

# Appendix 3 Jinty Steam Loco Advanced

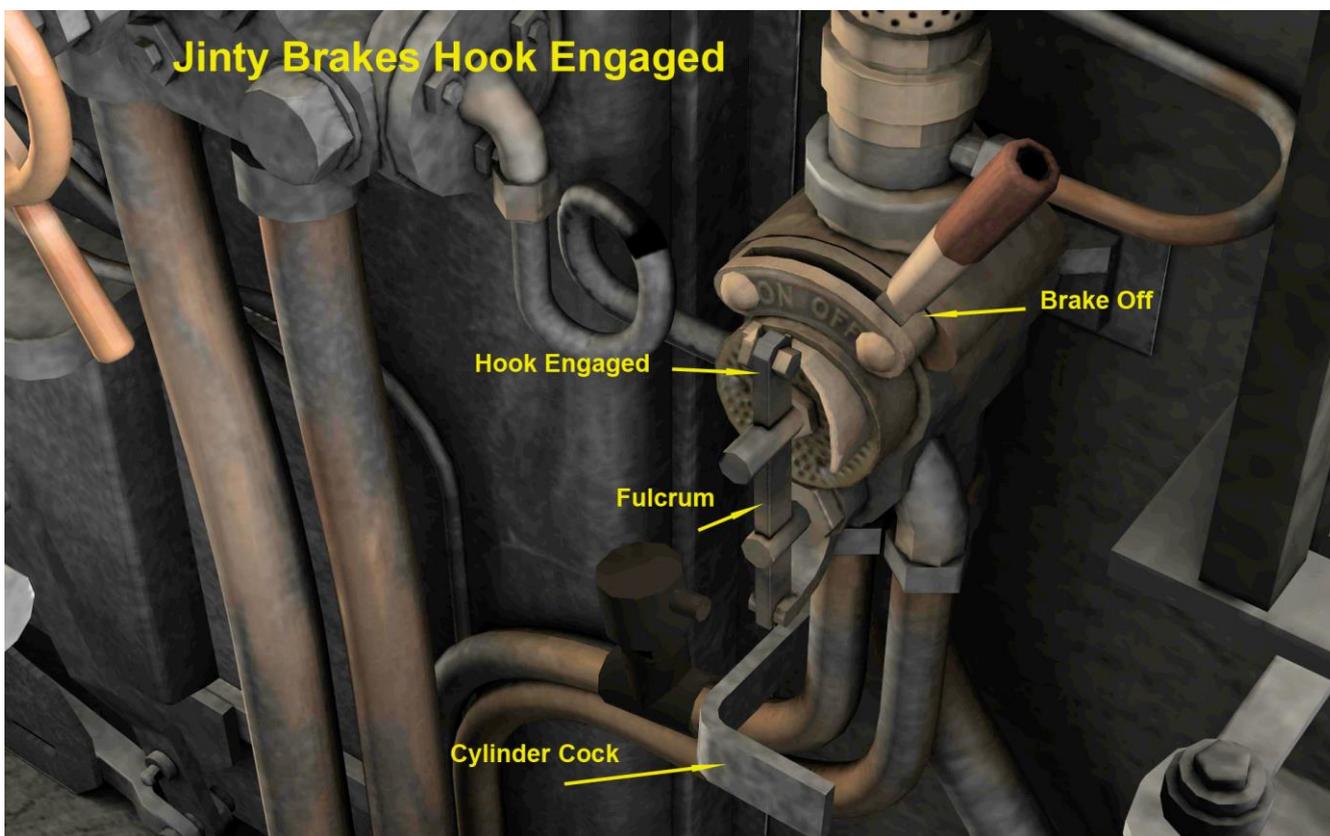
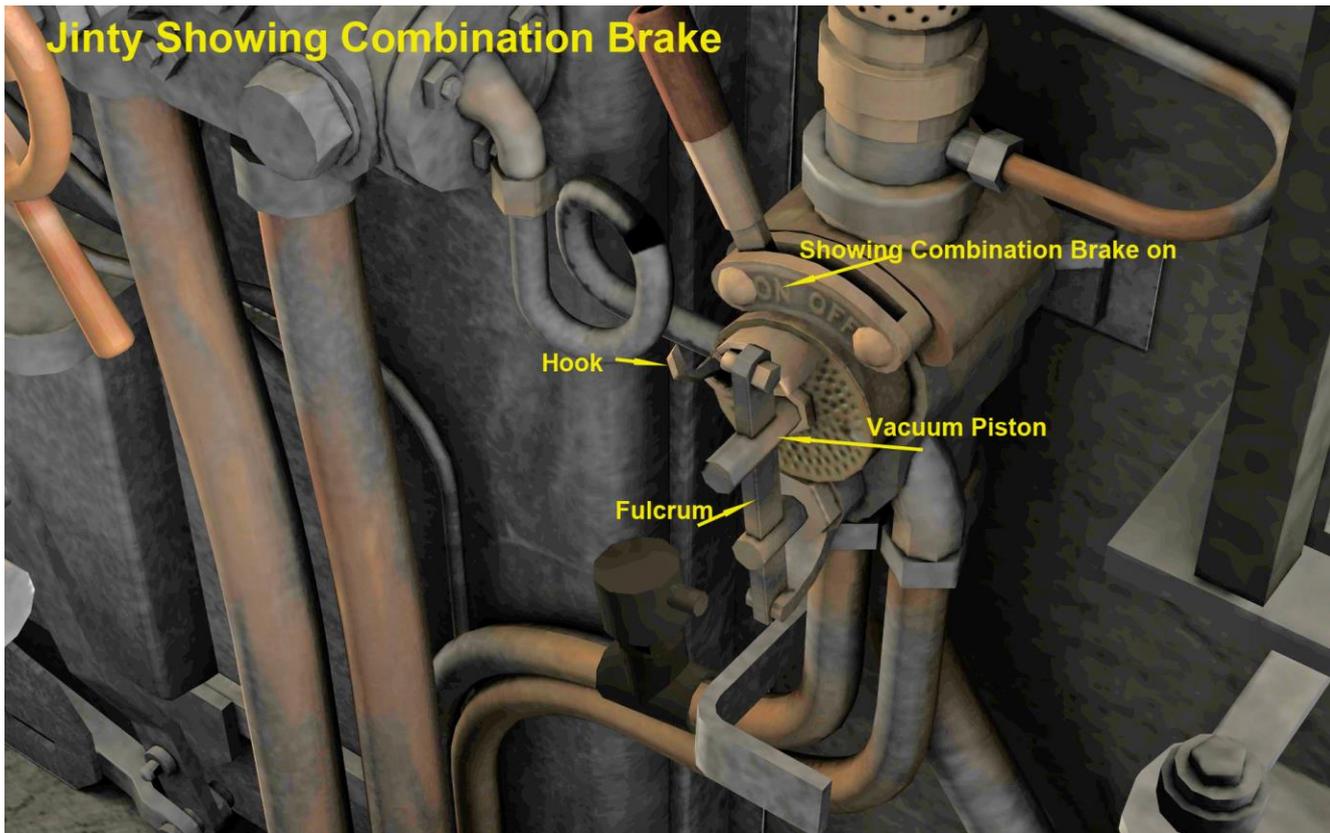
## A tabular guide to steam locomotive driving

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

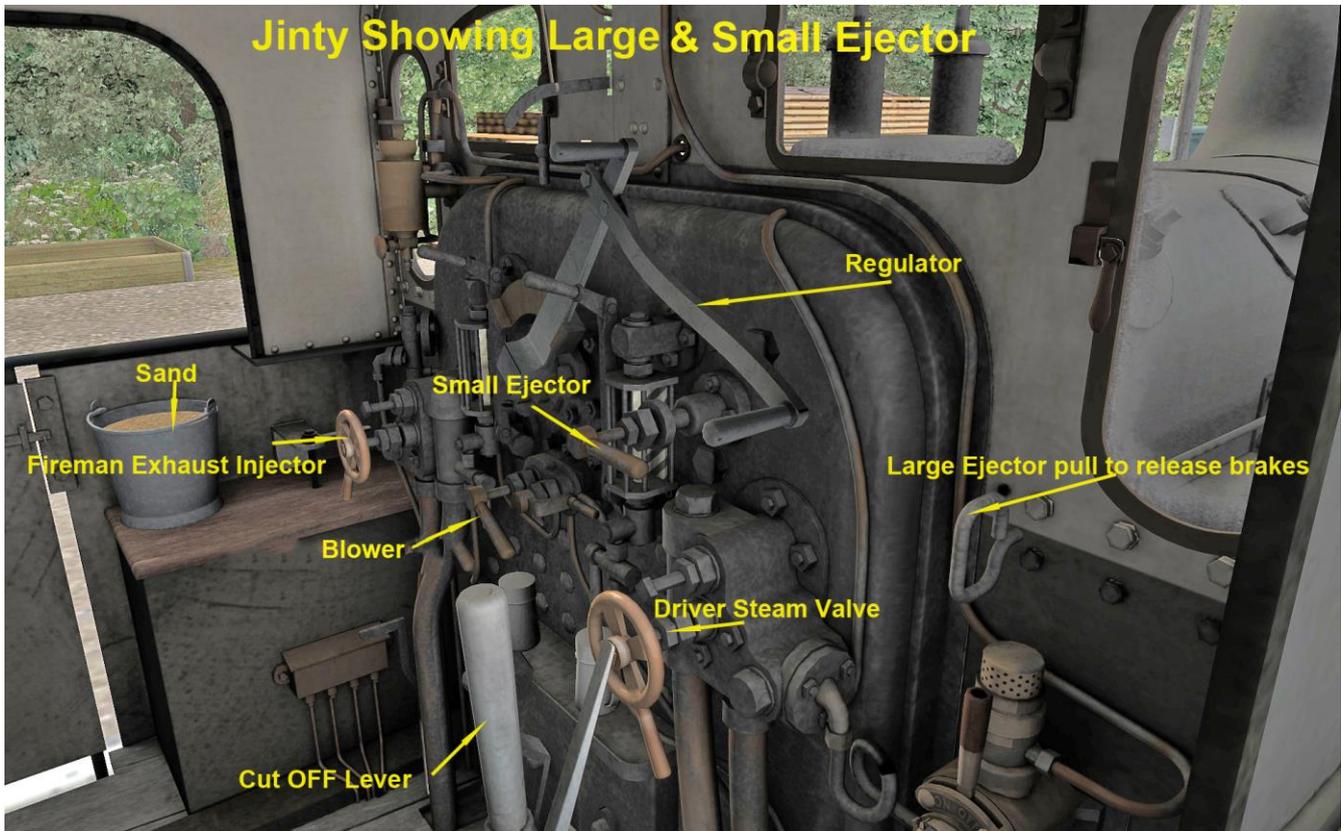
Close Cylinder Cocks	"C"	after 4-5 revolutions of the wheels Closed on "F5 HUD" Toggle open/close to keep steam pressure steady.
If sufficient, water, steam and fire mass Close as sequence	Sequence "Shift+I"+"Shift+O" "Shift+K"+"Shift+L" "Shift+R"+"Shift+F"	Repeat sequence as necessary to maintain water levels, steam pressure and firemass. <b>Ideal Fire Mass 530 lbs</b> <b>Boiler pressure &gt; 90psi</b>
At <b>≈10 mph</b> , Close Blower	"Shift+N"	
At <b>≈10 mph</b> <b>Regulator reduce &lt;33%</b> ↓ the reverser ↑ the regulator Fire as needed	"D" "E" "↓S" "↑A" "F"/"R"	Cut-off = Reverser  <b>≈25 % Cut-off (Notch3)</b> monitor boiler pressure, "F5 HUD" <b>Keep Fire mass 530lb ± 5%</b> <b>Boiler pressure &gt; 90psi</b>
At <b>≈20 mph</b> <b>Regulator reduce &lt;33%</b> ↓ the reverser then ↑ the regulator	"D" "E" "↓S" "↑A" "F"/"R"	<b>≈20 % Cut-off - (Notch2)</b> monitor boiler pressure, "F5 HUD" <b>Keep Fire mass 530lb ± 5%</b> <b>Boiler pressure &gt; 90psi</b>
At <b>≈35 mph</b> <b>Regulator reduce &lt;33%</b> ↓ the reverser ↑ the regulator	"D" "E" "↓S" "↑A"	<b>≈15 % Cut-off (Notch1)</b> 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
<b>Running conditions</b>		
<b>Dampers</b> 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.
<b>Blower</b> Open Blower slightly when shutting regulator	As "D↓" "M"	As the regulator is shut open the blower slightly.
<b>Tunnels</b> Close Regulator Open Blower fully	As "D↓" = 0 "M" fully	Prevents blowback

***For stopping the Jinty see my steam loco driving notes.***

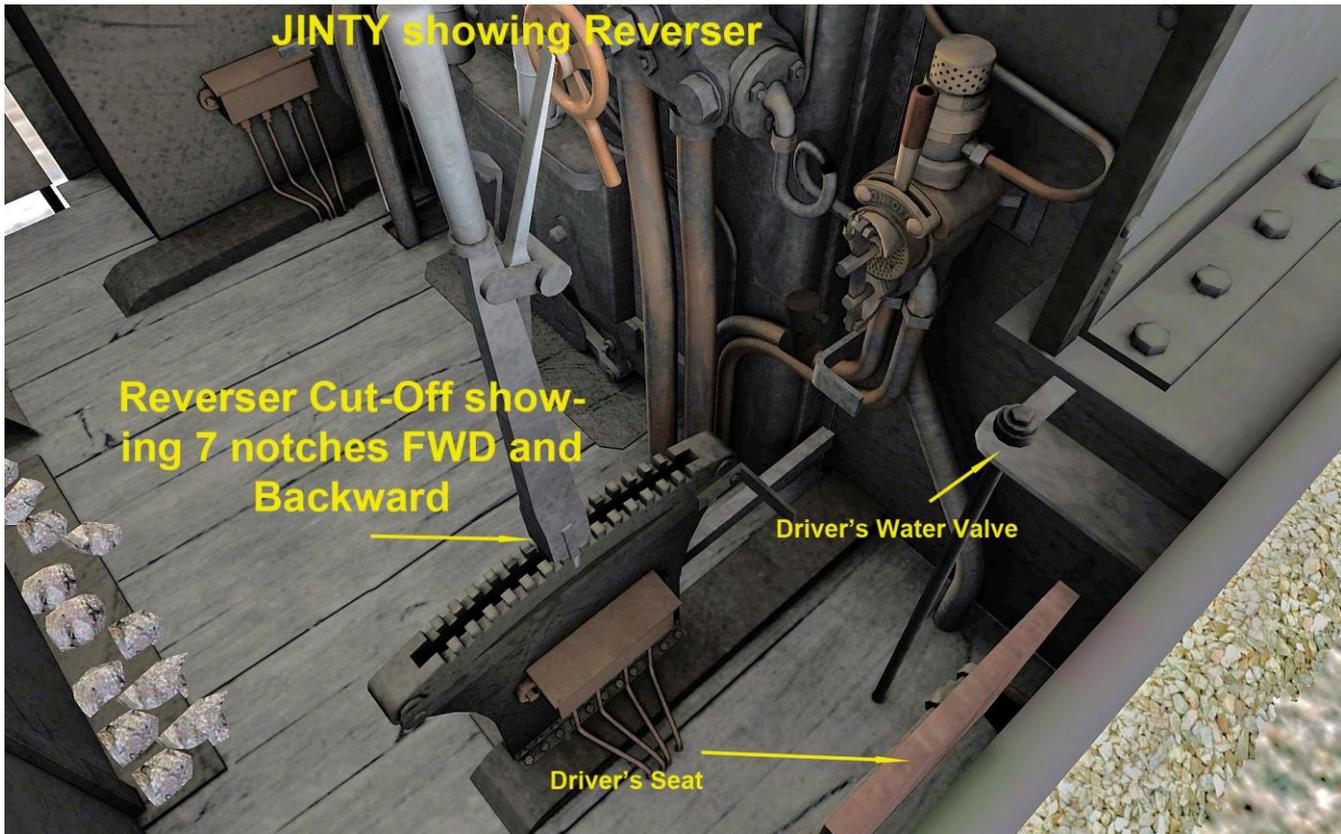
## Jinty Showing the various cab controls



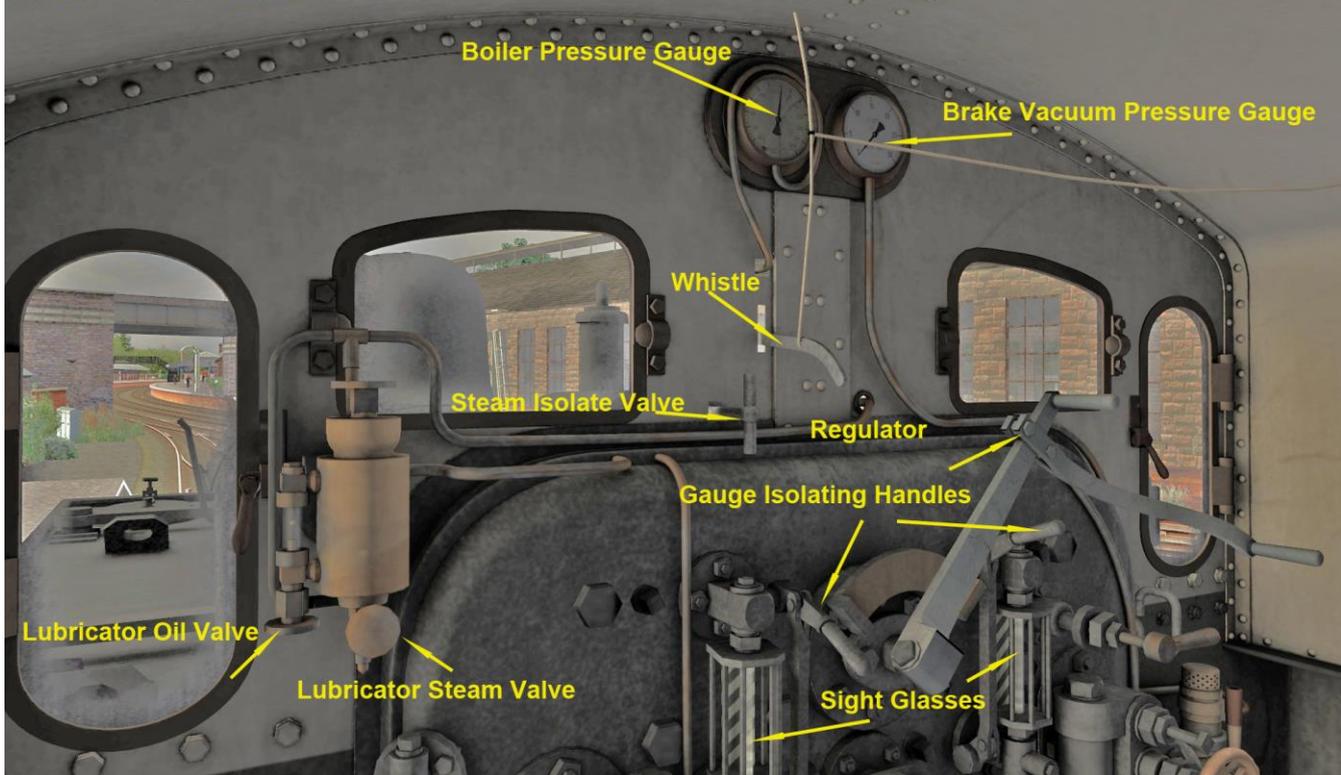
### Jinty Showing Large & Small Ejector



### 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