

# EMD SD50 CONRAIL

## Manual operator



## **The General Motors SD50 locomotive history:**

By the early 1980s, the six-motor road switcher was the most popular locomotive type for road freight service in North America. While a few railroads continued to order four-motor models, large road switchers made up the bulk of sales. As result, Electro-Motive introduced the six-motor SD50 as an improvement on its popular SD40-2. It offered greater output and significantly better fuel consumptions. Unfortunately, this model neither sold as well as the SD40-2, nor demonstrated the same high level of reliability that the SD40-2 did.

During SD50 production, Electro-Motive boosted output from 3,500 to 3,600 horsepower on the model. SD50s with 3,600-horsepower output used an AR11A main generator (alternator) with maximum current draw of 7,020 amps and either a D14 or D18 companion alternator for auxiliaries (depending on options). The SD50 could be ordered with either a 3,400- or a 4,000-gallon fuel tank. The HTC truck was standard equipment, and four gear ratios were offered, along with either standard 40-inch or 42-inch wheels. The 70:17 gearing and 40-inch wheels allowed a maximum speed of 70 miles per hour.

The SD50 was impressive because of its length. At 71 feet 2 inches long, it was significantly longer than the SD40, SD45, and SD40-2 models. It Was also slightly taller than the GP50, at 15 feet 7 ½ inches above the rail. The weight of the locomotive varied with options, with the heaviest weighing 390,000 pounds. Improved wheel slip and electrical improvements allowed for the SD50 to deliver substantially higher tractive effort than the SD45/SD45-2, which were similarly rated at 3,600 horsepower. According to Chicago & North Western's SD60 manual, its SD45s could develop between 69,000 and 82,000 pounds of tractive effort at maximum throttle, compared with 96,600 and 115,000 pounds with the SD50. Short-time over ratings were also better with SD50.

Despite improved performance characteristics and better fuel economy, unanticipated difficulties with the 16-645F engine and other problems brought the reliability of GP50 and SD50 locomotives into question. History has proven that both the 16-645F diesel engine and Super Series wheel creep control system were not as reliable or successful as the Dash-2 model systems they replaced.

Some observers believe the 16-645F was simply one view in the May 2005 issue of TRAINS Magazine, former Electro-Motive engineer Jack Wheelihan explains that by working 50 rpm faster than the 645E design, the 645F engine produced different and unanticipated levels of vibration that caused serious damage to the whole locomotive.

Ultimately, Electro-Motive decided to refine yet another new engine, the 710, which corrected problems inherent in the 16-645F. While 16-645F engine remain standard in 2006, these are often de-rated, or rebuilt into 16-645E's.



## SD50 locomotives included in the pack:

*SD50 Conrail scheme with NoDriver version*



*SD50 Conrail Quality scheme with NoDriver version*



## Scenarios included in the pack:



### **1 - Coal empty friday [Norfolk Southern Coal District]**

*You are in West Brownsville yard. You must drive a train of empty hoppers to Bailey Mine. Await departure clearance signal and messages to the dispatcher.*

### **2 - Coal load industry [Norfolk Southern Coal District]**

*You must make loading the remaining hoppers, then attach the rest of the train at the output of the mine.*

### **3 - Run through the curve [Horseshoe Curve]**

*It begins with the moving train outside Altoona with a long train of tanks.  
A little walk around the era of Conrail. A tour of the famous horseshoe curve.  
Take special care with slope*



## Cab Controls

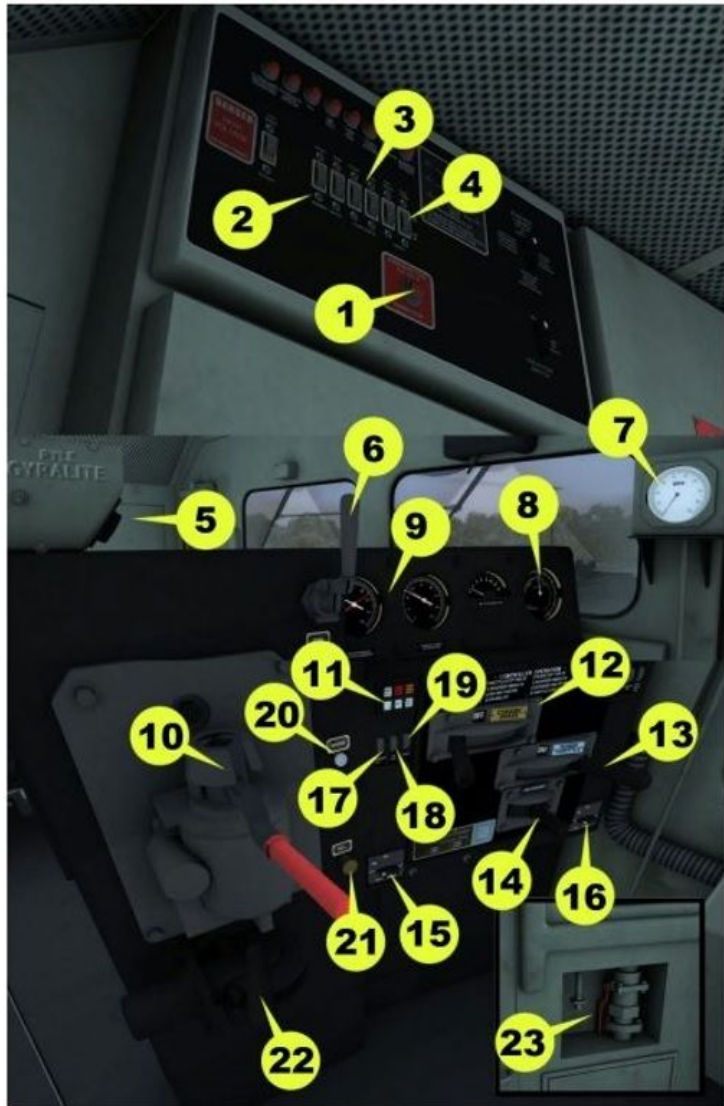
Cab doors and windows can be opened with the mouse.

- 1) Engine Start / Stop
- 2) Numberboards Lights
- 3) Class Lights
- 4) Platform Lights
- 5) Gyalite Switch
- 6) Horn
- 7) Speed Recorder
- 8) Ammeter
- 9) Air Gauges
- 10) Train Brake
- 11) Warning Lights
- 12) Dynamic Brake
- 13) Throttle
- 14) Reverser
- 15) Rear Headlights
- 16) Front Headlights
- 17) Instrument Lights
- 18) Cab Lights
- 19) Wipers
- 20) Sander
- 21) Bell
- 22) Engine Brake
- 23) Emergency Brake Valve

L: Cab Lights

M: Front Mirrors

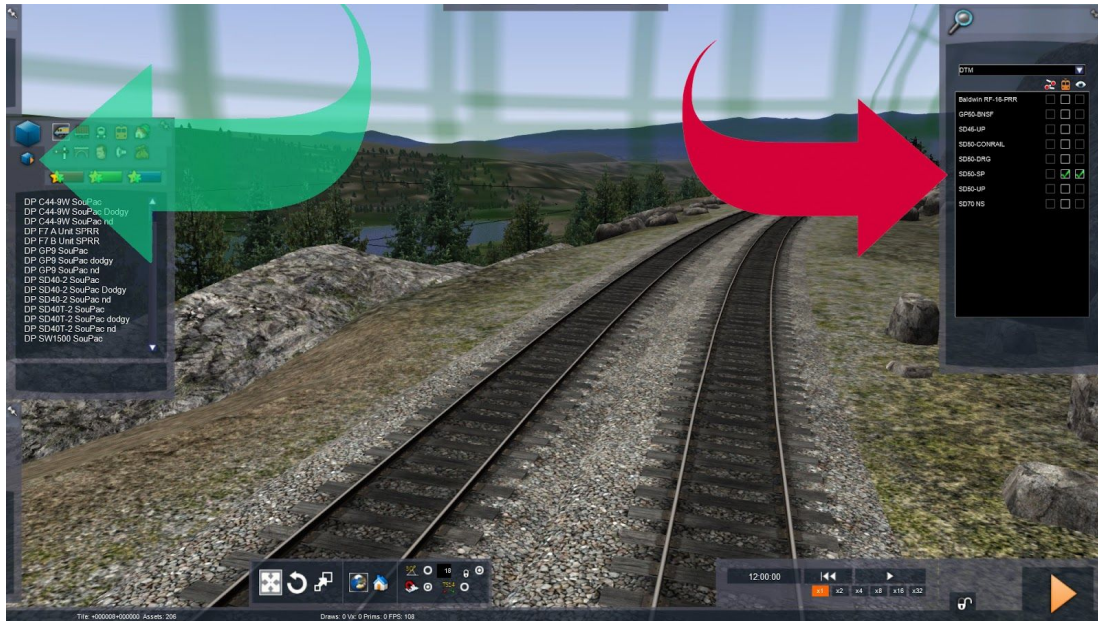
Shift + M: Rear Mirrors



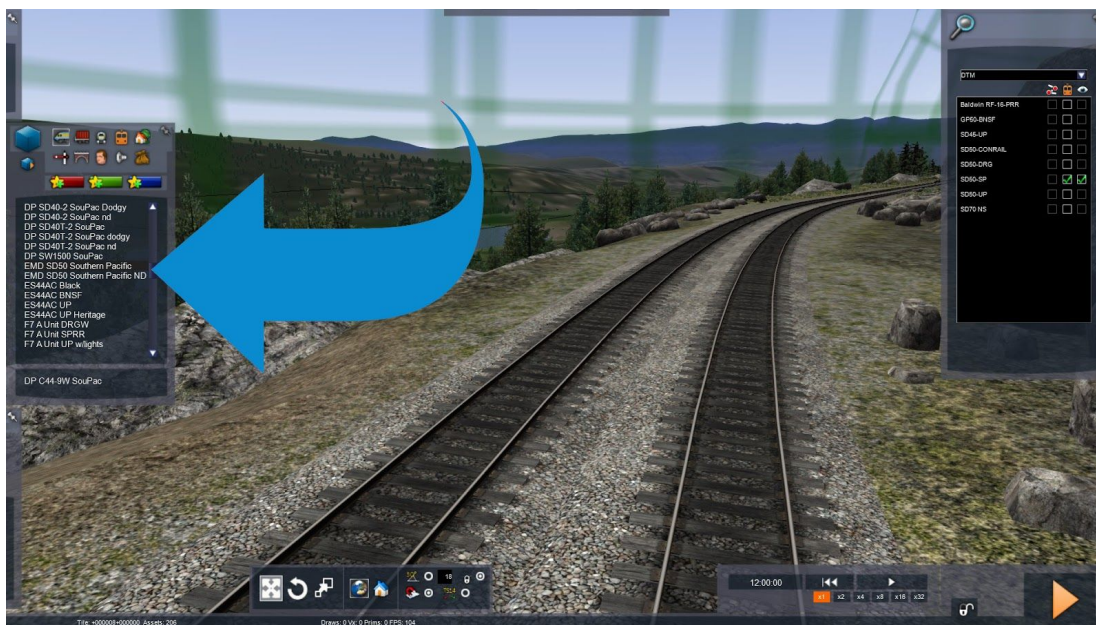
- \* 3. **Class Lights** not available in this pack
- \* 4. **Platform Lights** not available in this pack
- \* 5. **Gyalite** not available in this pack
- \* **Rear Mirrors** not available in this pack

## To create your own custom scenarios:

1. Click to blue box (Green arrow)
2. Click in right window and selected; DTM - SD50-CON (red arrow)



3. The name of the locomotive appears in the left window (blue arrow)  
**EMD SD50 Conrail // EMD SD50 Conrail Quality**



**Thanks to:**

Andreas Czudai  
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