Hump Shunting in Railways

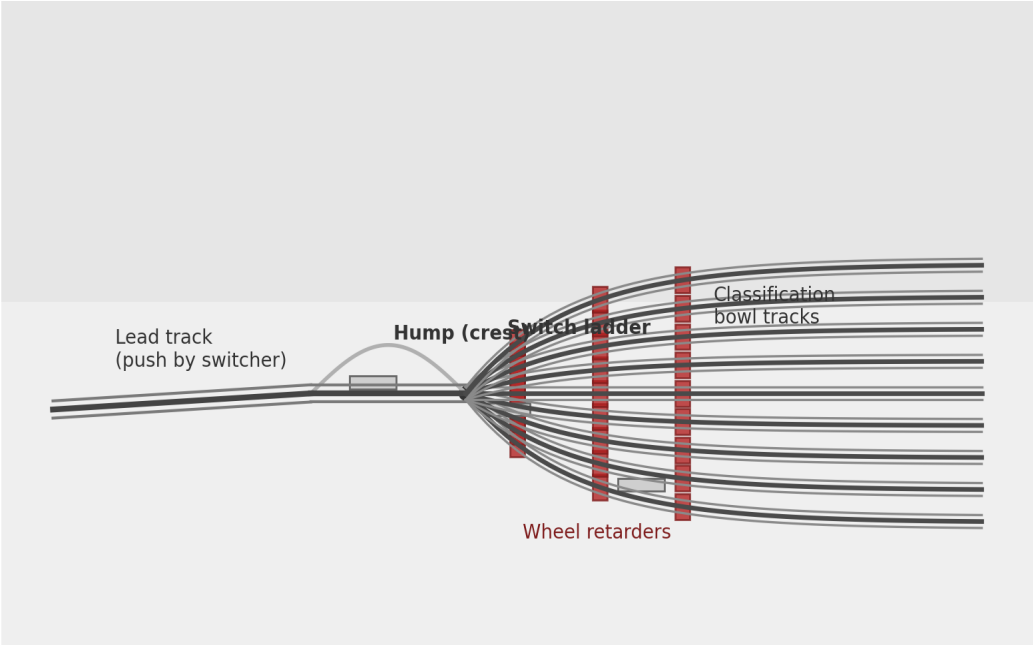
A hump yard (hump shunting) is a high-throughput method of sorting freight cars by gravity. Cars are pushed over a short hill (the hump), uncoupled at the crest, routed by a ladder of switches, and slowed by wheel retarders as they roll into classification tracks (the bowl).

Enola Yard, Pennsylvania — a large classification yard.

Te Rapa hump yard, Hamilton, New Zealand (aerial view).

Minneapolis hump yard — general view across the bowl.

Hump Yard Schematic (realistic style)



Schematic showing hump (crest), switch ladder, wheel retarders (red blocks), and multiple bowl tracks.

How it works

• Build the cut: a switching locomotive pushes a cut of cars up the approach to the hump.

• Crest & uncouple: at the top, cars are released individually or in blocks.

• Route: power-operated points send cars toward the correct classification track.

• Control speed: wheel retarders automatically slow cars to safe coupling speeds.

• Trim & depart: cars are coupled in the bowl; a trim engine assembles outbound trains.

Key components

• Hump (the hill)

• Crest & cut points

• Switch ladder

• Wheel retarders

• Classification bowl

• Trim lead