

Appendix 3 Jinty Steam Loco Advanced

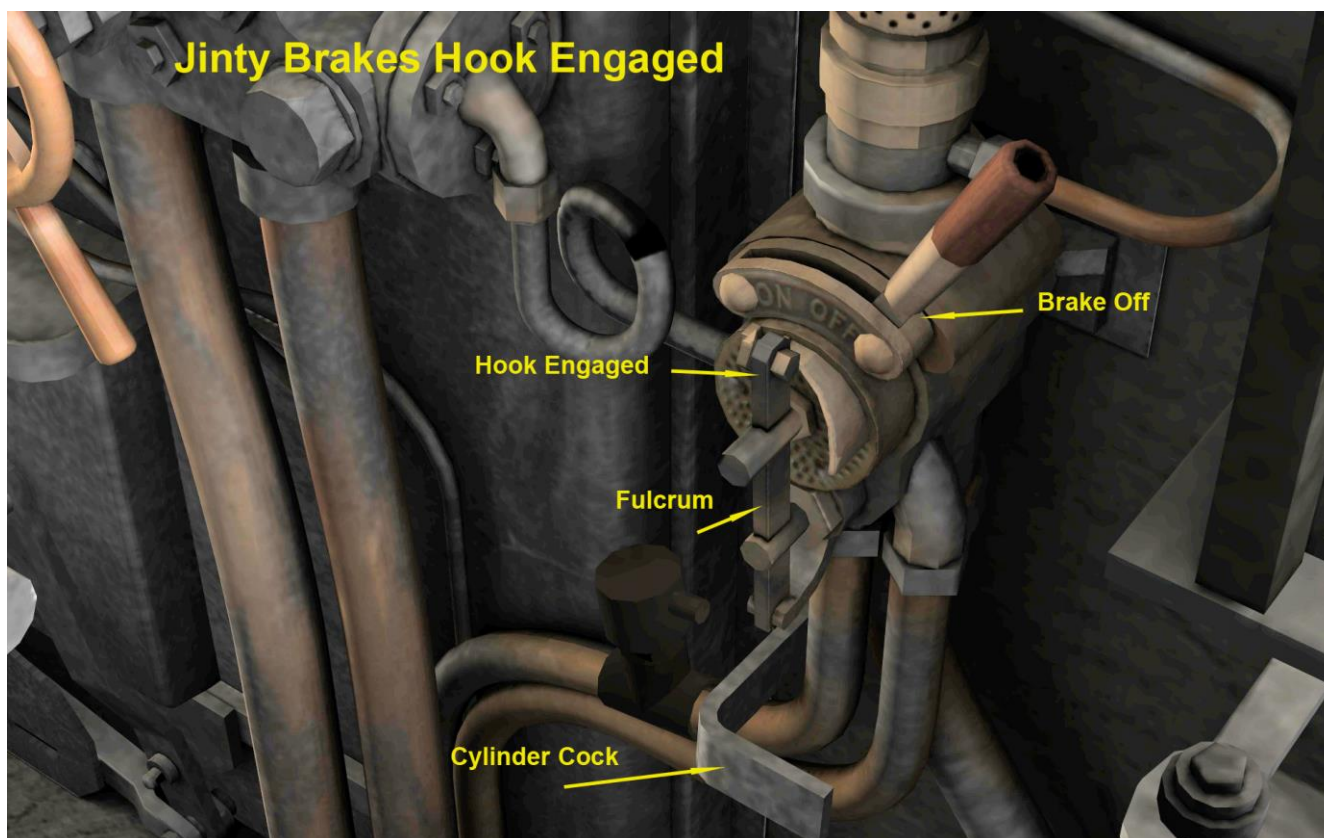
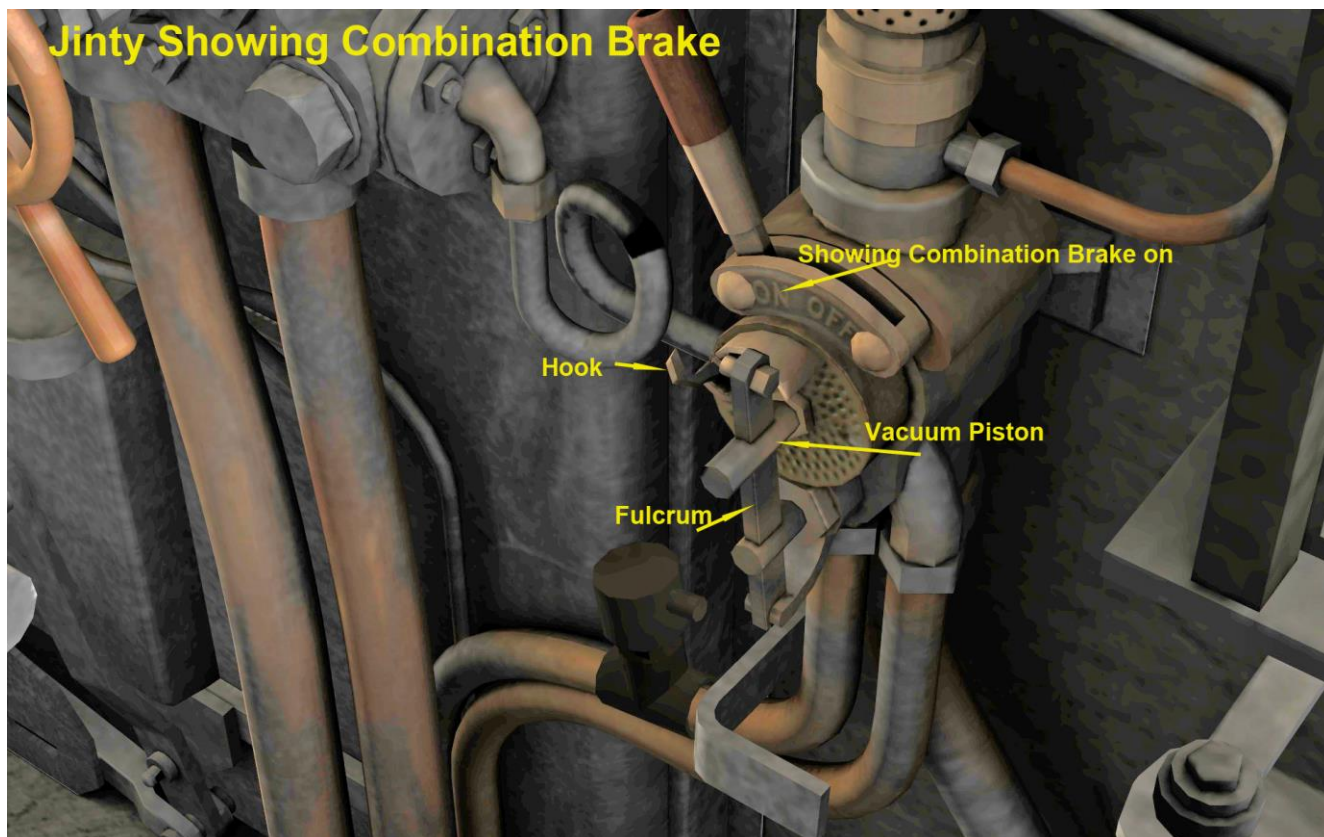
A tabular guide to steam locomotive driving

Action	Key Stroke /HUD	Supplemental
Check Train Brake is on Check Loco Handbrake	"'" (Apostrophe) "/" = on	"F4 HUD or F5 HUD "
Open Cylinder Cocks	"C"	"F5 HUD"
Check Fire Box, Boiler pressure and water levels	F5 HUD and Cab	F4 HUD and Cab Ideal Fire Mass 530 lb coal Boiler pressure > 90psi
Stoke and top up water, steam, fire mass as needed	Sequence "F"+"R" & "K"+"L" "I"+"O"	Stoke and water $\approx \pm 5/10\%$ of starting scenario level. Open fire door "F" and stoke, "R" . Open L/R water injectors "K" and "L" then steam valve L/R "I" and "O" Hear singing sound. Generally - stoke to $\approx 80/85\%$ fire mass and inject water to $\approx 85\%$ level Ideal Fire Mass 530 lbs Boiler pressure > 90psi
Open the Dampers	"M"	Close/open dampers according to steam colour see below.
Turn on the blower	"N"	
Operate Reverser latch	"E"	Regulator at zero (closed)
Open the Reverser Fully	\uparrow "W"	$\approx 75\%$- ie Notch 7
Release Handbrake	"Shift + /"	
Close Doors and open Windows stow driver's seat.	Mouse in Cab View	No keystrokes use mouse in cab view
Open the Large Ejector	"U" toggle	Only use when stationary. Releases brakes – once released – close.
Open small Ejector Ensure brakes off	"J" toggle with "Shift + J"	Crack open small ejector "J" Closed on "F5 HUD" ($\approx 30\%$) Crack open slightly. My need to press "J" repeatedly to release brakes fully.
Release the Train brake fully Usually shows a min of 19" Hg in F4 HUD or Release in F5 HUD Vacuum > 17" Hg	;"]" P"	Release train Brake Hold fulcrum out Lock fulcrum with Hook Note: Loco brake still on.
Release Loco Brakes (0% in F5 HUD)	"U" "J" "P" "["	Close Large Ejector Crack open small ejector slightly Unhook fulcrum Move fulcrum inward
Open the Regulator	\uparrow "A"	$\approx 35 - 60\%$ Increase slowly (watch lag)
Movement occurs at	Brake Pressure $\approx 19/21$" Hg	Train moves when brake vacuum pressure reaches ≈ 19 "Hg F4/F5 HUD

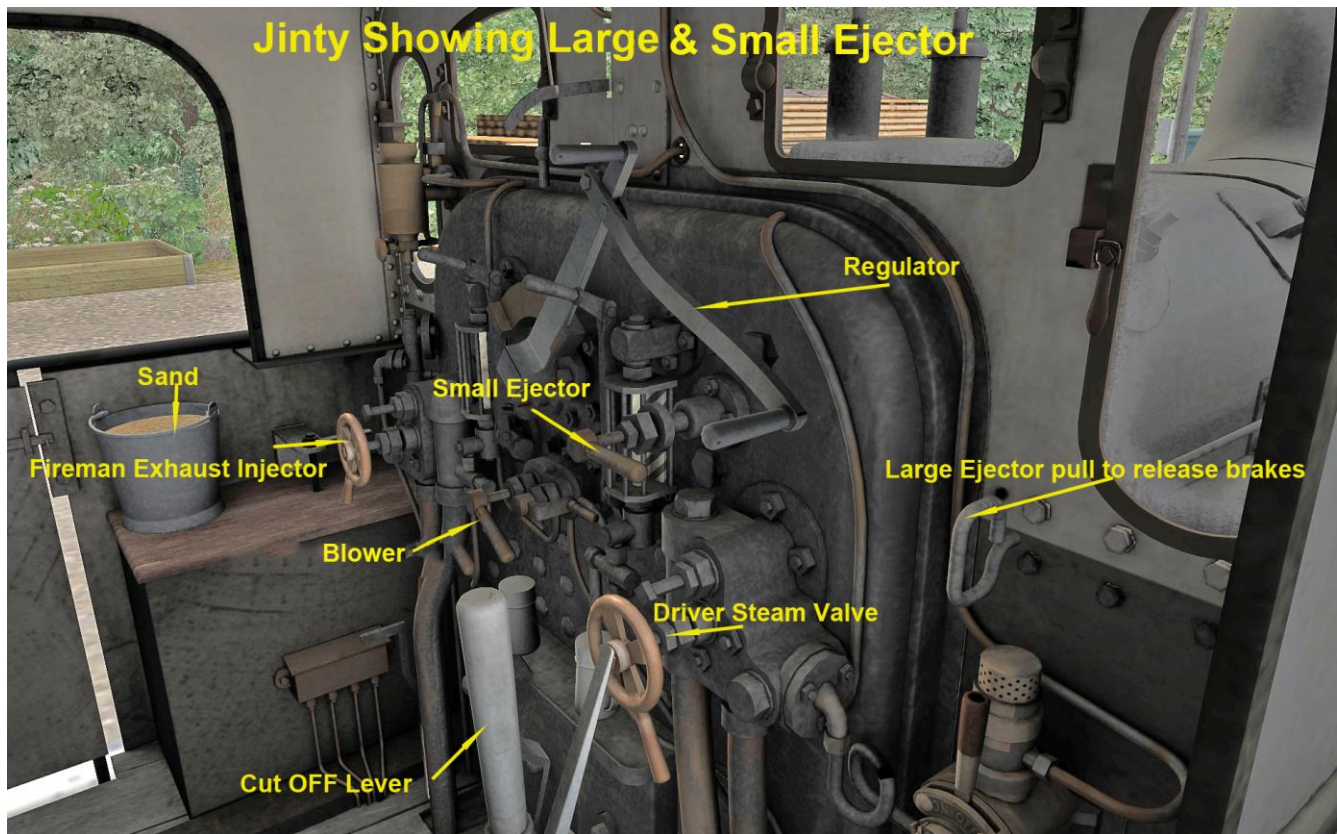
Close Cylinder Cocks	"C"	after 4-5 revolutions of the wheels Closed on " F5 HUD " Toggle open/close to keep steam pressure steady.
If sufficient, water, steam and fire mass Close as sequence	Sequence "Shift+I"+"Shift+O" "Shift+K"+"Shift+L" "Shift+R"+"Shift+F"	Repeat sequence as necessary to maintain water levels, steam pressure and firemass. Ideal Fire Mass 530 lbs Boiler pressure > 90psi
At ≈10 mph , Close Blower	"Shift+N"	
At ≈10 mph Regulator reduce <33% ↓ the reverser ↑ the regulator Fire as needed	"D" "E" "↓S" "↑A" "F"/"R"	Cut-off = Reverser ≈25 % Cut-off (Notch3) monitor boiler pressure, " F5 HUD " Keep Fire mass 530lb ± 5% Boiler pressure > 90psi
At ≈20 mph Regulator reduce <33% ↓ the reverser then ↑ the regulator	"D" "E" "↓S" "↑A" "F"/"R"	≈20 % Cut-off - (Notch2) monitor boiler pressure, " F5 HUD " Keep Fire mass 530lb ± 5% Boiler pressure > 90psi
At ≈35 mph Regulator reduce <33% ↓ the reverser ↑ the regulator	"D" "E" "↓S" "↑A"	≈15 % Cut-off (Notch1) Keep the boiler pressure as close to the optimum/ maximum (Green on the F4 HUD or as per loco spec on " F5 HUD ")
As you move faster Balance Regulator according to terrain Adjust reverser as needed Close Blower	"↑A"/"D" "Shift + N"	Keep the boiler pressure as close to the optimum/ maximum (Green on the F4 HUD or as per loco spec on " F5 HUD ") Close Blower
Running conditions		
Dampers Keep Open unless: (Pale Yellow Smoke close damper. Black Smoke open damper and blower Light Grey Smoke ideal)	"M" "Shift+M"	Only close/reduce them " Shift+M ". if you wish to limit steam production to avoid blow-off i.e. during light loads.
Blower Open Blower slightly when shutting regulator	As "D↓" "M"	As the regulator is shut open the blower slightly.
Tunnels Close Regulator Open Blower fully	As "D↓" = 0 "M" fully	Prevents blowback

For stopping the Jinty see my steam loco driving notes.

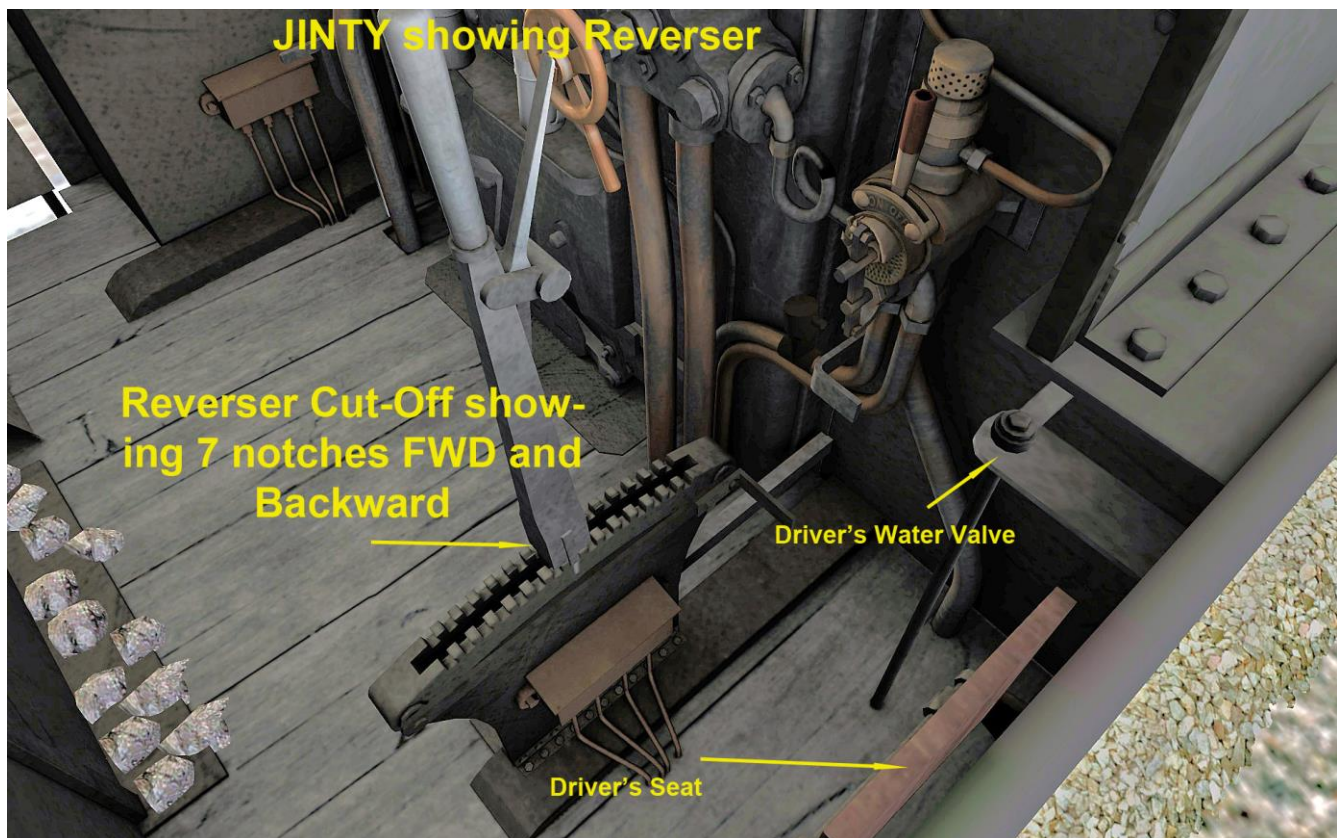
Jinty Showing the various cab controls



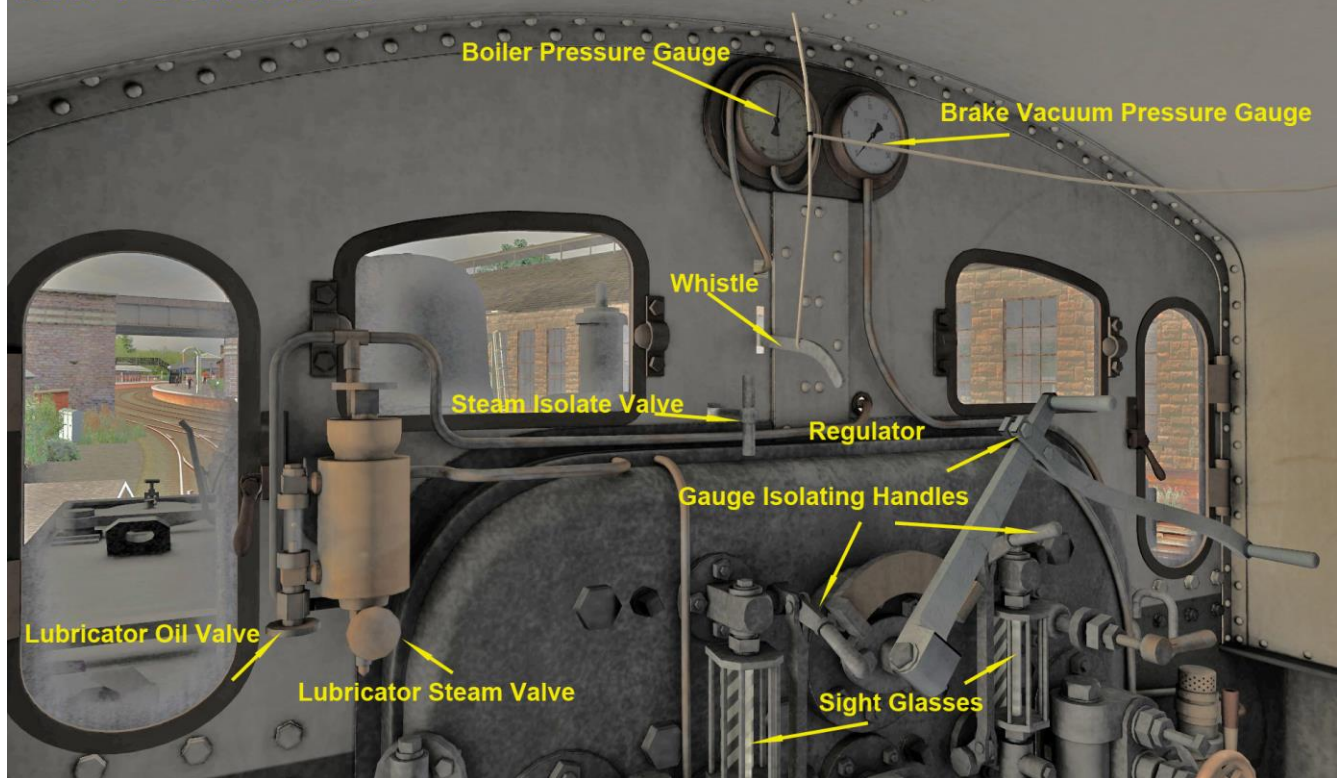
Jinty Showing Large & Small Ejector



JINTY showing Reverser



JINTY CONTROLS



LMS Combination Brake Operation (from the forums by Chris Barnes on UKTS)

- Put the vacuum brake handle to the OFF position.
- Press the steam brake fulcrum inwards and lock it with the hook.
- Toggle the fulcrum in and out to brake the loco,
(Note: the fulcrum wants to go outwards so you are pushing it against steam pressure. - quite fiddly.

This procedure demonstrates that the vacuum brakes of the trains and the steam brakes on the locomotive can be operated independently. (see RSC- J94). The hook is being used to lock the fulcrum and prevent it from being forced inwards. The result – this locks the steam brakes fully on whilst the train brakes are fully off, and vice versa..

Operating the Jinty brakewise (Chris Barnes on UKTS)

- Open the Cylinder Cocks "C"
- Open the large ejector (turn on) by pressing "U"
- Move the brake handle to the off position :/;
- Lock the fulcrum (out position –HOLD "J") with the Hook ("P")
- The F5 Panel shows that the train brakes are fully off at 21 inches of mercury and the loco brakes at 97%
- Put the small ejector on (cracked open a little) "J"
- Close the the large ejector off "U"
- Unclip The Hook "P"
(or flick brake lever to left)
- Fulcrum move inwards "["
- Loco brakes released

Now we can move