

Technical Note #15

SoundCar Intelligent Consisting (NCE-style Advanced Consist)

Problem:

SoundCar Intelligent Consisting is not working properly with an NCE-style Advanced Consist (function-related sound effects play, but movement sounds, such as the clickety-clack and flange squeals, are silent).

NCE has designed a consisting method that is built into all NCE Systems and set up via the cab. This method is a consisting hybrid; it sends motor commands to the consist address and function commands to the lead locomotive address. Since the NCE Advanced Consisting programming method uses both a consist and a lead locomotive address, the F8 command sequence used in Intelligent Consisting assigns the SoundCar decoder to the lead locomotive address only. Thus, the decoder will not receive nor respond to motor commands that are sent to the consist address. If you want to use Intelligent Consisting to add SoundCar-equipped models to your consist, **do not use NCE-style Advanced Consisting to set up the locomotive consisting.**

Solution:

To use Intelligent Consisting with all NCE Systems you must consist your locomotives manually with Advanced Consisting. This method makes the consist perform more realistically by taking full advantage of the sound decoders in the locomotives, while providing reliable, trouble-free operation for integrating the SoundCar decoders.

Follow these steps to use intelligent Consisting with NCE DCC Systems:

Step 1: Kill all NCE-style Advanced Consists that previously created.

To kill all NCE-style Advanced Consists press the “clear” button on NCE cabs. Enter the consist number to be killed and press enter. This will return the locomotives in each consist to operation under their normal addresses.

Step 2: Consist your locomotives manually with Advanced Consisting.

To assign each unit in the consist to the same consist address, set CV 19 (Consist Address) in each locomotive to the same value from 1 to 127 (+128 when the locomotive is facing backward). To restore normal operation, set CV 19 to 0.

Consist Function Groups (CVs 21 and 22) should also be programmed manually in each locomotive decoder. These CVs are only functional when the consist address is set in CV 19. Consist Function CVs allow each unit in the consist to have different function properties, allowing you to better mimic prototypical operation (refer to the “Consist Programming” section of the decoder’s user’s guide).

Use Tables J and K (on page 2) to calculate the appropriate values for CVs 21 and 22, respectively. Refer to Table J to determine which functions you want active in your consist, and circle the corresponding number. When you have selected all of your desired functions, add up the circled numbers and program that total into CV 21. Repeat this process using Table K and enter the sum into CV 22.

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Table J. CV 21: Consist Function Control 1								
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Function	F8	F7	F6	F5	F4	F3	F2	F1
CV Value	128	64	32	16	8	4	2	1

Table K. CV 22: Consist Function Control 2								
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Function	0	0	F12	F11	F10	F9	F0(r)	F0(f)
CV Value	0	0	32	16	8	4	2	1

***Note:** The Tsunami SoundCar has CVs 21 and 22 defaulted for consisting. Refer to the Tsunami SoundCar User's Guide for more information. Also, you will have to individually program CVs 21 and 22 for each DSD in your consist; each DSD may require a different set of values for CVs 21 and 22 depending on your model's requirements.

Step 3: Use intelligent Consisting to add the SoundCar decoders

With the consist address selected in your cab, you can use Intelligent Consisting to add the SoundCar decoders to that address. All decoders will respond to motor and function commands that are sent to a single consist address (as set in CV 19). This will enable clickety-clack, flange squeal, and all other movement sounds found in the SoundCar product.