 125 | 62 | 148 | Emergency Stop | 70 | 35 |
| 130 | Bell | 100 | 50 | 149 | Uncouple | 150 | 75 |
| 131 | Prime Mover | 225 | 112 | 150 | “All Aboard!”/Doors | 192 | 96 |
| 132 | Air Compressor | 30 | 15 | 153 | Clickety-Clack | 125 | 62 |
| 133 | Dynamic Brakes | 0 | 0 | 154 | Sander Valve | 10 | 5 |
| 134 | Fans | 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 | 0 | 0 | 162 | Bell Reverb | 64 | |
| 145 | Cab Door | 128 | 64 | | | | |

*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 Tsunami2 product documentation found on our website.*