



**D**igital**T**rain**M**odel  
**EMD SD45**

# EMD SD45 for Train Simulator 2013 Owner's Manual



# Digital Train Model

## EMD SD45



### A little bit of history

The EMD SD45 is a six-axle diesel-electric locomotive built by General Motors Electro-Motive Division between December, 1965, and December, 1971. Power was provided by an EMD 645E3 twenty-cylinder engine which generated 3,600 HP. This locomotive shared the same common frame with the EMD SD38, EMD SD39, EMD SD40, and EMD SDP40.

A total of 1,260 units were built for American railroads. Following this, the SD45-2 was released as its upgraded replacement. Additional models, like the SD45T-2, featuring the Tunnel Motor design, were released.

SD45s had several teething problems. Reliability was not as high as anticipated, due to the twenty-cylinder prime mover's propensity to break its own crankshaft. Even though it created an extra 600 horsepower (450 kW) from the 16-645 in the SD40, some railroads felt it just wasn't worth it, even after EMD redesigned the block to reduce crankshaft flexing.

Buyers included the Southern Pacific, Santa Fe, the Great Northern Railway and the Northern Pacific Railway. (Contrary to what many believe, the SD45 was not a "gas guzzler." It produced more power per unit of fuel than its 3,000 hp (2,240 kW) counterpart, the SD40. However, it did consume much more fuel at idle than the 16 cylinder prime mover in the SD40, and at the time, standard operating practice amongst US railroads was to leave a diesel locomotive idling when not in use.) Many SD45s can still be found, some rebuilt with sixteen-cylinder 645s, operating for lease companies. SD45s and SD45-2s owned by Montana Rail Link have maintained their 20 cylinder prime movers. Wisconsin Central used to roster a large fleet of SD45s, but its sale to CN has recently retired the entire fleet, with mass scrappings. Montana Rail Link is now also starting to sell some engines for scrap.

Source: [http://en.wikipedia.org/wiki/EMD\\_SD45](http://en.wikipedia.org/wiki/EMD_SD45)



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### Cab Controls

Cab Controls are identical to the default locomotives with some extra ones.

L: Cab Lights

I: Selector shift up

K: Selector shift down

M: Toggle front mirrors

Shift + M: Toggle rear mirrors

N: Strobe

O: Hand brake

U: Classlight Colour

Shift + U: Classlight Colour

Cab doors and windows can be opened with the mouse.



- 1) Engine Start / Shut down
- 2) Numberboards lights
- 3) Class lights
- 4) Platform lights
- 5) Train brake
- 6) Loco brake
- 7) Horn
- 8) Air gauges
- 9) Ammeter
- 10) Speed recorder
- 11) Warning lights
- 12) Sander
- 13) Selector indicator
- 14) Throttle indicator
- 15) Selector
- 16) Throttle
- 17) Reverser
- 18) Indicator lights
- 19) Cab lights
- 20) Front Dim lights
- 21) Rear Dim lights
- 22) Bell
- 23) Gyalite Control



Note: To use dynamic brakes within the cab you should place the selector lever in DYN position, then move the Throttle lever to apply brakes.





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## Included Scenarios

### 1) FROM ROSEVILLE TO COLFAX

Today you are in charge of two engines and your task is to take this train to its destination at Colfax. It should be a piece of cake for someone like you!

Tasks:

- Couple engine at Roseville Loco Refueling 04.
- Couple wagons at Roseville Departure Yard 2 - 10A.
- Stop at Colfax Loop Track 2.

### 2) SHORT FREIGHT TO SPARKS

Today we have a short train for you. Just 34 wagons and a caboose than must be taked to Sparks.

Tasks:

- Couple wagons at Truckee Yard 02.
- Stop at Sparks Cl. 01.

### 3) SWITCHING IN THE RAIN

The wagons in this two trains must be relacoted to compose three new consists, each one with one kind of wagon only.

Tasks:

- Couple engines at Roseville Local 02B.
- Couple engines at Roseville Local 05B.
- Drop Off at Roseville Loco Siding 02.
- Couple wagons at Roseville Local 02B.
- Drop Off at Roseville Departure Yard 2 - 07.
- Couple wagons at Roseville Local 02B.
- Drop Off at Roseville Departure Yard 2 - 15A.
- Couple wagons at Roseville Local 02B.
- Drop Off at Roseville Departure Yard 2 - 11A.
- Couple engines at Roseville Local 02B.
- Drop Off at Roseville Loco Siding 03.
- Couple wagons at Roseville Local 05B.
- Drop Off at Roseville Departure Yard 2 - 11A.
- Couple wagons at Roseville Local 05B.
- Drop Off at Roseville Departure Yard 2 - 15A.
- Couple wagons at Roseville Local 05B.
- Drop Off at Roseville Departure Yard 2 - 11A.
- Couple wagons at Roseville Local 05B.
- Drop Off at Roseville Departure Yard 2 - 07.
- Couple engines at Roseville Local 05B.
- Stop at Roseville Loco Siding 04.



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### 4) THE FOLLOWER

You must take your freight train to Truckee, but a passenger train has just departed, so you have to follow it and wait in the signals if you go too fast.

- Couple wagons at Sparks Cl. 01.
- Stop at Truckee Yard 05.



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### How to use this in your own scenario



- 1) Open your desired route.
- 2) Press Esc key.
- 3) Click on World editor from the pop up menu.



- 4) Go to the Tool Box panel.
- 5) Click on the Scenario icon.
- 6) Click yes from the warning pop up.



- 7) Go to the Browser panel.
- 8) Click on the Object Set Filter icon.



- 9) Go to the Browser Panel at the right of the screen.
- 10) Click the roll out menu.
- 11) From the roll out menu click on DTM.



- 12) Click the SD45 SP checkbox.



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- 13) Return to the Browser panel.
- 14) Click on Engines & Tenders icon.
- 15) Click the EMD SD45 SP
- 16) Click on the track to place it.



- 17) Return to the Tool Box panel.
- 18) Click the Driver icon.
- 19) Click on the engine.



- 20) Click the Play icon.
- 21) Save the changes in your scenario.
- 22) Drive your SD 45.



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Included rolling stock



Airslide Hopper SP.



Boxcar 50ft SP2.



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Gondola 52 ft SP with three loads: Lumbre, mt, and pipes.



Boxcar 50ft SP1.



Caboose CA-4 SP.

Union Pacific mark used under license

Thanks to:

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RSC Team

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