

# SANTA FE CE-6, CE-8, CE-11

## NOTICE

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## Meaning of Special Language

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

**NOTICE:** Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.

**WARNING:** Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

**WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, LLC. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.



Thank you for purchasing your new Athearn® Genesis® HO scale model. Painstaking attention to detail and razor sharp painting and printing has been utilized to make your model "As Close to Real as it Gets™".

Blending these features together provides a platform that should meet and exceed the most discriminating modeler's preferences.

Sincerely,  
The Athearn Team

Age Recommendation: Not for Children under 14 years. This is not a toy.

### PLEASE NOTE:

PARTS VARY BY MODEL AND/OR ROADNAME  
AND ARE SUBJECT TO AVAILABILITY.

## CE8 / CE11

G93225 - CUPOLA PARTS GROUP  
Includes:  
11007.611 - Cupola  
11008.003 - Roof Vent (2)  
11007.612 - Cupola Side Panel (2)  
11010.002 - Seat (2)  
G93226 - Cupola Glass Group  
G93227 - Cupola Grabirons Group

G93226 - CUPOLA GLASS GROUP  
Includes:  
11010.038 - Cupola End Window Glass (4)  
11010.003 - Cupola Side Window Glass (4)  
11010.004 - Cupola Wind Deflector (4)

G93227 - CUPOLA GRABIRONS GROUP  
Includes:  
19018.514 - Windshield Wiper (4)  
91300.049 - Support for Long Cupola Grabiron(2)  
19018.515 - Smoke Jack Brace, Left  
19018.516 - Smoke Jack Brace, Right  
91300.048 - Long Cupola Grabiron (2)

G93228 - CE6 BODY & DETAILS GROUP  
Includes:  
11007.602 - CE6 Body  
11008.001 - Light Pipe Cover (2)  
11014.034 - Coupler Pocket Cover (2)  
11008.023 - Light Barrier Cover (2)  
97999.PB16X40 - Screw (2)  
90610.509 - Marker Light PCB (2)  
11012.002 - Seat (2)  
97999.KB20X30 - Screw (2)  
11008.004 - Smoke Jack  
11008.005 - Toilet Vent

G93229 - CE8/11 BODY & DETAILS GROUP  
Includes:  
11007.601 - CE8/11 Body  
11008.001 - Light Pipe Cover (2)  
11014.034 - Coupler Pocket Cover (2)  
11008.023 - Light Barrier Cover (2)  
97999.PB16X40 - Screw (2)  
90610.509 - Marker Light PCB (2)  
11012.002 - Seat (2)  
97999.KB20X30 - Screw (2)  
11008.004 - Smoke Jack  
11008.005 - Toilet Vent

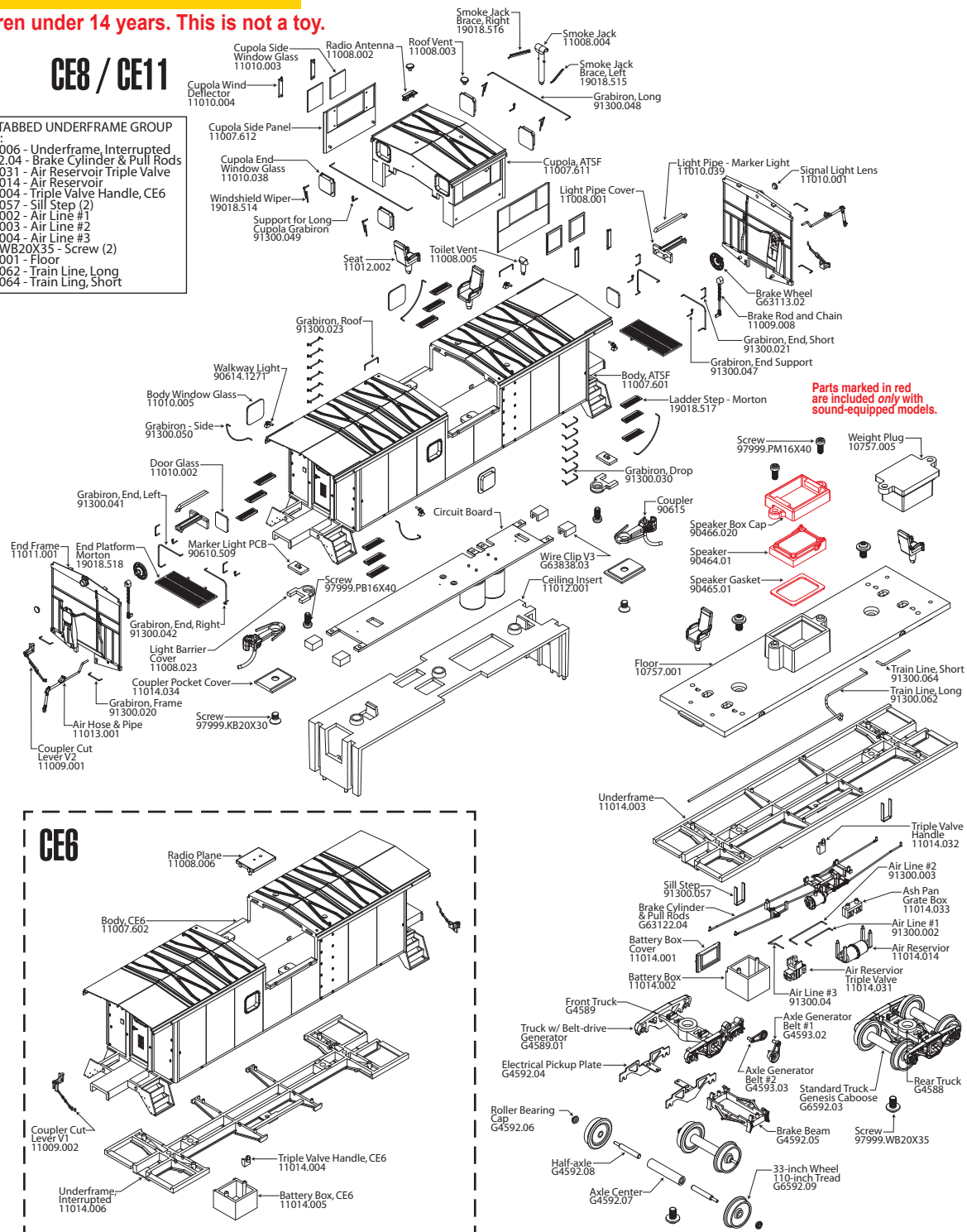
G93230 - BODY GLASS GROUP  
Includes:  
11010.005 - Body Window Glass (3)  
11010.002 - Door Window Glass (2)

G93231 - STEPS AND PLATFORMS GROUP  
Includes:  
19018.517 - Morton Ladder Step (12)  
19018.518 - Morton End Platform (2)

G93232 - BODY GRABIRONS GROUP  
Includes:  
91300.030 - Grabiron, Drop (12)  
91300.023 - Grabiron, Roof (2)  
91300.050 - Grabiron, Side (4)  
91300.042 - Grabiron, End, Right (2)  
91300.041 - Grabiron, End, Left (2)  
91300.021 - Grabiron - Frame (4)  
91300.047 - Grabiron, End Support(4)

G93233 - END FRAME GROUP  
Includes:  
11011.001 - End Frame (2)  
11010.001 - Signal Light Lens (2)  
G63113.02 - Brake Wheel (2)  
11009.008 - Brake Rod & Chain(2)  
91300.020 - Grabiron - Frame (4)  
11010.039 - Light Pipe, Marker Light (2)

G93234 - SOLID UNDERFRAME GROUP  
Includes:  
11014.003 - Underframe  
G63122.04 - Brake Cylinder & Pull Rods  
11014.031 - Air Reservoir Triple Valve  
11014.014 - Air Reservoir  
11014.032 - Triple Valve Handle  
91300.057 - Sill Step (2)  
91300.002 - Air Line #1  
91300.003 - Air Line #2  
91300.004 - Air Line #3  
97999.WB20X35 - Screw (2)  
10757.001 - Floor  
91300.062 - Train Line, Long  
91300.064 - Train Ling, Short



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If you are having problems with your caboose's operation or non-operation, please try resetting the Decoder to Factory Defaults before contacting Athearn Help for assistance.

### Resetting the Decoder to Factory Defaults

All NCE and Soundtraxx decoders can be reset to their factory values easily. If you have changed some CVs and are not happy with the results, or your caboose is not responding normally, this is the first troubleshooting step that you should try.

To do this, set CV 8 to a value of 8. Once you have done this, cycle the DCC system's power off for approximately 5–10 seconds, then turn it back on. With a SoundCar decoder, the caboose's lights will blink 16 times after a delay of about 10 seconds, indicating a successful factory reset. After a successful factory reset, your caboose will respond to address 3 and all CV values will be returned to their factory supplied default values.

### Decoder Function Assignments

Function Key	Default Effect
F0	Headlight
F1	(Not Used)
F2	(Not Used)
F3	Forward Secondary Marker <sup>1</sup>
F4	Reverse Secondary Marker <sup>1</sup>
F5	Interior Lights
F6	Auxiliary Lights

<sup>1</sup> - If equipped

### Table of Lighting effects

Value for CV	Description of Lighting Effect
0	Standard on/off function output
4	FRED - flashing rear end device
8	Mars Light
12	Rotary Beacon
16	Gyralight
20	Double Strobe
24	Single Strobe
28	Dimmed when on, off when off
32	Dim in forward, bright in reverse
36	Dim in reverse, bright in forward
40	Type A Ditch light phase A - Flash if F0 and F# - On bright if F0 on and F# off - Off if F0 off
44	Type A Ditch light phase B - Flash if F0 <u>and</u> F# - On bright if F0 on <u>and</u> F# off - Off if F0 off
48	Type B Ditch light phase A - Flash if F# - Off if F0 off
52	Type B Ditch light phase B - Flash if F# - Off if F0 off
56	Dimmed when on, off when off
60	Output is always off

### Light function Default CVs:

CV 130 = 5  
CV 131 = 0  
CV 132 = 150  
CV 133 = 75  
CV 134 = 6  
CV 135 = 0  
CV 136 = 150  
CV 137 = 75  
CV 138 = 0  
CV 139 = 1  
CV 140 = 150  
CV 141 = 75  
CV 142 = 0  
CV 143 = 2  
CV 144 = 150  
CV 145 = 75  
CV 146 = 3  
CV 147 = 0  
CV 148 = 150  
CV 149 = 75  
CV 150 = 4  
CV 151 = 0  
CV 152 = 150  
CV 153 = 75

# Tsunami® SoundCar™

### Setting the Hyperlight Effects

For each lighting output, there is a corresponding CV that determines its operating characteristics. To set the Hyperlight CVs, proceed as follows:

1. Locate the CV value for the desired effect and operating mode from the table below.
2. To enable Rule 17 Mode, add 64 to the table value. Otherwise, proceed to Step 3.
3. If you are using LED bulbs, enable LED Compensation Mode by adding 128 to the value from Step 1 (or Step 2 if using Rule 17 Mode).
4. Program the final sum for the selected function output into the corresponding CV.

Use CV 49 to configure F0F, CV 50 for F0R, CV 51 for FX5, CV 52 for FX6, CV 53 for FX3 and CV 54 for FX4.

### Hyperlight Control Mode Settings

Effect Type	CV Value			
	Crossing Logic Off		Crossing Logic On	
	Phase A	Phase B	Phase A	Phase B
On/Off	0	16	32	48
Dimmable	1	17	33	49
Mars Light	2	18	34	50
Gyralite	3	19	35	51
Oscillating Headlight	4	20	36	52
Single-Flash Strobe	5	21	37	53
Double-Flash Strobe	6	22	38	54
D312 Rotary Beacon	7	23	39	55
Prime Strarolite	8	24	40	56
Type I Ditch Light	9	25	41	57
Type II Ditch Light	10	26	42	58
FRED	11	27	43	59
Exhaust Flicker	12	28	44	60
Firebox Flicker	13	29	45	61
Dyno-Light	15	31	47	63

### Clickety-Clack Control

The clickety-clack sound effect can be adjusted to match the type of car and the type of rail. The following CVs control the clickety-clack sound effect:

CV 112 - Number of axles per truck and trucks per car. Factory default will match your model.

CV 116 - Distance between trucks. Factory default will match your model.  
CV 131 - Clickety-Clack volume (0 [mute] - 255 [full]).

### Sound Decoder Function Assignments

Function Key	Default Effect
F0	Forward/Reverse Marker (Directional)
F1	Bell
F2	Whistle / Horn
F3	FX3 Lighting Effect <sup>1</sup>
F4	FX4 Lighting Effect <sup>1</sup>
F5	Interior Lights
F6	FX6 Lighting Effect <sup>1</sup>
F7	(Not Used)
F8	Mute (4x Intelligent Consisting Enable)
F9	Generator
F10	Coupler Clank
F11	Apply / Release Brakes
F12	Uncoupling and Glad Hand Release
F13	Couple/Uncouple
F14	Half Speed & Momentum Override

<sup>1</sup> - If Equipped

CV 115 - Airhorn/Whistle Select		CV 129 - Airhorn/Whistle Volume	
CV 115 Value	Airhorn/Whistle	CV 115 Value	Airhorn/Whistle
0 (default)	Nathan K5LA	6	Leslie S2B
1	Amtrak Nathan K5LA	7	Wabco E2
2	Nathan K3L	8	Hancock Air Whistle
3	Nathan K3LA	9	Caboose Whistle (1)
4	Nathan KP3	10	Caboose Whistle (2)
5	Wabco AA2		

CV 227 - Bell Select		CV 114 - Ring Rate (0-15)		CV 130 - Bell Volume	
CV 227 Value	Bell	CV 227 Value	Bell		
0 (default)	Modern Cast	3	Electronic bell		
1	Bronze Cast	4	Gong bell		
2	Cast				

### Consisting

There are 2 ways to add your SoundCar equipped Genesis Caboose to your DCC Consist - Intelligent Consisting or traditional Advanced Consisting. Outlined below, you will find the guide for using the Intelligent consisting.

### Intelligent Consisting

This method requires a magnet to activate Intelligen Consisting mode, and is synchronized with prototypical sounds. With Intelligent Consisting, you essentially get to play the role of the brakeman!

1. To initiate Intelligent Consisting mode, wave a magnet (any common household magnet will work or you can use SoundTraxx intelligent consisting wand 810141) over the models you want to add to the train. The sound of the hand brake being untied will play to indicate that the decoders are waiting (deactivated after 1 minute) for a signal from the command station to add them to the consist.

2. Select the address of the locomotive or consist to which you want to add the SoundCar-equipped models.

3. Press F8 (Note: This function assignment can be remapped via CV 228) four times to send a command to the SoundCar decoders to add them to the train. The decoders will confirm that the cars are hooked into the locomotive's train line by playing the sound of the air bleed-off from the retainer.

4. To remove a car from the consist, simply wave the magnet over it again. Only the cars over which the "brake club" has been waved will be removed from the consist. When the car is released from the consist, the sounds of the hand brake being tied down and set is played to acknowledge that it is no longer part of the train.

### Decoder Features:

- No flicker circuitry keeps lights from flickering on dirty track
- All 6 function outputs have lighting effects generators
- Select from 14 different lighting effects
- Support for LED lighting
- Simplified function mapping to all functions F0-F28
- Decoder programming lock mechanism

### Lighting configuration CVs

Each lighting output has four associated CVs. These CVs control to which function number the output responds, what lighting effect the output will have, the overall brightness and the amount of dimming if the lighting effect has a dimming effect. The table of lighting effects below and to the right will be used when programming CV numbers 131,135,139,143,147 and 151

### Light configuration CVs:

CV130 - Function number to which output 1 will respond  
CV131 - Lighting effect for output 1 (on board LEDs).  
CV132 - Brightness for output 1  
CV133 - Brightness when output 1 is dimmed  
CV134 - Function number to which output 2 will respond  
CV135 - Lighting effect for output 2  
CV136 - Brightness for output 2  
CV137 - Brightness when output 2 is dimmed  
CV138 - Function number to which output 3 will respond  
CV139 - Lighting effect for output 3  
CV140 - Brightness for output 3  
CV141 - Brightness when output 3 is dimmed  
CV142 - Function number to which output 4 will respond  
CV143 - Lighting effect for output 4  
CV144 - Brightness for output 4  
CV145 - Brightness when output 4 is dimmed  
CV146 - Function number to which output 5 will respond  
CV147 - Lighting effect for output 5  
CV148 - Brightness for output 5  
CV149 - Brightness when output 5 is dimmed  
CV150 - Function number to which output 6 will respond  
CV151 - Lighting effect for output 6  
CV152 - Brightness for output 6  
CV153 - Brightness when output 6 is dimmed

Each output can select from different lighting effects by using its associated lighting effect CV.

Pick the value for the CV from the table to the right.  
Add 1 if you want the effect to be active only in the forward direction  
Add 2 if you want the effect to be active only in the reverse direction.

Example: Single strobe on only in reverse would be 24+2=26

CV ranges:

- Brightness CVs have a range of 0 (off) to 255 (full bright).
- Function number (function mapping) CVs have a range of 0-28.
- Lighting Effect CVs have a range of 0-63.