



Hudson Line

New York to Croton-Harmon



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Whilst we do our utmost to reproduce sounds that are accurate and true -to-life, sometimes these sounds may not completely tally with the user's expectation. Due to the nature of the simulation, it is often not possible to reproduce a completely accurate soundscape for a variety of reasons such as limitations with our current technology and occasional inability to gain meaningful access to the locomotives being created. You should therefore regard the audio reproduction for our locomotives as authentic interpretations rather than perfect recreations.

1 Route Map



2 Rolling Stock

Metro-North M7-A



Metro-North P32AC-DM



Amtrak P32AC-DM



CSX GenSet NRE 3GS-21B



CSX SD40-2



3 Driving the M7-A

Cab Controls



| | | | |
|---|------------------|---|------------|
| 1 | Headlight Switch | 3 | Cab Lights |
| 2 | Gauge Lights | 4 | Wipers |



| | | | |
|---|-------------------|----|------------------|
| 5 | Operating Screen | 9 | Alerter Reset |
| 6 | In Cab Signalling | 10 | Reverser |
| 7 | Speedometer | 11 | Power Controller |
| 8 | Horn Valve | | |

Key Layout

| Function | Key | Key |
|--|-----|----------|
| Decrease or Increase Throttle. | A | D |
| Move Reverser Forward or Backward. | W | S |
| Horn. Sound the horn's tone. | | Spacebar |
| Energy On/Off. | | P |
| Lights. Repeatedly pressing will cycle through headlight states where appropriate. | | H |
| Alerter. The Alerter is a system used on some trains to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown on the Driver's display), this must be acknowledged by pressing the Alerter button or the emergency brakes will be applied. | | Q |
| Windscreen Wipers. Press once to switch on and again to switch off. | | V |
| Cab Light. Toggle the Cab light on and off. | | L |

4 Driving the P32AC-DM

Cab Controls



| | | | |
|---|-------------------|----|------------------------------|
| 1 | Throttle | 8 | Headlights |
| 2 | Reverser | 9 | Emergency Shutdown / Startup |
| 3 | Train Brake | 10 | Alerter Reset |
| 4 | Independent Brake | 11 | Power Mode Operation Switch |
| 5 | Horn | 12 | Loco Information Display |
| 6 | Bell | 13 | Main Control Display |
| 7 | Sander | 14 | Crossing Lights |



| | |
|----|---------------------|
| 15 | Task Lights |
| 16 | Sun Shades |
| 17 | Aspect Display Unit |
| 18 | Emergency Brake |
| 19 | Dome Light |

Key Layout

| Function | Key | Key |
|--|-----|----------|
| Decrease or Increase Throttle. | A | D |
| Move Reverser Forward or Backward. | W | S |
| Decrease or Increase the Train Brake. | ; | ' |
| Decrease or Increase the Engine Brake. | [|] |
| Horn. Sound the horn's tone. | | Spacebar |
| Bell. Sound the bell. | | B |
| Sander. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press once to apply sand and again to stop. | | X |
| Lights. Repeatedly pressing will cycle through headlight states where appropriate. | | H |
| Alerter. The Alerter is a system used on some trains to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown on the Driver's display), this must be acknowledged by pressing the Alerter button or the emergency brakes will be applied. | | Q |
| Sun Shades. | | U |

5 Driving the NRE 3GS-21B

Cab Controls



| | | | |
|---|--------------|----|---------------------|
| 1 | Horn | 7 | Cab Lights |
| 2 | Sander | 8 | Wipers |
| 3 | Reverser | 9 | Engine Run |
| 4 | Throttle | 10 | Digital Speedometer |
| 5 | Ditch Lights | 11 | Front Head Lights |
| 6 | Gauge Lights | | |



| | |
|----|------------------------|
| 12 | Bell |
| 13 | Train Brake |
| 14 | Engine Brake |
| 15 | Platform Lights |
| 16 | Rear Headlights |
| 17 | Ditch Lights Direction |

Key Layout

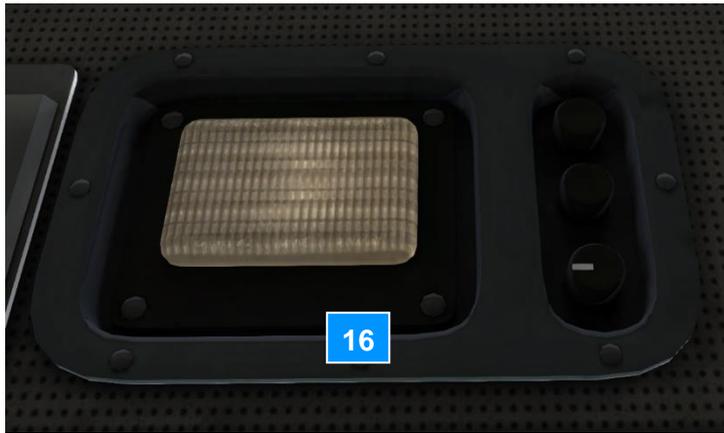
| Function | Key | Key |
|---|-------------|----------|
| Decrease or Increase Throttle. | A | D |
| Move Reverser Forward or Backward. | W | S |
| Decrease or Increase the Train Brake. | ; | ' |
| Decrease or Increase the Engine Brake. | [|] |
| Load/Unload. Press to load/unload passengers or freight. | | T |
| Lights. Repeatedly pressing will cycle through headlight states where appropriate. | | H |
| Windscreen Wipers. Press once to switch on and again to switch off. | | V |
| (Expert) Engine Stop/Start. By default engines will already be running at the start of a scenario. Press this button to stop and then again to restart the engine. | | Z |
| (Expert) Alerter. The Alerter is a system used on some trains to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown on the Driver's display), this must be acknowledged by pressing the Alerter button or the emergency brakes will be applied. | | Q |
| (Expert) Sander. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press once to apply sand and again to stop. | | X |
| Bell. Sound the bell | | B |
| Horn. Sound the horn's tone. | | Spacebar |
| Cab Light. Toggle the Cab light on and off. | | L |
| Gauge Lights. Toggle the Gauge lights on and off. | | I |
| Platform Lights. Toggle the Platform lights on and off. | | K |
| Ditch Lights. Increase or decrease the Ditch light control. | J | Shift+J |
| Ditch Light Direction. Switch the direction front to back. | | Ctrl+J |
| Number Lights. Activate or de-activate the Number lights. | | G |
| Handbrake On/Off. This icon is displayed in the Coupling view. | | / |
| ACES Alert. Activate the driver safety Alerter. | | Ctrl+D |
| ATC Cab Signalling. Activate the in cab signalling system. | | Ctrl+F |
| Couple manually. | Ctrl+Shift+ | C |

6 Driving the SD40-2

Cab Controls



| | | | |
|---|-------------------|----|---------------|
| 1 | Ammeter | 9 | Headlights |
| 2 | Cyl/Pipe Break | 10 | Reverser |
| 3 | Main/EQ Reservoir | 11 | Wipers |
| 4 | Horn | 12 | Dynamic Brake |
| 5 | Step Light | 13 | Sander |
| 6 | Instrument Lights | 14 | IND Brake |
| 7 | Number Lights | 15 | Train Brake |
| 8 | Throttle | | |



| | |
|----|-----------|
| 16 | Cab Light |
|----|-----------|

Key Layout

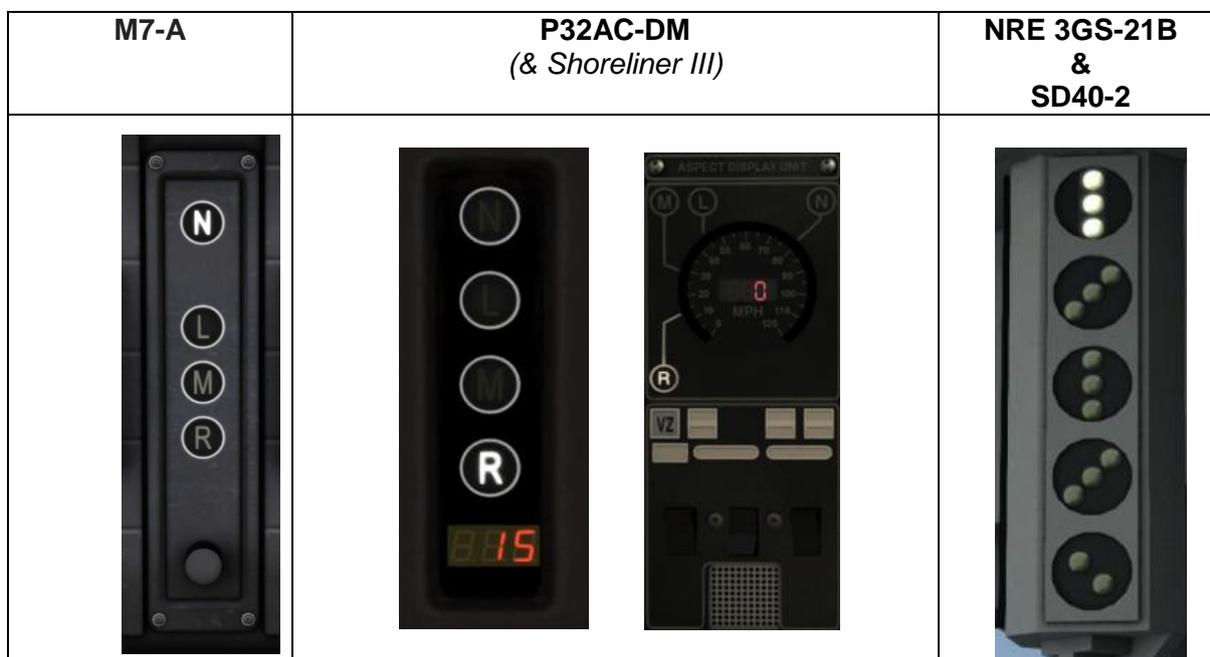
| Function | Key | Key |
|---|-----|----------|
| Decrease or Increase Throttle. | A | D |
| Move Reverser Forward or Backward. | W | S |
| Decrease or Increase the Train Brake. | ; | ' |
| Decrease or Increase the Engine Brake. | [|] |
| Horn. Sound the horn's tone. | | Spacebar |
| Bell. Sound the bell. | | B |
| (Expert) Engine Stop/Start. By default engines will already be running at the start of a scenario. Press this button to stop and then again to restart the engine. | | Z |
| (Expert) Sander. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press once to apply sand and again to stop. | | X |
| Lights. Repeatedly pressing will cycle through headlight states where appropriate. | | H |
| (Expert) Alerter. The Alerter is a system used on some trains to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown on the Driver's display), this must be acknowledged by pressing the Alerter button or the emergency brakes will be applied. | | Q |
| Windscreen Wipers. Press once to switch on and again to switch off. | | V |

7 In-Cab Signalling and Alerts

Locomotives on this route feature in-cab signalling systems.

Signal States

| Signal State | Description | Speed |
|--------------|---|------------|
| N | Normal | Line speed |
| L | Limited | 45 mph |
| M | Medium | 30 mph |
| R | Restricted | 15 mph |
| R | Restricted 2 <i>Please note: this allows you to enter same block as another trains. This does not require you to stop, but requires the driver to be attentive.)</i> | |



The images above shows the in-cab display used in this pack. Visually, the displays may vary for other locomotives but the principle remains the same.

Alerts and alarms

The alerter will alert the user to react if they don't touch controls for 60 seconds. The alarm can be cancelled by pressing Q or the "!" icon on the HUD. The cab signal aspect will be shown for the section you are currently in.

If you enter a new block and it has a reduced aspect (e.g. going from Normal to Limited) then the following happens and must be done by the engineer:

- An alarm will go off in the cab.
- The cab signalling will update to reflect the new signal speed and confirm what the new aspect is.
- If the train is within the MAS (Maximum Allowed Speed) then the engineer must simply press the ACKNOWLEDGE button (Q key) within 8 seconds.
- If the train is above MAS then the engineer must zero the throttle, move the brakes into 40% application or greater, and then press ACKNOWLEDGE within 8 seconds.

(Note: It is not required to be within the speed limit during the 8 seconds, it is only required that the engineer has confirmed to the ATC system that they acknowledge the reduction in aspect and have taken appropriate action to comply with it.)

- If the engineer moves the brake back out of suppression while still being above MAS then the alarm will sound again and the same procedure must be followed.
- Failure to acknowledge correctly within 8 seconds means the brakes will go to full service application - however, the engineer can apply the same procedure as above and they will be able to regain control of the train without having to stop.
- Once the train is under the new MAS the engineer can simply release the brakes and apply throttle as required.

Speed increase alert

This alarm is a small audio ping as a notification that your signal speed limit has increased. Note - this only applies to SIGNAL speed limits, not track speed limits. Currently you can only see this working if you have the control state dialog visible, there's nothing on the cab to indicate it.

Disabling the alerts

If the player does not want ALERTER functionality, they can press CTRL-F to toggle this.

If the player does not want ALERTER or ATC alarm and penalty brake functionality then they can press CTRL-D to toggle ATC Cut-out. In this case the cab signalling will still function, it just won't alert you with alarms or brake applications

SD40-2 & 3GS-21B in-cab signalling and alerts

In the CSX GenSet NRE 3GS-21B and CSX SD40-2, the in-cab signalling only displays the aspect and does not display the speed limit - the engineer is expected to know this information. Cab signalling is displayed on a pillar at the top of the front panel in the center of the cab.

Because freight trains are less tolerant of penalty brake applications, ATC and Alerter functionality on them is used to alert the engineer but will not apply penalty brakes.

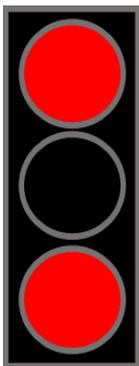
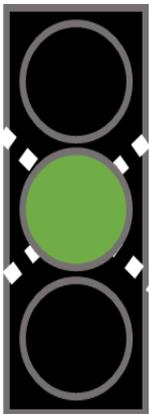
For the ATC, if the train is over the MAS then an alarm will sound - follow the procedure above and it will clear the alarm. The alarm will continue to be sounded no matter what you do unless you are braking correctly or under the MAS.

The SD40-2 has the updated air brake functionality that was debuted on the Canadian Pacific route and must be driven accordingly. The SD40-2 also implements flashing ditch lights that are triggered by sounding the horn, they remain flashing for 30 seconds after the last horn usage.

8 Wayside Signalling

These signals are only for junctions where the signallers can control them. The cab signalling does not actually have a stop aspect on the NMR trains, thus, the need for human-controlled signals.

The following wayside signals are used on this route:

| Signal Name | Wayside Signal | Description |
|--------------|---|--|
| Stop Aspect |  <p>Double Red</p> | Stop required. |
| Clear Aspect |  <p>Flashing Green</p> | Proceed using in-cab signalling guidance, as normal. |

9 Scenarios

Career Scenarios

- [M7A] 1. Against the Rush
- [M7A] 2. Demanding Morning
- [M7A] 3. Whiteout!
- [P32 AC-DM] 4. Empire Service
- [3GS-21B] 5. CSX Oak Point Switcher
- [SD40-2] 6. Bound for the Bronx
- [SD40-2] 7. Toting the Trash

Railfan Mode Scenarios

Railfan Mode provides a unique chance to observe and enjoy the operations of trains without the pressure and involvement of driving them. Railfan Mode scenarios are positioned at various key points along the route and provide camera functionality to sit back and watch the action unfold.

These scenarios are located on the Drive screen under the Career tab.

- [RailFanMode] Harlem 125th Street
- [RailFanMode] Greystone
- [RailFanMode] Spuyten Duyvil

10 Acknowledgements

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