The Budd Rail Diesel Car, RDC or Buddliner is a self-propelled diesel multiple unit (DMU) railcar. Between 1949 and 1962, 398 RDCs were built by the Budd Company of Philadelphia, Pennsylvania, United States. The cars were primarily adopted for passenger service in rural areas with low traffic density or in short-haul commuter service, and were less expensive to operate in this context than a traditional diesel locomotive-drawn train with coaches. The cars could be used singly or several could be coupled together in train sets and controlled from the cab of the front unit. The RDC was one of the few DMU trains to achieve commercial success in North America. RDC trains were an early example of self-contained diesel multiple unit trains, an arrangement now in common use by railways all over the world.

Source Wikipedia

Project settings and information:

- The decoder software must be at least version 35.15.
- The ditch lights will be activated, if the bell or horn is played (CV 393 Bit0 = 1 activates ditch light if bell is played, CV 393 Bit1 = 1 activates ditch light if horn is played).
- This project includes various horns: RDC Horn (39), Nathan K3H long (40), Nathan K3H short (41), Nathan K5LLA (42), Nathan M5 (43), Nathan M3 (44), Nathan P3 (45), Nathan P5 (46), Leslie RS3K (47), Leslie RS3L (48) and Leslie RS5T (49). You can easily switch the horns in ZIMO Sound Programmer (ZSP) or modify CV 516 by changing its value to the above mentioned. You can also add other horns/sounds into this project in ZSP. You can switch the bells by modifying CV 513 from 38 to 35, 36 or 37.
- You can turn on the second diesel engine with F6, while the locomotive is at standstill.

Function	Arrangement	Function output	Sound-function
F0	Lights on/off	Front light white right (function output 0 forward), front light white left (function output 1) and front headlight (function output 7) in forward direction; Back light white right (function output 0 reverse), back light white left (function output 3) and back headlight (function output 8) in reverse direction	
F1	Bell	Toggles ditch lights	Bell
F2	Horn	Toggles ditch lights	Horn RDC
F3	Coupling		Coupling
F4	Number board light	function output 4	
F5	Cab light	function output 5	
F6	2. engine start		2. engine start
F7	Coasting (Notch 1)		
F8	Sound on/off		
F9	Toggles ditch lights	Front light white right (FOf), front light white left (FO1), back light white right (FOr) and back light white left (FO3) ditch lights	
F10	Volume +		
F11	Volume -		
F12	Mute		
F13 – F28	Reserved for user assignment		

Modified CVs:

CV# 1 = 3	CV# 36 = 0	CV# 60 = 150	CV# 287 = 50	CV# 349 = 20	CV# 399 = 40	CV# 443 = 255
CV# 3 = 20	CV# 37 = 0	CV# 64 = 175	CV# 288 = 40	CV# 351 = 0	CV# 430 = 29	CV# 444 = 1
CV# 4 = 20	CV# 40 = 0	CV# 114 = 232	CV# 311 = 0	CV# 352 = 0	CV# 431 = 253	CV# 445 = 7
CV# 9 = 77	CV# 41 = 0	CV# 125 = 33	CV# 312 = 0	CV# 374 = 7	CV# 432 = 7	CV# 446 = 3
CV# 17 = 0	CV# 42 = 0	CV# 126 = 34	CV# 313 = 112	CV# 389 = 255	CV# 434 = 8	CV# 447 = 8
CV# 18 = 0	CV# 43 = 0	CV# 127 = 37	CV# 314 = 0	CV# 393 = 3	CV# 436 = 29	
CV# 29 = 14	CV# 44 = 0	CV# 129 = 38	CV# 339 = 6	CV# 394 = 64	CV# 437 = 255	
CV# 33 = 5	CV# 45 = 0	CV# 132 = 80	CV# 340 = 17	CV# 395 = 128	CV# 438 = 14	
CV# 34 = 18	CV# 46 = 0	CV# 152 = 60	CV# 345 = 6	CV# 396 = 11	CV# 440 = 15	
CV# 35 = 0	CV# 57 = 140	CV# 158 = 76	CV# 346 = 1	CV# 397 = 10	CV# 442 = 29	
CV# 1 = 3	CV# 36 = 0	CV# 60 = 150	CV# 287 = 50	CV# 349 = 20	CV# 399 = 40	
CV# 3 = 20	CV# 37 = 0	CV# 64 = 175	CV# 288 = 40	CV# 351 = 0	CV# 430 = 29	