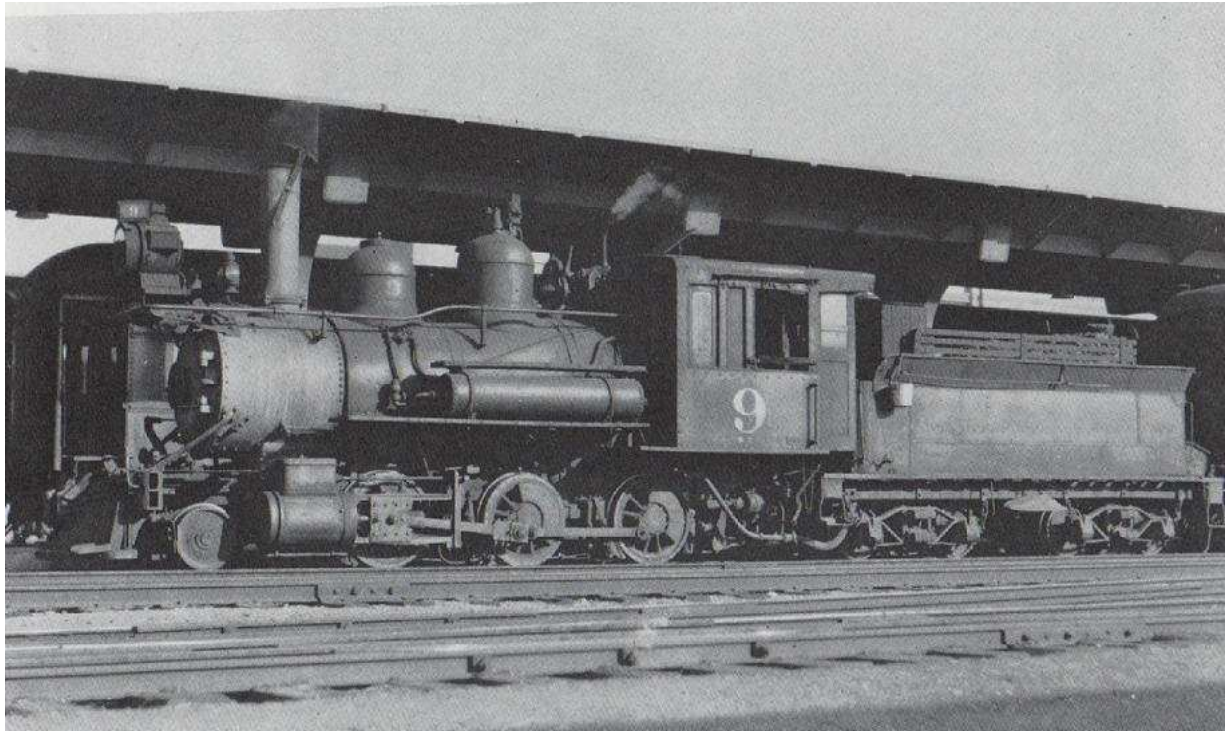


## **DSP&PRR 72 / Colorado & Southern Mogul 9**



### **Prototype information**

The Colorado and Southern narrow gauge lines were formed in 1898 from the Colorado Central and the Denver, South Park and Pacific Railroads. The narrow gauge had four distinct lines: the Platte Canyon Line from Denver, Colorado to Como, Colorado, the Gunnison Line from Como to Gunnison, Colorado via Alpine Tunnel, Highline between Como and Leadville, Colorado, and the Clear Creek line from Denver to Silver Plume, Colorado. Major Branch lines were the Baldwin branch between Gunnison and Baldwin; the Keystone from Dickey, Colorado to Keystone, Colorado; the Blackhawk branch between Forks Creek and Central City, Colorado; the Alma Branch from Como to Alma, Colorado; and the Morrison Branch from Denver to Morrison, Colorado. The Colorado and Southern narrow gauge never owned a new engine, all motive power coming from the former companies.

Engine 72, a 2-6-0 built in 1884 by Cooke Locomotive Works. #72 was renumbered by the Colorado & Southern Railroad as their #9, and has been restored for operation in Breckenridge, Colorado.

Source: Wikipedia

### **Sound project information**

The sound was recorded on the remaining C&S Mogul 9.

The project was first created as a true quality replacement sound for the toy sound in LGBs models.

The sound operates both the thundering highball and the light coasting on flat areas. Use function key F15 to switch between the modes.

The decoder must have SW Version 33.14 or higher.

The sound is made for 4 chuffs per revolution. Using 2 chuffs per revolution as LGB does would destroy the sound impression.

The sound project is based on Zimo Advanced Standard.

The sound project is designed for the new Zimo MX 697 sound decoder that fits the NMRA G-scale plug and play connector. All another Zimo sound decoders also work well, except the old MX 690 series, which cannot handle

complex sounds with coasting.

FA 7 and servo1 can operate several electric couplers. The Kadee electric coupler can simply be plugged in on servo connector 1.

CVs 3, 4, 5, 57, 154 and 158 are important values for the sound project. Please change values very carefully!

By default the function number is the same as function key. All the functions can easily be assigned to other keys, using the Zimo function key mapping.

Program the desired key number as your value in the CV 400+Fu number and the whole function is mapped to another key. Please take care, as it is possible to map multiple functions to the same key! Please read the instruction sheet <http://sound-design.white-stone.ch/Information.html>

Function	Installation	Function output	Sound effect
F0	Light on	FA 0v+0r	Dynamo
F1	Bell		Bell
F2	Whistle l-l-s-l		Highway crossing signal
F3	Whistle long		Playable as long as you push
F4	Whistle short		Short
F5	Cab light	FA 5	
F6	Smoke generator on heater load controlled Also replaceable with Zimo blowing smoker	FA 6 heater, on 15 min timer to prevent burnout Fan output for cam operated blower	
F7	Cylinder valve		Blow down
F8	Sound on / off		
F9	Wheels screeching on curves		Sound of Wheels screeching on curves
F10	Shoveling coal	FA 8 flickers automatically	Sound of shovel and firebox door closing
F11	Blower	Smoke fan is on	Steam blowing
F12	Servo coupler opens and loco moves back and forth	FA7 and servo1 opens electric coupler	Uncoupling sound
F13	Coupling		Coupling sound
F14	Pop valve (safety valve)		Loud steam blast
F15	Full power / coasting		Switch between 2 sound modes
F16	Tunnel fader (muting)		Sound fades in or out in 2,5 sec
F17	Conductor		„All aboard!“
F18	Injector		Feeding water in the boiler
F19	Westinghouse air pump, fast		Air pump with different speeds
F20	Filling water into tender		Water splashing
F21	Steam blast		loud steam blast
F22	Marker Lights	FA 3	

Random effect	Sound	
Z1	Air pump fast	Every time the locomotive comes to a standstill
Z2	Air pump slow	Maintaining air pressure
Z3	Blower	Fan blows smoke out of stack
Z4	Injector	Steam injects water into the boiler
Z5	Shoveling coal	FA8 flickers
Z6		
Z7	Safety valve	Loud popping valve
Z8	Steam noise	hissing

input	sound	
1	bell	
2	whistle	
3	Cam chuff trigger	

### **Changing CVs values used by the reset**

CV# 3 = 20	CV# 112 = 1
CV# 4 = 20	CV# 114 = 127
CV# 5 = 252	CV# 115 = 66
CV# 29 = ---	CV# 116 = 145
CV# 35 = 0	CV# 129 = 8
CV# 36 = 12	CV# 132 = 72
CV# 37 = 0	CV# 133 = 20
CV# 38 = 0	CV# 134 = 6
CV# 41 = 0	CV# 137 = 153
CV# 42 = 0	CV# 138 = 204
CV# 43 = 0	CV# 139 = 255
CV# 44 = 0	CV# 154 = 18
CV# 45 = 0	CV# 158 = 8
CV# 46 = 4	CV# 159 = 48
CV# 57 = 90	CV# 160 = 8
CV# 60 = 60	CV# 163 = 255
CV# 67 = 0	CV# 167 = 255
CV# 68 = 0	CV# 181 = 12
CV# 69 = 0	CV# 182 = 12
CV# 70 = 0	CV# 266 = 65
CV# 71 = 0	CV# 267 = 90
CV# 72 = 0	CV# 269 = 0
CV# 73 = 0	CV# 275 = 128
CV# 74 = 0	CV# 276 = 128
CV# 75 = 0	CV# 281 = 5
CV# 76 = 0	CV# 282 = 40
CV# 77 = 0	CV# 283 = 255
CV# 78 = 0	CV# 284 = 5
CV# 79 = 0	CV# 285 = 40
CV# 80 = 0	CV# 286 = 50
CV# 81 = 0	CV# 287 = 100
CV# 82 = 0	CV# 288 = 90
CV# 83 = 0	CV# 312 = 7
CV# 84 = 0	CV# 313 = 116
CV# 85 = 0	CV# 314 = 25
CV# 86 = 0	CV# 345 = 15
CV# 87 = 0	CV# 346 = 2
CV# 88 = 0	CV# 351 = 204
CV# 89 = 0	CV# 352 = 255
CV# 90 = 0	CV# 353 = 32
CV# 91 = 0	CV# 376 = 181
CV# 92 = 0	CV# 430 = 22
CV# 93 = 0	CV# 432 = 3
CV# 94 = 0	CV# 434 = 3