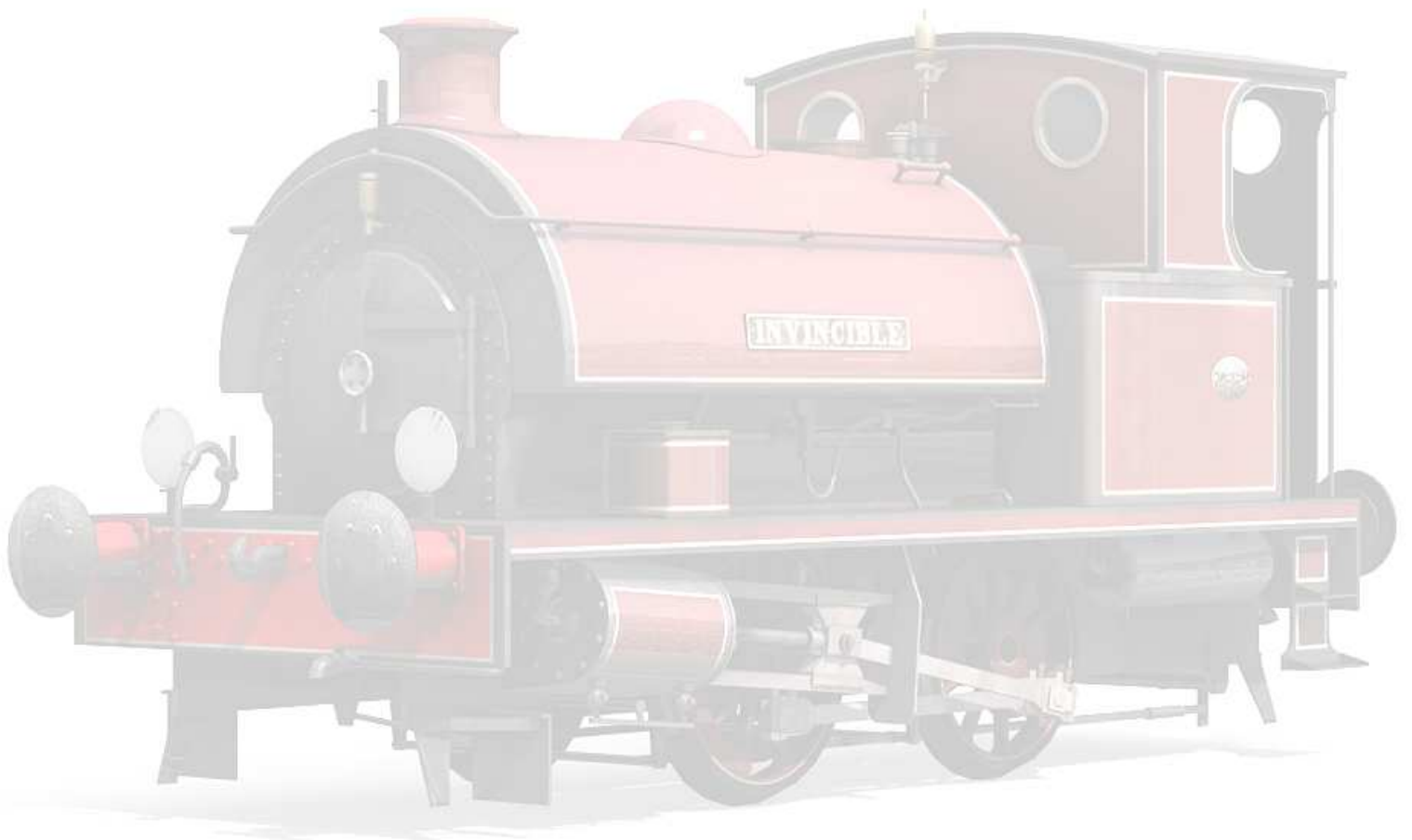


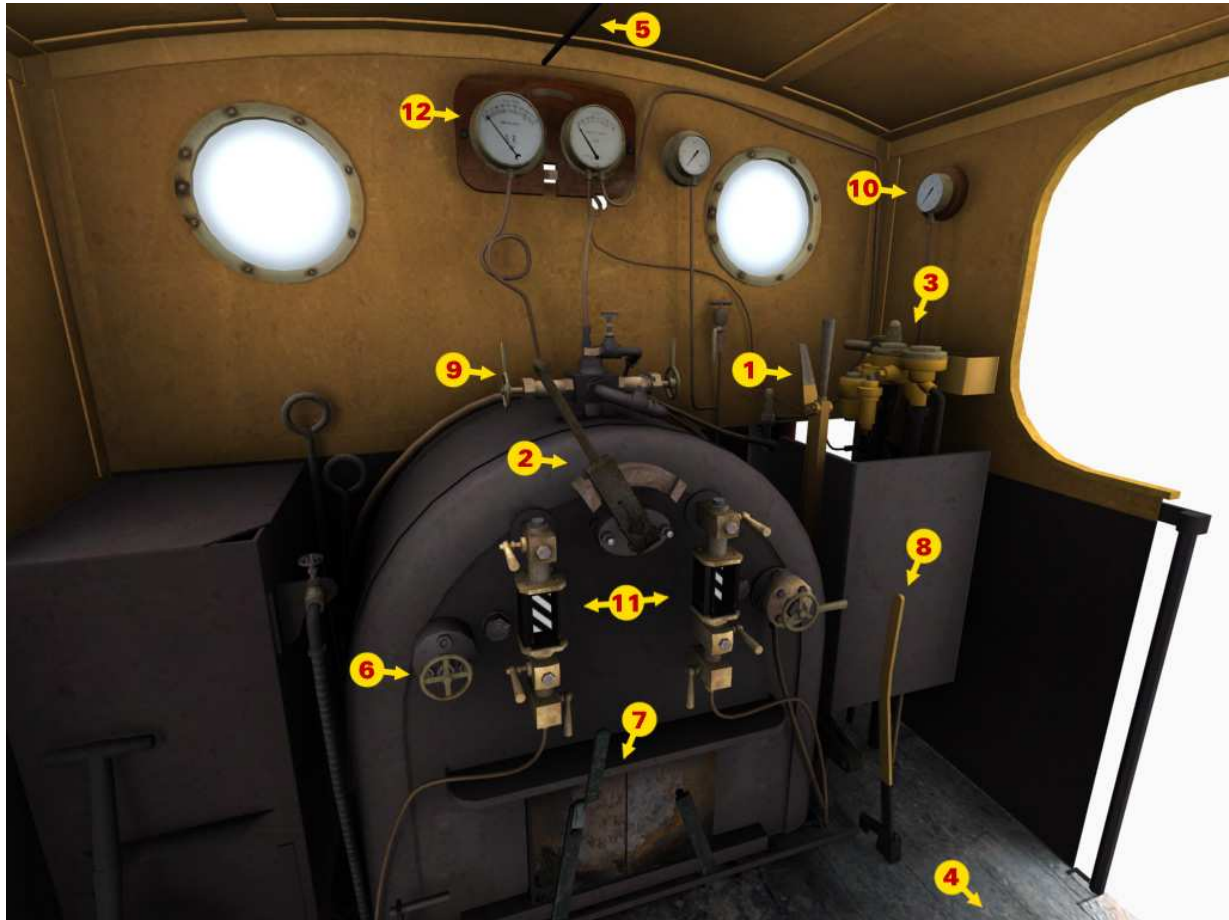


Kitchener Class 0-4-0ST "Invincible"

DRIVING MANUAL



1 0-4-0ST "Invincible" Cab Diagram



- 1 : Reverser(Directional Control)
- 2 : Regulator Handle
- 3 : Train Brake Controller
- 4 : Handbrake Lever
- 5 : Whistle Cable
- 6 : Blower

- 7 : Firebox Door
- 8 : Cylinder Cock Lever
- 9 : Live Steam Injector Wheels
- 10 : Train Brake Pipe Pressure
- 11 : Water Gauges
- 12 : Steam Heat Pressure Gauge

2 0-4-0ST “Invincible” Cab Controls

There are several important controls:

2.1 Reverser

- Pull this lever towards you to increase the Forward setting
 - (**W** on the keyboard)
- Push the lever away from you increase the Reverse Position
 - (**S** on the keyboard)
- Position vertically for a Neutral setting

2.2 Regulator Handle

- Pull the lever to the right hand side to increase power
 - (**A** on the keyboard)
- Push the lever to the left hand side to decrease power
 - (**D** on the keyboard)

2.3 Brake Handle

- Pull the handle towards you to apply the brakes
 - (**`** on the keyboard)
- Push the lever away from you to release the brakes
 - (**;** on the keyboard)

2.4 Additional Controls

- **Whistle** – Pull down on the cable to sound the whistle to alert line side workers as well as pedestrians on the multitude of foot crossings
 - (**Spacebar** on the keyboard)
- **Handbrake** – Turn the lever anti-clockwise to apply, and clockwise to release
 - (**/** on the keyboard)
- **Cylinder Cock Lever** – Pull the lever towards you to Open the Cylinder Cocks and push it forward to close them.
 - (**C** on the keyboard)
- **Blower** – Spin the wheel clockwise to activate the Blower. Spin it anti-clockwise to de-activate it.
 - (**N & SHFT+N** on the keyboard)
- **Live Injector Steam Control** – Pull the wheels towards you to activate the Injectors and push them away to de-activate.
 - (**O** on the keyboard)
- **Live Injector Water Control** – Activate the Injectors to pump water from the tank into the boiler and de-activate them to stop the pump.
 - Requires the Steam Injectors to be activated.
 - (**L & SHFT+L** on the keyboard)
- **Firebox Door** – Slide the handle left to open the Firebox door, and slide it right to close it again.
 - (**F & SHFT+F** on the keyboard)

3 Driving an 0-4-0ST Locomotive

Expert Mode instructions

3.1 Starting the Locomotive

Release the brakes. Once they are fully released and the brake pipe pressure becomes constant (shown in the F5 information display) apply the brakes slightly until they are in the RUNNING position. If you leave them in the RELEASE position steam pressure is wasted.

Pull the Reverser back about 40% to engage forward movement

Pull the Regulator to the right by roughly 10-20% and the train will begin to move off

Depending on your location, once you reach about 10-15mph push the reverser back to about 15-20%.

To go faster simply pull the Regulator more to the right

When going up hill, you may need to pull the reverser back and/or pull the Regulator more to the right to maintain speed.

When going downhill, you can push the Regulator all the way to the left and coast using the reverser at roughly 10-15%.

NOTE

The 0-4-0ST "Invincible" has a small coal and water capacity so be cautious of prolonged speed or you may run out of fuel.

3.2 Stopping the Locomotive

Move the Regulator Handle all the way left to the **OFF** position

To start applying the brakes, pull the Lever into the **APPLY** position. This applies the brakes based on how far you move the lever.

If you leave the brakes in the APPLY position, they will continue to come on until they reach maximum force.

If you wish to make a partial brake application, after applying the brakes, release them until in the SELF LAP position (shown in the F5 information display). This will hold the braking force at its current level.