

## Porter Kleinloks

16Bit  
SOUND



Photo Bachmanntrains

### Vorbild Information

The Baldwin locomotive factory builds rather larger locomotives. However, it focused very early on on a modular production. This was an advantage, especially during the First World War. Field track locomotives were produced for the U.S. Army. These four or six driver, often tender locomotives, were the workhorses of the small industrial railways and are still to be found today on museum railways.

The construction is very simple and handy - built for rough use.

### Sound Projekt Informationen

The sound project reflects the typical chuff sound. The Sound Project is coal-fired.

The sound project is based on the Zimo Advanced Standard. Current decoders with the SW from version 39 required.

The sound project fits all Zimo decoders, and is also available in a 16 bit version for MS decoder

FA 7 and Servo 1 switch electrical couplers. The Kadee electric coupler can be easily plugged into the servo 1 connector.

A servo can be plugged in at the servo output 4 to control the swinging bell

The CVs 3, 4, 5, 57, 154 and 158 are relevant for this sound project. Changes can cause sound malfunctions!

Please do not set the final speed with CV 5, but with CV 57.

A large-scale train decoder is recommended for use of the smoke generator!

Treat yourself the fun, drive like a real train driver with power regulator and brake.

To do this, change the following CVs: CV4 value 255, CV39 value 0, CV309 value 5, CV349 value 20, CV 442 value 23, CV444 value 5, CV446 value 5

Now the cab light is switched with function 23 and function 5 is the brake. The locomotive only starts when the brake is released (function 5 off). The locomotive accelerates as usual when the controller is open. If the controller is closed, the locomotive rolls out a large distance and can be stopped at any time with the brake function 5. Of course, everything with the right sounds. With the value in CV 349, the brake can be adjusted more or weaker.

By default, the function number is the same as the function key number. All functions can be assigned to other function keys with the Zimo input mapping. The function key number is entered as a value in the CV400+Fu number, and the function key is assigned. Attention, several functions can be placed on the same function key! Please read the instructions on <http://sound-design.white-stone.ch/Information.html>

Function	Installation	Function output	Sound Effect
F0	Light on	FA 0v+0r	Generator sound turns on
F1	Bell		Bell
F2	Whistle long-long-short-long		Before highway crossing
F3	Long whistling		Whistle as long as you press
F4	short whistling		
F5	Light cab	FA 5	Generator sound turns on
F6	Smoke generator on, load dependent.	FA 6 Heating switchoff after 15 min Fan output	
F7	Cylinder blow down		Steam emitted out of the cylinders
F8	Sound on/off		
F9	Curves squeak		Curves squeak
F10	Coalshoveling	FA 8 flickers automatically	
F11	Blower	Smoke fan on	Blow steam
F12	Open the clutch, locomotive back and forward	FA7 and Serrvo1 open electrically	Uncoupling noise
F13	Coupling		Couplings hook into each other
F14	Safety valve		Loud steam blowing
F15	Full power / leakage		switch the noise modes
F16	Lower volume in the tunnel (muting)		Lower or ramp up vol in 2.5 seconds
F17	Conductor		„All aboard!“
F18	Injector		water inject into the boiler
F19	Air pump fast		
F20	Filling the tender with water		Water splashes
F21	Boiler floor sludge		
F26	Turn off start-up whistles		No start-up whistles
F27	Volume -		Light
F28	Volume +		Louder

Random effect	Sound	
Z1	Air pump fast	After each stop
Z2	Air pump slow	Add pressure loss
Z3	Coal shoveling	FA8 flickers
Z4	Blower	Fan blows smoke from stack
Z5	Injektor	Water is injected into the boiler
Z6	Ventil abschlämmen	
Z7	Dampf ablassen	
Z8	Sicherheitsventil	Loud blowing of the safety valve

Reed	Sound	
1	Curve squeaking	
2		

**Geänderte CVs Werte, vom Reset verwendet**

CV# 3 = 18 Acceleration rate	CV# 274 = 80 min. drainage downtime [0.1s]
CV# 4 = 20 Deceleration rate	CV# 275 = 181 Volume with no load slow travel
CV# 7 = ---	CV# 276 = 181 Volume with no load speed run
CV# 9 = 55 Motor control frequency	CV# 281 = 3 Threshold for full acceleration sound
CV# 23 = 1 Acceleration variation	CV# 284 = 2 Threshold for noise reduction in delay
CV# 35 = 0 Function mapp. F1	CV# 285 = 20 Duration of the noise reduction with delay
CV# 36 = 0 Function mapp. F2	CV# 286 = 140 Volume reduced driving noise during deceleration
CV# 37 = 0 Function mapp. F3	CV# 287 = 150 Threshold for brake squeal
CV# 38 = 0 Function mapp. F4	CV# 307 = 128 cornering squeal inputs
CV# 41 = 0 Function mapp. F7	CV# 308 = 9 cornering squeal key
CV# 42 = 0 Function mapp. F8	CV# 312 = 7 Drainage button
CV# 43 = 0 Function mapp. F9	CV# 313 = 116 Mute button
CV# 44 = 0 Function mapp. F10	CV# 314 = 25 Mute fade time
CV# 45 = 0 Function mapp. F11	CV# 315 = 1 Random Z1 min interval
CV# 46 = 4 Function mapp. F12	CV# 316 = 20 Random Z1 max interval
CV# 57 = 120 Motor regulation: voltage reference	CV# 317 = 15 Random generator Z1 playback time
CV# 60 = 213 Dimming general	CV# 318 = 180 Random Z2 min interval
CV# 65 = 0 Sub-Vers. Number	CV# 319 = 180 Random Z2 max interval
CV# 114 = 172 Dim Mask FO0-FO6	CV# 320 = 50 Random generator Z2 playback time
CV# 115 = 66 Uncoupler control	CV# 321 = 90 Random Z3 min interval
CV# 116 = 145 Automatic uncouple	CV# 322 = 100 Random Z3 max interval
CV# 125 = 88 Effects F0 front	CV# 323 = 9 Random generator Z3 playback time
CV# 126 = 88 Effects F0 rear	CV# 324 = 100 Random Z4 min interval
CV# 131 = 88 Effects F5	CV# 325 = 110 Random Z4 max interval
CV# 132 = 72 Effects F6	CV# 326 = 12 Random generator Z4 playback time
CV# 137 = 153 Smoke generator at standstill	CV# 327 = 110 Random Z5 min interval
CV# 138 = 204 Smoke generator at cruising speed	CV# 328 = 120 Random Z5 max interval
CV# 139 = 255 Smoke generator at acceleration	CV# 329 = 7 Random generator Z5 playback time
CV# 154 = 18 ZIMO configuration bits 2 (binary)	CV# 330 = 180 Random Z6 min interval
CV# 159 = 48 Effects F7	CV# 331 = 255 Random Z6 max interval
CV# 160 = 8 Effects F8	CV# 332 = 1 Random generator Z6 playback time
CV# 163 = 255 Servo 1 right stop	CV# 333 = 210 Random Z7 min interval
CV# 167 = 255 Servo 2 right stop	CV# 334 = 255 Random Z7 max interval
CV# 174 = 0 Servo 4 left stop	CV# 335 = 8 Random generator Z7 playback time
CV# 175 = 255 Servo 4 right stop	CV# 336 = 255 Random Z8 min interval
CV# 177 = 9 Servo 4 speed	CV# 337 = 255 Random Z8 max interval
CV# 181 = 12 Servo 1 - Function Assignment	
CV# 182 = 12 Servo 2 - Function Assignment	
CV# 184 = 201 Servo 4 - Function Assignment	
CV# 190 = 20 Up-dimming time for FO	
CV# 191 = 8 Down-dimming time for FO	
CV# 250 = 230 Decoder-ID 1	
CV# 252 = 10 Decoder-ID 3	
CV# 253 = 147 Decoder-ID 4	
CV# 272 = 150 Drainage time	
CV# 273 = 10 Starting delay	

CV# 338 = 14 Random generator Z8 playback time  
CV# 341 = 10 Switching input 1 Playback time  
CV# 342 = 4 Switching input 2 Playback time  
CV# 345 = 15 Sound-switch-key  
CV# 346 = 2 Sound-switch-conditions  
CV# 351 = 204 Smoke fan pwm at constant speed  
CV# 353 = 37 Smoke heater max. operating time  
CV# 376 = 181 Driving sound volume  
CV# 394 = 32 ZIMO configuration 4 (binary)  
CV# 395 = 120 maximal volume  
CV# 396 = 27 Volume decrease key  
CV# 397 = 28 Volume increase key  
CV# 516 = 45 F2 soundnumber  
CV# 519 = 46 F3 soundnumber  
CV# 521 = 72 F3 information on loop  
CV# 522 = 47 F4 soundnumber  
CV# 540 = 51 F10 soundnumber  
CV# 541 = 64 F10 volume  
CV# 542 = 8 F10 information on loop  
CV# 543 = 32 F11 soundnumber  
CV# 544 = 91 F11 volume  
CV# 545 = 72 F11 information on loop  
CV# 546 = 34 F12 soundnumber  
CV# 547 = 128 F12 volume  
CV# 549 = 33 F13 soundnumber  
CV# 552 = 43 F14 soundnumber  
CV# 554 = 8 F14 information on loop  
CV# 561 = 35 F17 soundnumber  
CV# 562 = 181 F17 volume  
CV# 564 = 37 F18 soundnumber  
CV# 565 = 91 F18 volume  
CV# 566 = 8 F18 information on loop  
CV# 567 = 29 F19 soundnumber  
CV# 568 = 181 F19 volume  
CV# 569 = 8 F19 information on loop  
CV# 575 = 41 soundnumber change of direction  
CV# 576 = 128 volume change of direction  
CV# 577 = 31 soundnumber squeal  
CV# 578 = 128 volume squeal  
CV# 583 = 40 Soundnumber drainage  
CV# 603 = 36 cornering squeal sound number  
CV# 604 = 64 cornering squeal volume  
CV# 673 = 40 F20 soundnumber  
CV# 674 = 181 F20 volume  
CV# 675 = 8 F20 information on loop  
CV# 676 = 44 F21 soundnumber  
CV# 678 = 72 F21 information on loop

CV# 734 = 51 Soundnumber trigger 5  
CV# 735 = 10 Trigger 5 to FO  
CV# 736 = 32 Soundnumber trigger 6  
CV# 737 = 255 Trigger 6 to FO  
CV# 744 = 29 Soundnumber Z1  
CV# 745 = 181 Volume Z1  
CV# 746 = 8 Information on loop Z1  
CV# 747 = 30 Soundnumber Z2  
CV# 748 = 128 Volume Z2  
CV# 749 = 8 Information on loop Z2  
CV# 750 = 51 Soundnumber Z3  
CV# 751 = 64 Volume Z3  
CV# 752 = 8 Information on loop Z3  
CV# 753 = 32 Soundnumber Z4  
CV# 754 = 91 Volume Z4  
CV# 755 = 8 Information on loop Z4  
CV# 756 = 37 Soundnumber Z5  
CV# 757 = 64 Volume Z5  
CV# 758 = 8 Information on loop Z5  
CV# 759 = 38 Soundnumber Z6  
CV# 760 = 128 Volume Z6  
CV# 761 = 8 Information on loop Z6  
CV# 762 = 40 Soundnumber Z7  
CV# 763 = 16 Volume Z7  
CV# 764 = 8 Information on loop Z7  
CV# 765 = 43 Soundnumber Z8  
CV# 766 = 128 Volume Z8  
CV# 767 = 8 Information on loop Z8