EMD BL2
for
Train Simulator 2021
Owner´s Manual

Index

A Little Bit of History

EMD BL2

EMD's diesel program was well underway in the late 1940s and early 1950s, thanks to the success of the company's FT demonstrations across the country. While the F-units in production were great for moving trains over the railroad, their full-width carbody made it difficult for locomotive crews to see to the rear of the locomotive. This was considered a worthwhile sacrifice for a mainline locomotive, which was expected to do little switch work, since the full-width carbody type was considered much more handsome and stylish. By comparison were the more functional-looking switch engines, with square lines, walkways and handrails, and narrow cowling covering mechanical parts. The F-units also lacked locations for brakemen or switchmen to stand and ride short distances while performing switching duties, such as the fore and aft platforms, footboards and handrails provided on diesel switchers, which were too small and slow for road service. The F-units did have grab irons and stirrup steps, but these features were a hindrance in locations with tight clearances.

Since the engine inside the locomotive's hood didn't consume the full carbody width, it seemed logical that the hood could be "cut away" somewhat, leaning towards what was then switch engine practice, allowing the crew to view the train from the cab, and also to ride more safely outside the cab, but while retaining the style of a full width carbody type. Thus, they created an early "road switcher", which combined the power and speed of a mainline "road" engine with the visibility and convenience of a switch engine, a design which has become ubiquitous on North American railroads. This wasn't an entirely new idea, as the Pennsylvania Railroad's GG1 fleet, which featured large cutout sections in its hoods, had been in service since 1934 (without external riding platforms). Both the BL and GG series attempted to preserve the stylish appearance of a carbody unit, to make them suitable for passenger duty, but subsequent road switchers have adopted a purely utilitarian appearance, and are most often used for freight service.

Another problem facing EMD was that ALCO was making inroads into a market that EMD wanted to retain. ALCO's RS series road-switchers were starting to assume many of the tasks that EMD wanted to fulfill with their locomotives. Likewise, Baldwin and Fairbanks-Morse had started their own models of road switchers.

EMD's designers and engineers designed a carbody somewhat reminiscent of the GG1 with mechanicals that contained the technical knowledge they had learned with the company's F-unit series. Starting from an F3, the result was the BL1 EMD Demonstrator #499 in September 1947. The BL1 Demonstrator was EMD Project 89499, thus the 499 Demonstrator number. The BL in the model name stood for "Branch Line", indicating that EMD felt the locomotive was best suited for light traffic and frequent switching chores.

A Little Bit of History

The BL1 and BL2 were virtually identical, differing only in throttle mechanism. The only BL1 was built with an air-actuated throttle. The BL1 was converted to a BL2 in February 1948 by replacing the air-actuated throttle with a standard electrically-actuated throttle. The production BL2 used the standard electro-hydraulic governor and notched throttle as used in the F3. While EMD public relations claimed the difference between the BL1 and BL2 was a lack of Multiple Unit control, photographs of the BL1 demonstrator clearly show it was MU-equipped.

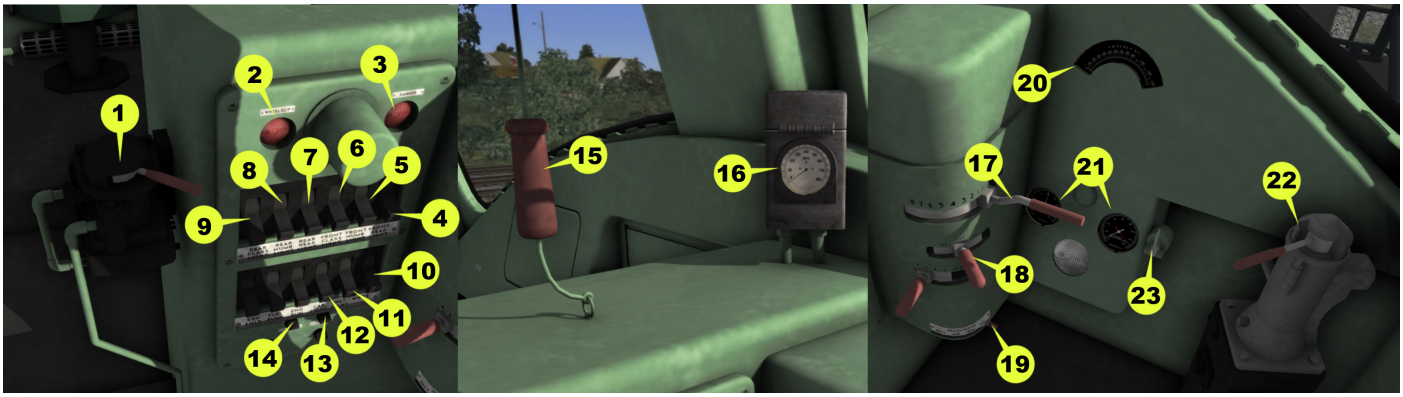
This locomotive was sold configured either for freight or passenger service. When configured as a passenger locomotive, it was equipped with a steam generator for heating the train. Passenger versions can be identified by the exhaust stack of this generator, which protruded in front of the windshield, between the two panes of glass. Freight units lack this stack.

Limiting the locomotive's success were several mechanical and ergonomic drawbacks. The mechanical components in the engine compartment were difficult to access and maintain, reducing its appeal among railroad shop crews. The locomotive's carbody lacked the full-length walkways of a true switch engine (a mistake not repeated on the subsequent "GP" series of diesels or other road switchers), making it difficult for the brakeman or switchman to move from one point on the locomotive to another during switching operations. Finally, although the industrial designers at EMD tried to build a carbody that evoked high-class passenger trains while retaining the utilitarianism of railroad work, the design never became popular. Even though the BL2 wasn't very successful, EMD's engineers learned from the endeavor, and incorporated all of the good ideas from it into the company's successful GP series of locomotives.

See Wikipedia, EMD BL2, //https://en.wikipedia.org/wiki/EMD_BL2 (describing history of the EMD BL2) (as of July. 15, 2021, 10:20 GMT).

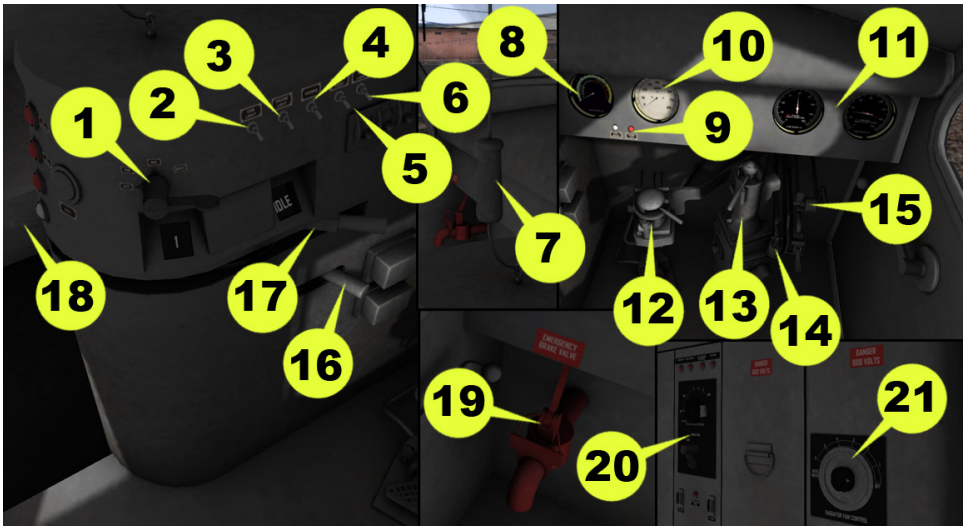
EMD BL2 Cab Controls

Cab doors and windows can be opened with the mouse.



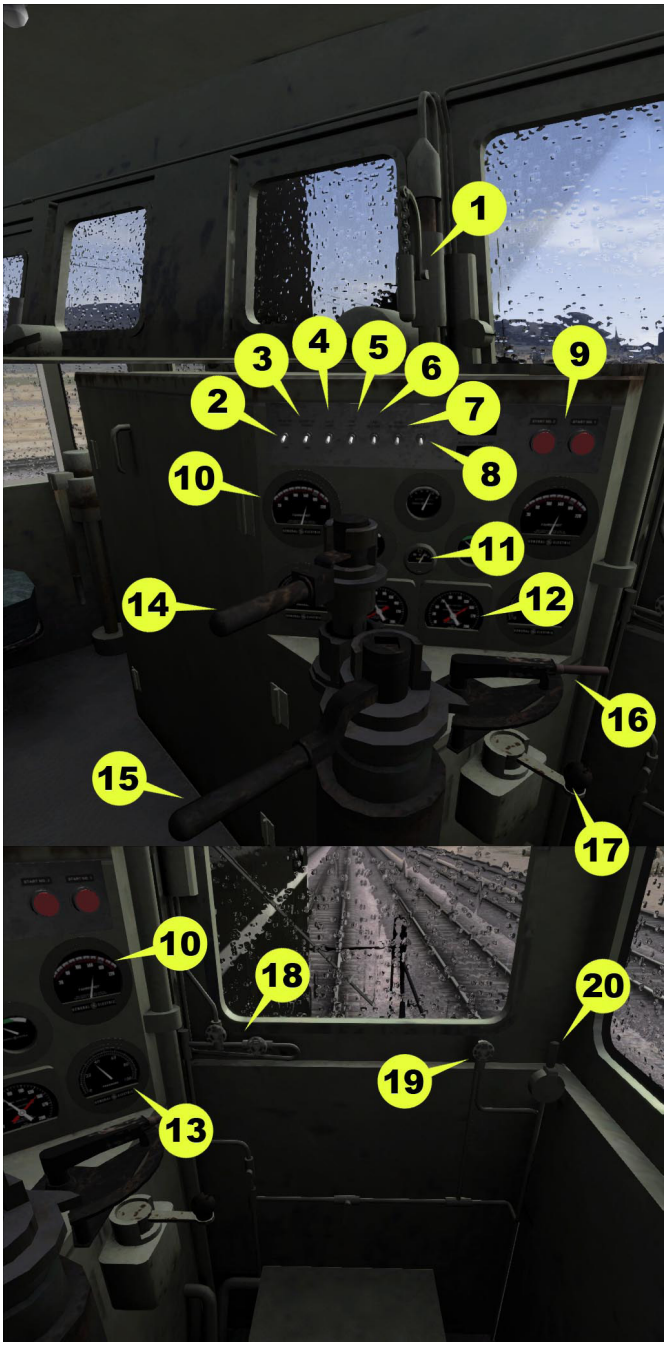
1) Loco Brake
2) Wheelslip
3) Sander Light
4) Front Headlight Switch
5) Front Number Light
6) Front Class Light
7) Rear Headlight Switch
8) Rear Number Light
9) Rear Class Light
10) Wiper
11) Gauge Lights
12) Cab Lights
13) Step Lights
14) Sander
15) Horn
16) Speed Recorder
17) Throttle
18) Reverser
19) Headlight Control
20) Ammeter
21) Air Gauges
22) Train Brake
23) Bell

ALCo FA2 Cab Controls



1) Headlights
2) Cablight
3) Gauge Light
4) Wipers
5) Class Light
6) Numberboard Light
7) Horn
8) Ammeter
9) Dyn Brake / Wheel Slip Lights
10) Speed Recorder
11) Air Gauges
12) Loco Brake
13) Train Brake
14) Bell
15) Sander
16) Reverser
17) Throttle
18) Selector
19) Emergency Brake Valve
20) Engine Start/Stop
21) Radiator Fan Control

44 Ton Cab Controls



1) Horn
2) Rear hood bright light
3) Front hood bright light
4) Gauge light
5) Cab light
6) Cab heater
7) Rear headlight
8) Front headlight
9) Start/stop engines
10) Water temperature
11) Battery charge
12) Air gauges
13) Oil pressure
14) Independent brake
15) Train brake
16) Throttle
17) Reverser
18) Wiper
19) Bell
20) Sander

Keyboard Controls

W/S = Reverser
A/D = Throttle
´/; = Train Brake
/ = Handbrake
[/] = Locomotive Brake
Z = Start Up / Shut Down
B = Bell
H = Headlights On
H + Shift = Headlights Off
L = Cablight
V = Wipers
Backspace = Emergency Brake
Space Bar = Horn
X = Sander
Control + Q = Exterior Sun Visors (BL2 only)
Control + T = Skirts (BL2 Only)

How to Drive

The EMD BL2 is easy to drive. Once in game, the engine is ON by default. To start moving it do the following steps:
1) Set the Reverser forwards or backwards.
2) Release Loco brake if the locomotive is light or Train brake if the locomotive is coupled to a consist.
3) Move up the Throttle. Depending on the consist it might need more power to move the train.
4) Use brakes levers to stop the train. Loco brake if you are operating a light engine or Train brake if you are operating a consist.

To operate the train with simple controls is even easier. You only have to worry about two controls. Reverser button and Throttle/brake lever. Reverser is usually set to forwards and can be changed with a single click on it. To move the train just move up the Throttle/Brake lever from the brake area, the bottom half, to the power area, the top half. Move it down to the brake area to stop the train.

The BL2 Headlights

To turn on the Headlights on the BL2 first click on the front headlight or rear headlight switch, then use the healight control lever.

Included Career Scenarios

All included scenarios are for CSX Hanover Subdivision

01 - Hagerstown Denizens

The Western Maryland Railway's long-lived pair of distinctive Electro-Motive BL2 diesels were regularly assigned throughout much of their careers to work at the railroad's sprawling Hagerstown (Maryland) Yard. You are the engineer of the veteran BL2s and have some yard switching to perform, followed by a run to Security to make set outs and pick ups.

02 - Jacks Mountain Climb

The climb of the east slope of Jacks Mountain was one of the many challenges of Western Maryland's Hanover Subdivision. You are the engineer of WM Train BT-1 and with only a pair of EMD BL2s on the point, you have stopped at Fairfield to add a pair of Alco FA2 rear helpers. Ahead is the ascent of Jacks Mountain and a pick up at the massive Greenstone quarry.

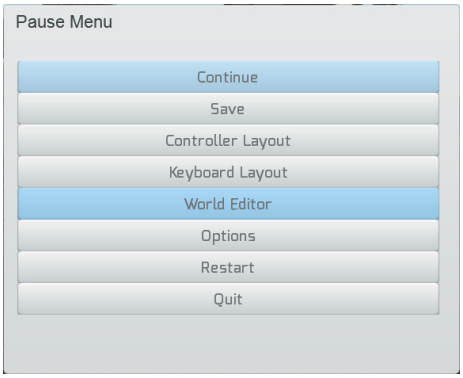
03 - Gettysburg Warriors

"Old warriors" is a term often applied to vintage and classic locomotives and in this scenario, you are the engineer of Western Maryland Train WM-6 aboard Western Maryland's veteran duo of distinctive EMD BL2s. You have stopped at historic Gettysburg (Pennsylvania) where you have pick up and set out work before continuing eastward on the Hanover Subdivision.

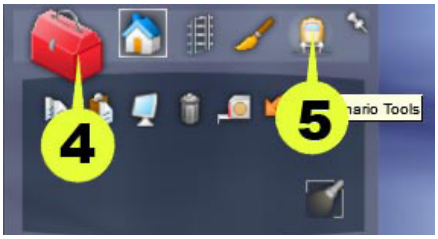
04 - Homeward Bound

Having been dispatched east to Baltimore the day before, Western Maryland's pair of EMD BL2s are now making their way back to their hometown, Hagerstown, as power of WM Train BT-1. As the scenario begins, you are awaiting a meet with eastbound Train WM-6, then you'll be making the descent of South Mountain's snowy west slope on a winter afternoon.

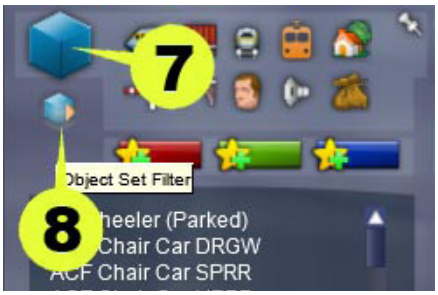
How to Use This in Your Own Scenario



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



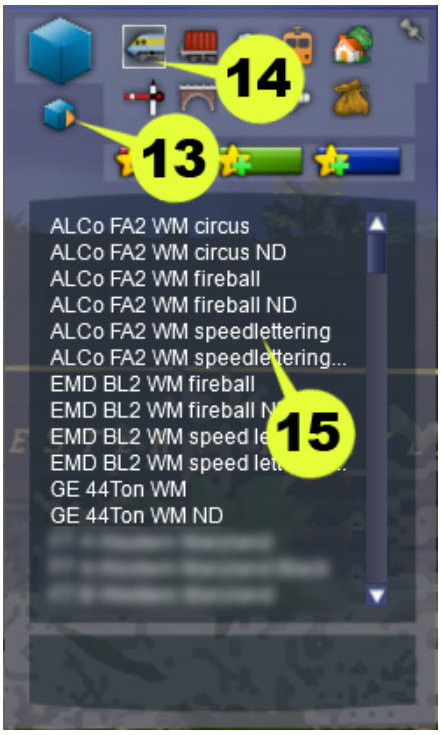
4) Go to the Tool Box panel.
5) Click on the Scenario icon.
6) Click yes from the warning pop up.



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

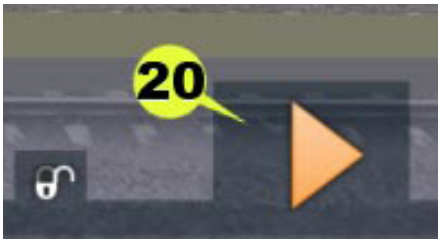
9) Go to the Browser Panel at the right of the screen.
10) Click the roll out menu.
11) From the roll out menu click on DTM.

12) Click the EMD BL2-WM checkbox.



13) Return to the Browser panel.
14) Click on Engines & Tenders icon.
15) Click the any of the units in the pack.
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 locomotive.

Included Rolling Stock

EMD BL2 WM speed lettering

EMD BL2 WM fireball

ALCo FA2 WM circus

ALCo FA2 WM fireball

ALCo FA2 WM speed lettering

GE 44Ton WM

40ft Boxcar WM

C20 Hopper WM

2 Bay Covered Hopper WM

52ft Gondola WM

Caboose WM in three schemes

WM mark used under license

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Michael Stephan
Dovetail Team

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