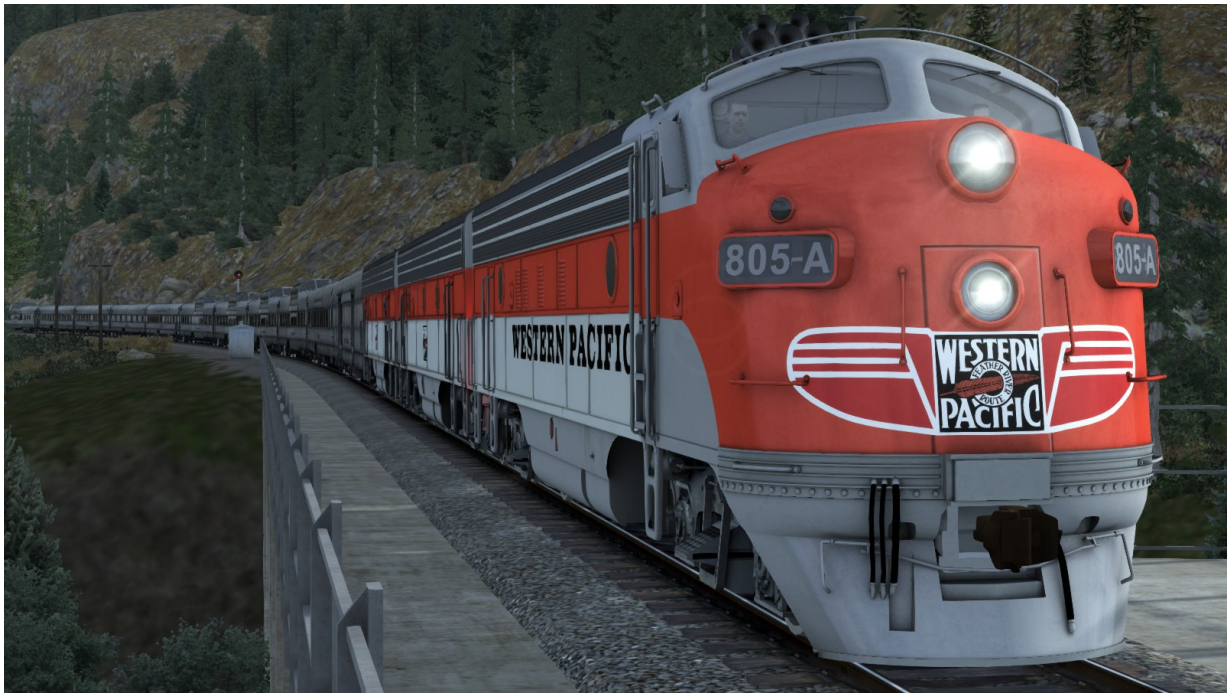
# FP7 California Zephyr

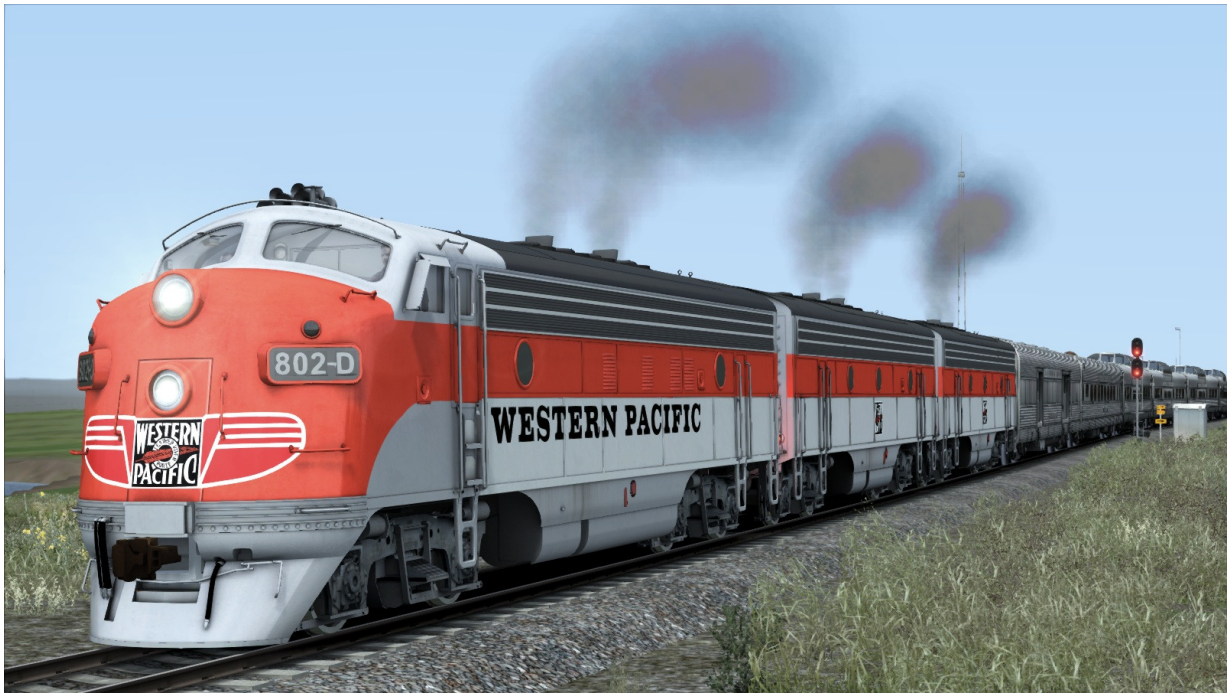





Release Version 1.0

# 1 Background

## 1.1 EMD FP7 Western Pacific




The EMD FP7 was a 1,500 horsepower (1,100 kW), B-B dual-service passenger and freight-hauling diesel locomotive produced between June 1949 and December 1953 by General Motors' Electro-Motive Division and General Motors Diesel. Final assembly was at GM-EMD's La Grange, Illinois plant, excepting locomotives destined for Canada, in which case final assembly was at GMD's plant in London, Ontario. The FP7 was essentially EMD's F7A locomotive extended by four feet to give greater water capacity for the steam generator for heating passenger trains.

While EMD's E-units were successful passenger engines, their A1A-A1A wheel arrangement made them less useful in mountainous terrain. Several railroads had tried EMD's F3 in passenger service, but there was insufficient water capacity in an A-unit fitted with dynamic brakes. The Atchison, Topeka and Santa Fe Railway's solution was to replace the steam generators in A-units with a water tank, and so only fitted steam generators into the B-units. The Northern Pacific Railway's solution was to fit extra water tanks into the first baggage car, and to pipe the water to the engines. The real breakthrough came when EMD recognized the problem and added the stretched FP7 to its catalog.

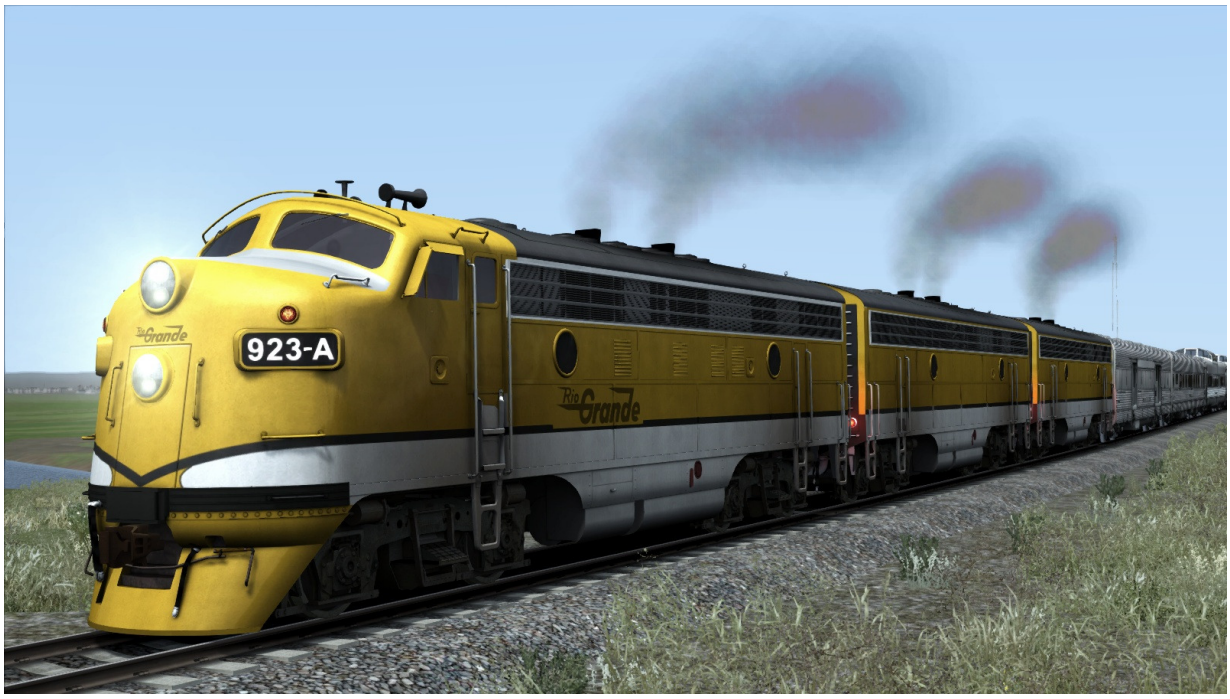
A total of 381 cab-equipped lead A units were built; unlike the freight series, no cabless booster B units were sold. Regular F7B units were sometimes used with FP7 A units, since they, lacking cabs, had more room for water and steam generators. The FP7 and its successor, the FP9, were offshoots of GM-EMD's highly successful F-unit series of cab unit freight diesels.

F3s, F7s, and F9s equipped for passenger service are not FP-series locomotives, which although similar in appearance have distinctive differences, including but not limited to the greater body length. The extra 4ft (1.2 m) of length was added behind the first body-side porthole, and can be recognised by the greater distance between that porthole and the first small car body filter grille. The corresponding space beneath the body, behind the front truck, was also opened up; this either remained an empty space or was filled with a distinctive water tank shaped like a barrel mounted transversely.

| | |
|---|---|
| **Total Built** | 381 |
| **Locomotive Weight** | 132t |
| **Vehicle Length** | 55’2 ¼” (16.82m) |
| **Fuel Capacity** | 1,000 gal (3626 litres) |
| **Vehicle Power** | 1,500hp (1,100 kW) |
| **Top Speed** | 50-120mph (80-164km/h) |

## 1.2 EMD F7 Rio Grande




After World War II, EMD began offering a new range of locomotives designated F for freight market, consisting of the F2, F3, F7 and F9 models, with each one offering increased power ratings and improvements on the last.

The EMD F7 first appeared in 1949, and went on to become the second best-selling locomotive ever produced by the Electro-Motive Division of General Motors. A total of 2,366 cab-equipped A units and 1,483 cabless B units were built between 1949 and 1953.

Although promoted originally as a freight locomotive, the F7 was also extensively used on passenger services across America during its time, even gaining some prestigious names such as the Santa Fe's 'El Capitan'.

Despite this popularity, many crews made their feelings known about its operation. Dislikes of the units included the difficulty to mount and dismount during switching duties as well as very poor visibility between engineer and ground crew unless they leant a long way through the cab side window.

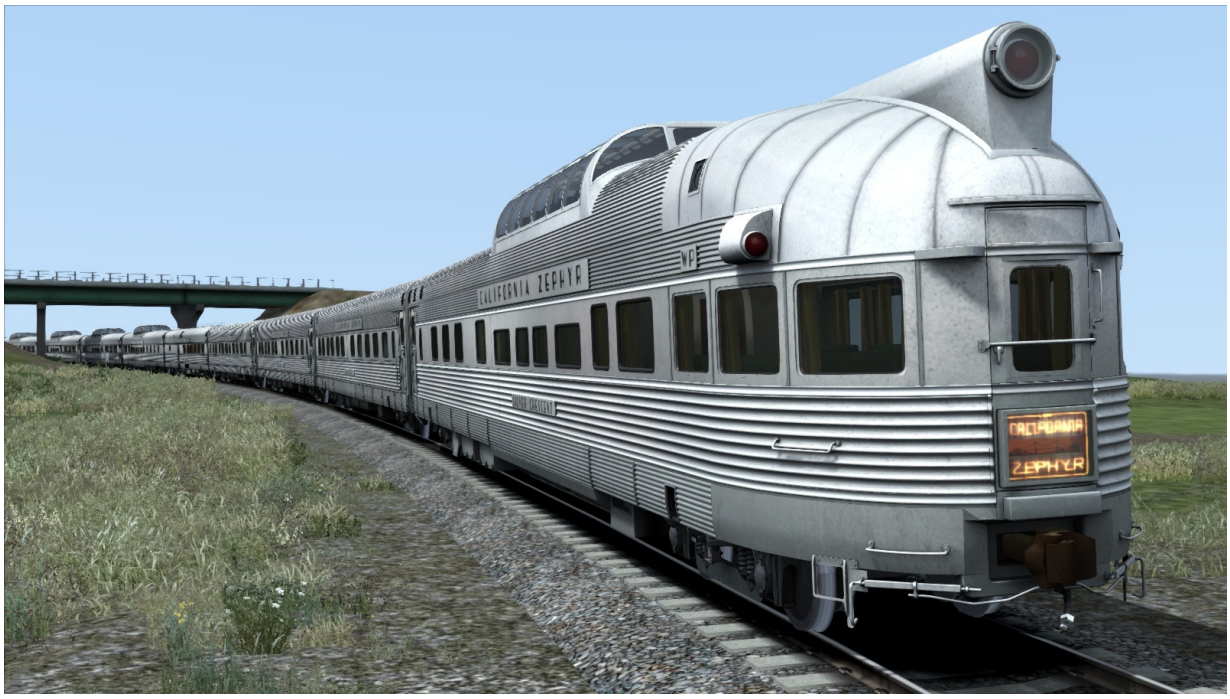
With much of the F7's life taking place before the introduction of two-way radio systems, these points of contention resulted in most switching operation moving over to GP traction, leaving the F units solely for through-working and block trains. This turn of duty was later attributed to the disappointing sales of the much improved F9s that were intended to replace the F7s.

Final withdrawal of the F units took place in the 1970s while most were still fully operational and so many have survived in preserved railroads.

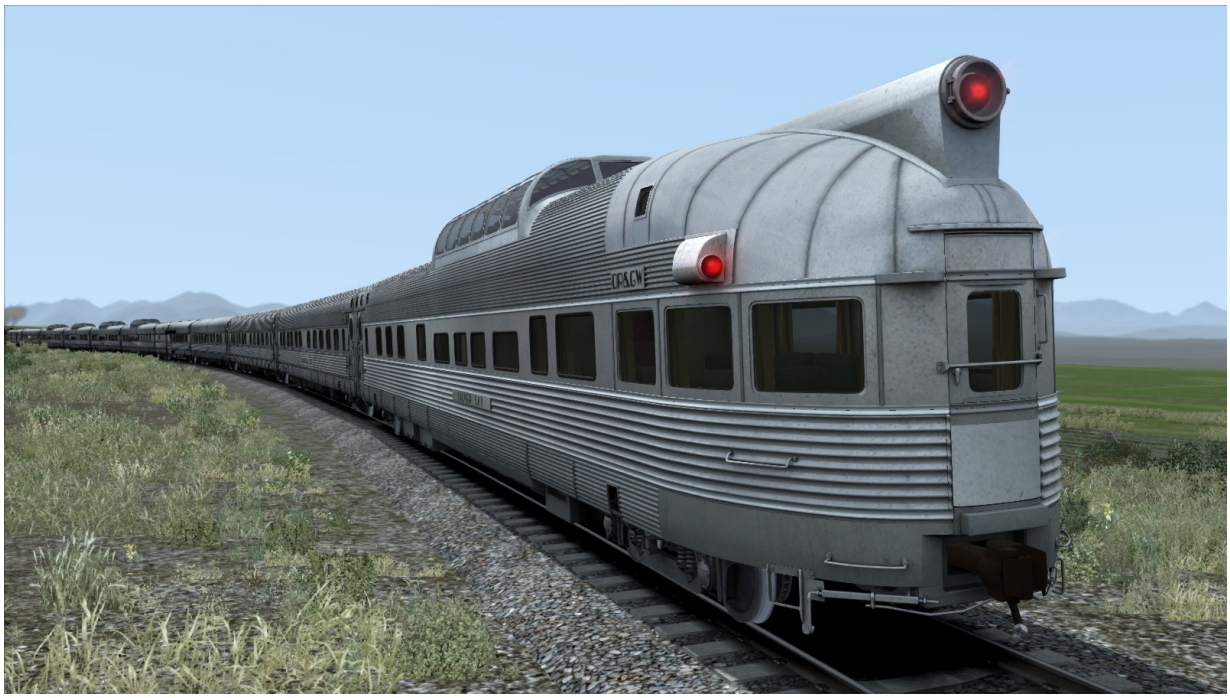
| | |
|---|---|
| **Total Built** | 2,366 A Units, 1,483 B Units |
| **Locomotive Weight** | 104t |
| **Vehicle Length** | 50’8” (15.44m) A Unit, 50’ (15.2m) B Unit |
| **Fuel Capacity** | 800 gal (3626 litres) |
| **Vehicle Power** | 1,215hp (906 kW) |
| **Top Speed** | 50-120mph (80-164km/h) |

# 2 Rolling Stock

## 2.1 California Zephyr cars

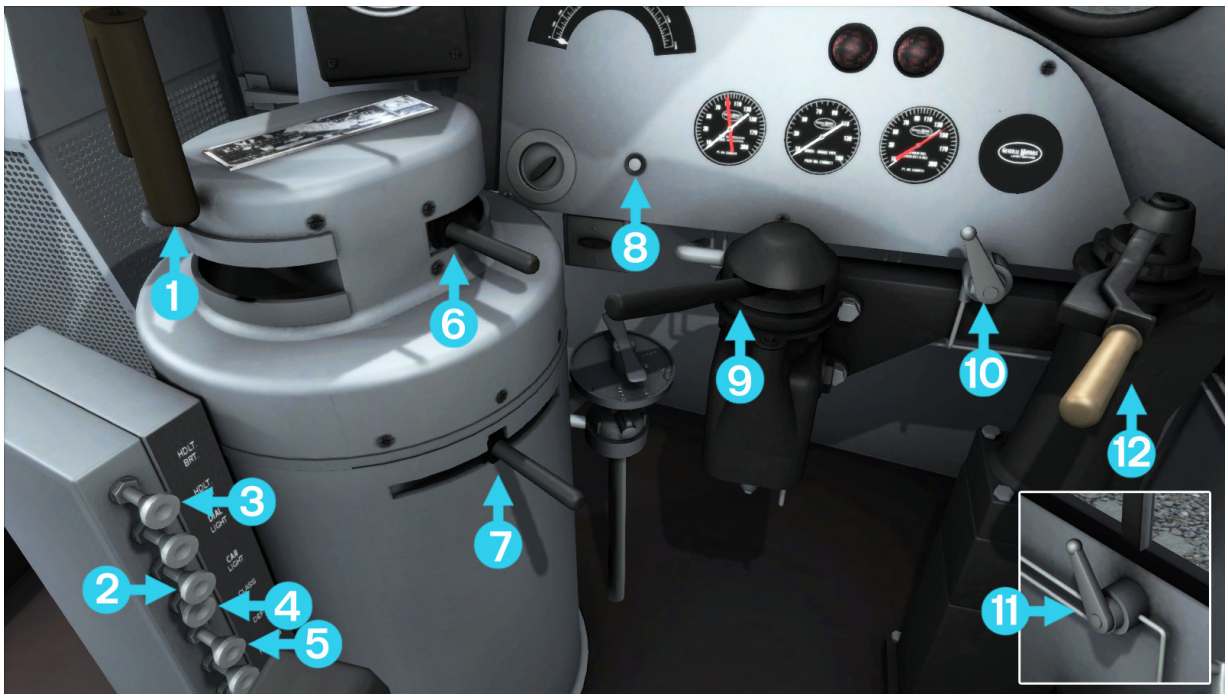



## 2.2 Rio Grande Zephyr cars



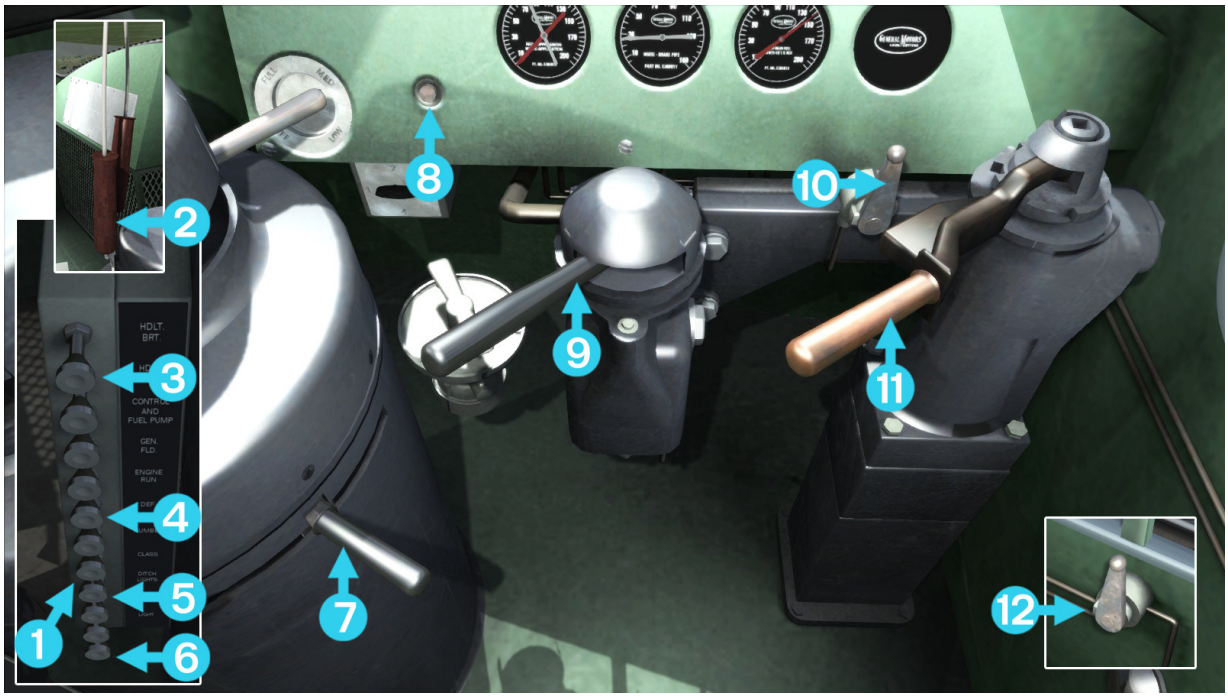
# 3 Driving the Locomotives

## 3.1 EMD FP7




| | |
|---|---|
| 1 | Horn |
| 2 | Dial Lights |
| 3 | Headlight |
| 4 | Cab Light |
| 5 | Class Lights |
| 6 | Power Handle |
| 7 | Reverser |
| 8 | Wipers |
| 9 | Independent Brake |
| 10 | Bell |
| 11 | Sander |
| 12 | Train Brake |

## 3.2 EMD F7




| | | | |
|---|---|---|---|
| 1 | Number Lights | 7 | Reverser |
| 2 | Horn | 8 | Wipers |
| 3 | Headlights | 9 | Locomotive Brake |
| 4 | Engine Run | 10 | Bell |
| 5 | Class Lights | 11 | Independent Brake |
| 6 | Cab Light | 12 | Sander |

## 3.3 Locomotive Keyboard Controls

| Key Equivalent | Action |
|---|---|
| **D** / **A** | Decrease or Increase the Regulator. |
| **S** / **W** | Decrease or Increase the Reverser. |
| **;** / **.** | Decrease or Increase the Train Brake. |
| **[** / **]** | Decrease or Increase the Locomotive Brake. |

## 3.4 General Keyboard Controls

| Key Equivalent | Action |
|---|---|
| **T** | **Load/Unload.** Press once to load/unload passengers or freight. |
| **H** | **Lights.** Repeatedly pressing will cycle through headlight states. |
| **Q** | **(Expert) Alerter.** The Alerter is a system used to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown in the cab) it must be acknowledged by pressing the Alerter button or the emergency brakes will be applied. |
| **X** | **(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. |
| **Space** | **Horn.** Sound the locomotive horn. |
| / | **Handbrake On/Off.** This icon is displayed in the Coupling view |
| **Shift+Ctrl+C** | **Couple Manually.** |

# 4 Scenarios

***For driving tutorials, please visit the Academy from the main TS2016 menu screen****

## 4.1 [FP7] 1. Train 17 Westbound

Take this southbound California Zephyr from Poe to Oroville.

Starting here at Poe, you're charged with taking this southbound California Zephyr as far as Oroville, where another crew will relieve you of your shift. Now that the signal has cleared you may proceed.

**Difficulty:** Easy
**Duration:** 50 Minutes

## 4.2 [FP7] 2. Train 18 Eastbound - Part 1

The first of a two-part journey to Keddie.

Hi Engineer. Now that the high priority train has passed, you are clear to proceed to Keddie.

**Difficulty:** Medium
**Duration**: 65 Minutes

## 4.3 [FP7] 2. Train 18 Eastbound - Part 1

The second of a two-part journey to Keddie.

With the fault fixed, the train ahead of you is moving again allowing you to proceed to Keddie. However, a looming snowstorm intensifies, conspiring with your delay to make your journey to Keddie a difficult one.

**Difficulty:** Hard
**Duration**: 65 Minutes

# 5 Acknowledgements

Dovetail Games would like to thank the following people for their contribution to the development of the FP7 California Zephyr pack.

Beta Testing Team