Heisler Geared Locomotive

Photo © Heinz Däppen

Prototype information

The Heisler locomotive was the last variant of the three major types of geared steam locomotive, Charles L. Heisler receiving a patent for the design in 1892 following the construction of a prototype in 1891. Somewhat similar to a Climax locomotive, Heisler's design featured two cylinders canted inwards at a 45 degree angle to form a 'vee-twin' arrangement. Power then went to a longitudinal driveshaft that drove the outboard axle on each powered truck. The inboard axle on each truck was then driven from the outboard one by external side (connecting) rods. The Heisler was the fastest of the geared steam locomotive designs, and yet was still claimed by its manufacturer to have the same low speed hauling ability. Heisler's were produced in both two and three truck variants in sizes ranging from 17 tons to 95 tons.

Source: Wikipedia

Sound project information

The decoder is programmed for using motor informations to the virtual chufftrigger also operating the fan blowing smoker.

The sound project is based on Zimo Advanced Standard. The decoder must have SW Version 33.14 or higher.

The older MX 690 can operate this sound project, but the number of simultaneous auxiliary sounds is limited with these older decoders.

Please operate the calibration run on a flat long track. Start with CV 302 Value 75

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

Please look up the functions of each output in this manual and then connect the wires!!!!

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 stop		Whistle s-s-s
F5	Cab light	FA 5 dimmer activated	
F6	Smoke generator on heater ,load controlled	FA 6 load controlled by the loco	
F7	Cylinder valve		Blow down
F8	Sound on / off		
F9	Wheels screeching on curves		Opening the firedoor hear the wood fire and close the door
F10	Firedoor opening and closing	FA 8 flickers automatically	Sound of shovel and firebox door closing
F11	Blower	Steam generator fan on at Fan out or FA 4 or FA10	Smooth steam blow
F12	Servo coupler opens and loco moves back and forth	FA7 for automatic uncoupler Servo out 1 for Kadee electric coupler #11220	Uncoupling noise
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	Injector feeds water into the boiler		Injector
F18	Filling water into tender		Water splashing
F19	Air pump		Steam powered air pump
F20			

Random effect	Sound	Action
Z1	Compressor fast	Every time the locomotive comes to a standstill
Z2	Compressor slow	Maintaining air pressure
Z3	Firedoor opening and closing	FA8 flickering
Z4	Blower	Fan blows smoke out of stack
Z5	Injector	Steam injects water into the boiler
Z6	Safety valve	Loud popping of valve

Input	Sound	Time
1	Whistle	5 sec
2	Bell	5 sec
3		

Changing CVs values used by the reset

CV# 3 = 18
CV# 4 = 22
CV# 7 = ---
CV# 9 = 96
CV# 17 = ---
CV# 18 = ---
CV# 29 = ---
CV# 32 = 16
CV# 35 = 0
CV# 36 = 12
CV# 37 = 0
CV# 38 = 0
CV# 41 = 0
CV# 42 = 0
CV# 43 = 0
CV# 44 = 0
CV# 45 = 0
CV# 46 = 4
CV# 57 = 80
CV# 60 = 60
CV# 63 = 51
CV# 65 = 10
CV# 112 = 1
CV# 114 = 128
CV# 115 = 66
CV# 116 = 145
CV# 132 = 72
CV# 134 = 72
CV# 137 = 153
CV# 138 = 204
CV# 139 = 255
CV# 141 = 0
CV# 154 = 18
CV# 158 = 8
CV# 159 = 48
CV# 160 = 8
CV# 181 = 12
CV# 265 = 1
CV# 266 = 65
CV# 267 = 80
CV# 269 = 20
CV# 274 = 60
CV# 282 = 50
CV# 286 = 60
CV# 287 = 80
CV# 301 = 13
CV# 302 = 16
CV# 303 = 21
CV# 312 = 7
CV# 313 = 116
CV# 314 = 25
CV# 345 = 15
CV# 351 = 204
CV# 352 = 255
CV# 353 = 32
CV# 376 = 181