Athearn Big Boy 4-8-8-4 N Scale (2020-2025 Releases)

Factory Equipped with Tsunami2

Default Values



P.N.	Description	P.N.	Description
ATH-2080	N GEN 4-8-8-4 'Big Boy' & CA-11 Caboose, UP #4014, Caboose- UP 'Snowbus' #25809	**ATH30206**	N 4-8-8-4 Big Boy, UP #4014/Excursion
ATH25741	N 4-6-6-4 Big Boy, UP #3985 Modern		

Whistle Selections	CV 120 Value	Whistle Selections	CV 120 Value	Whistle Selections	CV 120 Value
ATSF Step Top 6-Chime	0	K-36 No.489 (Broken Chime)	22	Reading Flat Top 6-Chime (1)	44
Baldwin Class B-4G	1	K-37 No.497	23	Reading Flat Top 6-Chime (2)	45
Baldwin Single-Chime	2	Frisco No.1522 3-Chime "Steamboat"	24	Southern Railway 8" Flat Top Single-Chime	46
Baldwin Flat Top 3-Chime	3	Hancock Step Top 3-Chime	25	Southern Railway Iron Top 3-Chime	47
Baltimore & Ohio 3-Chime	4	Hancock Flat Top 3-Chime UP No.4018	26	Southern Railway Flat Top 3-Chime	48
Boston & Maine Step Top 5-Chime	5	Hancock Flat Top 3-Chime	27	Southern Pacific c Step Top 6-Chime (1)	49
C&O Flat Top Single-Chime	6	Hancock Short Bell 3-Chime (Road)	28	Southern Pacific c Step Top 6-chime (2	50
Colorado & Southern No.74 (Road)	7	Hancock Short Bell 3-Chime (Yard)	29	Southern Pacific c GS-4 No. 4449 Whistle	51
Colorado & Southern No. 74 (Yard)	8	Illinois Central 3-Chime "Steamboat"	30	Leslie A200 Airhorn SP GS-AC Classes	52
Colorado & Southern No. 801	9	Lehigh Valley Single-Chime	31	Hancock 3-Chime Union Pacific No.3985	53
Crosby 5" Flat Top 3-Chime	10	Lima Step Top 5-Chime	32	USRA Step Top 6-Chime	54
Crosby 6" Flat Top 3-Chime (Road)	11	Lunkenheimer Flat Top 3-Chime	33	Westside Lumber Co. Shay No.12	55
Crosby 6" Flat Top 3-Chime (Road)	12	L&N Passenger 3-Chime	34	Westside Lumber Co. Shay No.14	56
D&RGW Flat Top Single-Chime	13	L&N Freight 3-Chime	35	Heisler	57
C-19 No.340 (Road)	14	Milwaukee Road Step Top 6-Chime	36	Round Top Single-Chime "Peanut"	58
C-19 No.340 (Yard)	15	Nathan Step Top 5-Chime (Road)	37	Wabco E2 Airhorn	59
D&RGW K-27 No.463 (Road)	16	Nathan Step Top 5-Chime (Yard)	38	Single-Chime (1) ATSF Freight	60
D&RGW K-27 No.463 (Yard)	17	Nathan Step Top 5-Chime	39	Single-Chime (2)	61
D&RGW Flat Top 3-Chime K-28 No.473	18	N&W Step Top 3-Chime No.611	40	LNER A4 3-Chime	62
D&RGW Step Top 5-Chime K-36 No.487	19	N&W Flat Top Single-Chime No.1218	41	Hancock Flat Top 3-Chime “UP no. 4014” (Road)	63
Nathan Step Top 5-Chime D&RGW #488	20	PRR Round Top 3-Chime	42	Hancock Flat Top 3-Chime “UP no. 4014” (Yard)	64
Powell Round Top 3-Chime D&RGW #489	21	PRR Flat Top Single-Chime "Banshee"	43		

Exhaust Chuff Selections	CV 123	Exhaust Chuff Selections	CV 123	Exhaust Chuff Selections	CV 123
Light #1	0	Medium #1	3	Heavy #1	6
Light #2	1	Medium #2	4	Heavy #2	7
Light #3	2	Medium #3	5	Heavy #3	8
				Heavy #4	9

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Air Pump Selections	CV 124 Value	Air Pump Selections	CV 124 Value	Air Pump Selections	CV 124 Value
Single-Phase (1)	0	Cross-Compound (3)	4	Dual Cross-Compound	8
Single-Phase (2)	1	Cross-Compound (4)	5	Vacuum Pump	9
Cross-Compound (1) (Westside Shay)	2	Dual "Whistling" Cross-Compound	6	Big Boy Air Pump	10
Cross-Compound (2)	3	Dual Single-Phase	7		

Dynamo Selections	CV 125 Value	Dynamo Selections	CV 125 Value
Dynamo (1): Westside Lumber Co. Shay	0	Dynamo (5): Japanese Class C56	4
Dynamo (2): D&RGW C-19 #340	1	Muffled Dynamo: D&RGW K-236	5
Dynamo (3): Frisco 1522	2	Double Dynamos: Dual UP 4018	6
Dynamo (4): UP 4018	3	Big Boy Dynamo	7

Coupler	CV 126	Coupler	CV 126	Coupler	CV 126
Light	128		129		130

Default Function Assignments					
F0	Front & Rear Headlights and Dynamo	F10	Blowdown	F20	Injectors
F1	Bell	F11	Brake Squeal & Release	F21	Sander Valve
F2	Whistle	F12	Brake Select	F22	Cab Chatter
F3	Short Whistle	F13	Couple/Uncouple	F23	“All Aboard!”/Coach Doors
F4	Cylinder Cocks	F14	Half-Speed & Momentum Override	F24	(not used)
F5	FX4: On/Off Light	F15	Wheel Chains	F25	(not used)
F6	FX5: On/Off Light	F16	Water Stop	F26	Cutoff+
F7	Dimmer	F17	Fuel Loading	F27	Cutoff-
F8	Mute	F18	Ash Dump	F28	(not used)
F9	Grade-Crossing Signal	F19	Wheel Slip		

Configuration Variable Default Values

CV	Description	Value	CV	Description	Value	CV	Description	Value
13	Analog Mode Functions	48	198	DCC Auto Sound Enable 1	8	246	Consist Function Enable 4	24
29	Configure Register 1	6	224	High-Pass Filter Cutoff	50	247	Consist Function Enable 4	31
49	Headlight Configuration	143	225	EQ Control Register	7	1.259	FX3 Output	255
50	Backup Light Configuration	143	226	62Hz Cut/Boost	0	1.262	FX6 Output	255
51	FX3: Firebox Flicker	141	227	125Hz Cut/Boost	0	1.278	Grade-Crossing Signal	255
52	FX4: On/Off Output	128	228	250Hz Cut/Boost	75	1.387	FX3 Effect	31
53	FX5: On/Off Light	128	229	500Hz Cut/Boost	150	1.390	FX6 Effect	16
54	FX6: Emergency Gyralite	149	230	1kHz Cut/Boost	150	2.503	DDE Load Offset	42
112	Sound configuration 1	206	231	2kHz Cut/Boost	150	2.504	DDE Load Slope	162
114	Chuff Control	57	232	4kHz Cut/Boos	100	2.507	Chuff Low Volume Limit	255
120	Whistle Select	64	233	Reverb Control Register	5	2.509	DDE Attack Time Constant	150
122	Bell Select: Air-Rung Heavy	58	242	Analog Mode Function Enable 4	24	2.510	DDE Release Time Constant	150
197	Analog Auto Sound Enable	14	243	Analog Mode Function Enable 5	15	2.512	DDE Load Gain	80

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Speed Table Default Values

CV	Value	CV	Value	CV	Value	CV	Value	CV	Value	CV	Value
*67	9	72	55	77	100	82	146	87	191	92	237
68	18	73	64	78	109	83	155	88	200	93	246
69	27	74	73	79	118	84	164	89	209	94	255
70	36	75	82	80	127	85	173	90	219		
71	45	76	91	81	137	86	182	91	228		

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	165		146	Water Stop	50	25
129	Whistle	200	100	147	Injectors	65	32
130	Bell	75	42	148	Emergency Stop	70	35
131	Exhaust Chuff	75	37	149	Uncouple	128	64
132	Air Pump	25	12	150	“All Aboard!”/Coach Doors	192	96
133	Dynamo	25	17	152	Leaky Valve Packing	15	7
134	Blower	10	12	153	Clickety-Clack	15	7
135	Rod Clank	50	25	154	Sander Valve	5	2
136	Cylinder Cocks	125	62	155	Fuel Loading	65	32
137	Coupler / Uncoupler	128	64	156	Firing	30	32
138	Train Brake	65	32	157	Wrench	50	25
139	Brake Squeal	100	50	158	Oil Can / Grease Gun	40	20
140	Brake Release	70	35	159	Ash Dump	50	25
141	Snifter Valve	65	32	160	Cab Chatter	60	30
142	Johnson Bar / Power Reverser	64	32	161	Whistle Reverb	20	
143	Safety Valve	150	75	162	Bell Reverb	50	
144	Blowdown	100	50	163	Exhaust Chuff Reverb	100	

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.