

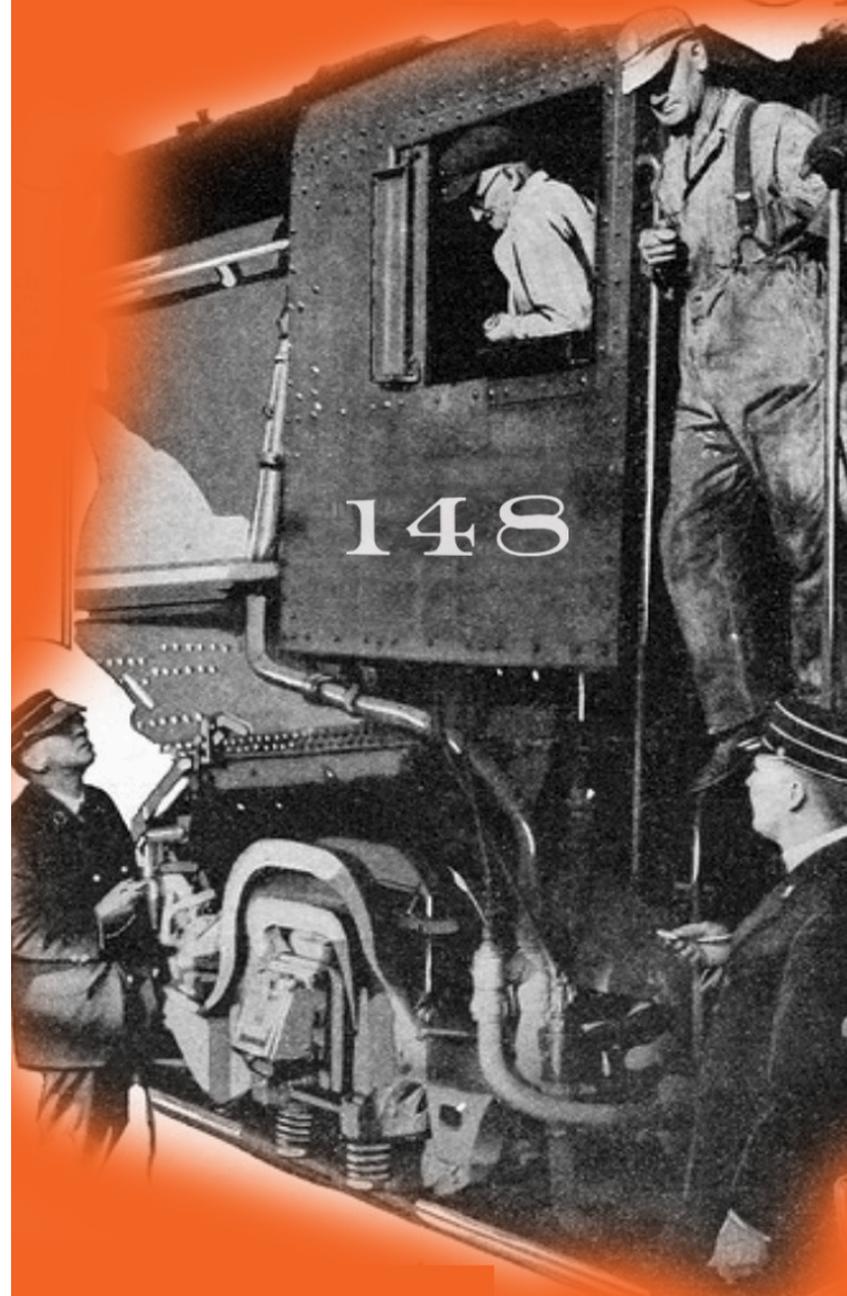
WHO HELPS MAKE THE TRAIN GO?

Operating a train of any size is a lesson in team work! At rest or on the move, a train is a mobile “office” for train crews around the country.

The **ENGINEER** (standing in the locomotive at right) operates the train, controlling how fast or slow the train goes. From the right side of the locomotive’s cab, the engineer watches the tracks ahead of the train to ensure they are clear. The engineer controls the locomotive using the throttle, reverse gear, and brake. The engineer calls the signals to the fireman and blows the whistle. The engineer has the ultimate responsibility in the operation of the train.

The **FIREMAN** (sitting in the locomotive window) maintains the correct steam pressure in the locomotive’s boiler. By changing the intensity of the fire, the fireman can create more steam or let the engineer’s actions at the throttle consume steam. Besides maintaining steam pressure, the fireman must also maintain an adequate level of water in the boiler by checking the gauge glass and adding water when necessary. The fireman is also the engineer’s eyes and ears for anything happening on the left side of the train.

The **CONDUCTOR AND BRAKEMAN** (standing left and right at the locomotive) are in charge of the time schedules and building the train. The conductor couples and uncouples train cars and watches the train as it goes around curves to be sure everything is working as it should be. The conductor communicates with the engineer through the use of hand signals, light signals, and by radio.



DID YOU KNOW TRAINS CAN TALK?

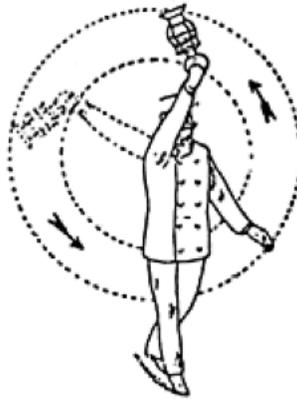
Engineers do not blow whistles just for fun. Every whistle has a meaning. Here are some definitions:

(● means a short whistle ■ means a long whistle)

| | |
|---------|---|
| ■ ■ | Release brakes. Proceed |
| ● | Apply brakes. Stop. |
| ■ ■ ● | Approaching meeting points or waiting points of trains. |
| ■ | Approaching Station. |
| ■ ■ ● ■ | Approaching public grade crossing. Used as an alarm for people or livestock on the track. |
| ● ● ● | When train is standing, back up. |
| ● ● | Answer to any signal not otherwise provided for. |

TALK WITH YOUR HANDS

Before radios and telephones, railroad crews would use hand and lantern signals to tell the engineer what to do next.



1. TRAIN HAS PARTED



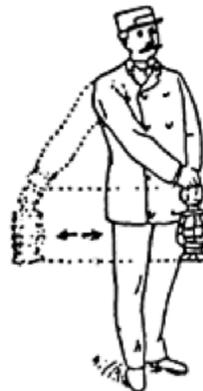
2. APPLY AIR BRAKES



3. BACK UP



4. RELEASE AIR BRAKES



5. STOP



6. PROCEED