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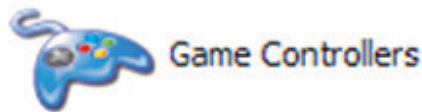
## Off-Highway Truck Controls Calibration



# Medium OHT Controls Calibration

## Initial Steps

1. Connect all Off-Highway Truck (OHT) simulator components to your computer as outlined in the “Off-Highway Truck Simulator Assembly Instructions.”
2. Install the Off-Highway Truck Simulator Software on your computer.
3. For Windows XP or Vista Operating Systems: From your Windows Desktop, Click “Start” – “Control Panel” – “Game Controllers” (See below). *Note:* On some computers, this may appear as “Game Options.”



*Note:* For Windows 7 Operating Systems: From your Windows Desktop, Click “Start” — “Devices & Printers.” Right click on any one of the “S/A Combo. Sim Controllers” listed.

4. After clicking this icon, three identical entries will appear in the “Game Controller” Window:

- A. S/A Combo Sim Controller
- B. S/A Combo Sim Controller
- C. S/A Combo Sim Controller

The OHT Simulator calibration procedure will use each of these three calibration functions.

## Controls Calibration Procedure

*Note:* Follow each set of steps in the sequence shown to calibrate each simulator input device.

The switches used as input devices for the OHT Simulator do *not* require calibration. These input devices include:

- Key Switch – located on the Left Control Pod
- Pan Left and Right Screen View – located on the Left Control Lever Pod
- Parking Brake Switch – located on the Right Control Lever Pod
- Horn – located on the Steering Wheel

It is important that no button is pressed during the calibration procedure. Use the Computer Mouse to move through the calibration screens. The first group of control devices you will calibrate are:

- Hoist Lever
- Retarder Lever
- Service Brake Pedal (Center Pedal)
- Throttle Pedal (Right Pedal)

These functions are calibrated under the first “S/A Combo Sim Controller.” Start this process by following these steps:

1. Select and double click on the *first* “S/A Combo Sim Controller” line.
2. Click on the “Properties” panel.
3. Select the “Settings” tab.
4. Click on the “Calibrate” Button.
5. The “Welcome to the Device Calibration Wizard” will appear.
6. Click “Next.”

### Find Center Point

7. This option is not used with this simulator.
8. Click “Next.” again.

### Axis Calibration – X-Y Axis

9. This option is not used with this simulator.
10. Click “Next.”
11. Click “Next” again.

### Hoist Lever Calibration – Z Axis

12. Click on the “Display Raw Data” button.
13. The first input device to be calibrated under this 1st Function is the Hoist Lever located on the Left Control Pod.
14. Move the Hoist Lever through its full range of motion (forward and backward.)
15. Horizontal bar shown on calibration panel should move with the hoist lever movement.
16. Release the Hoist Lever. *Note:* The final position of the Hoist Lever is not important. It is important that you see movement of the blue horizontal bar.
17. Click “Next.”

### Retarder Lever Calibration – Z Rotation

18. The second input device to be calibrated under this 1st Function is the Retarder Lever. This lever is located on the Right Side of the Steering Wheel Assembly.
19. Move the Retarder Lever through its full range of motion (up and down).
20. You should see the horizontal bar move back and forth on the calibration panel.
21. Leave the Retarder Lever in the full “Up” position. *Important:* If the Retarder Lever is not left in the full “Up” position, the simulation software will receive a false signal from this input device.
22. Click “Next.”

### Service Brake Calibration – Slider Bar

23. The third input device to be calibrated under this 1st Function is the Service Brake Pedal function. The Service Brake Pedal is the middle pedal on the Pedal Assembly.
24. Press (cycle) the middle pedal several times.
25. You should see the horizontal bar move to the left and right as you cycle this brake pedal.
26. Click “Next.”

### Engine Throttle Calibration – Slider Bar

27. The fourth input device to be calibrated under this 1st Function is the Engine Throttle function. The Throttle Pedal is the right pedal on the Pedal Assembly.
28. Press (cycle) the right pedal several times.
29. The horizontal bar (slider) will move to the left and right as the brake pedal is cycled.
30. Click “Next.” Save Your Control Calibration Setting under the First Calibration Function.
31. Click “Finish.”
32. Click “OK” on the “S/A Properties” Panel – this locks calibrations just set for input devices. The only control device that is calibrated from the second “S/A Combo Sim Controller” line is:
  - Secondary Brake Pedal (Left Pedal)

Start this process by following these steps:

1. Select and double click on the second “S/A Combo Sim Controller” line.
2. Click on the “Properties” panel.
3. Select the “Settings” tab.
4. Click on the “Calibrate” Button
5. The “Welcome to the Device Calibration Wizard” will appear.
6. Click “Next”

#### *Find Center Point*

7. This option is not used with this simulator.
8. Click “Next” again.

### Axis Calibration – X-Y Axis

9. This option is *not used* with this simulator.
10. Click “Next.”
11. Click “Next” again.

### Axis Control – Z Axis

12. This option is *not used* with this simulator.
13. Click “Next.”

### Z Rotation – Slider Bar

14. This option is *not used* with this simulator.
15. Click “Next.”

### Axis Calibration - Slider Bar

16. This option is *not used* with this simulator.
17. Click “Next.”

### Secondary Brake Pedal Calibration – Slider Bar

18. The only device to be calibrated under this 2nd Function is the Secondary Parking Brake Pedal  
– left pedal (Red) on the pedal assembly.
19. Click on the “Display Raw Data” button.
20. Press (cycle) the left pedal several times.
21. The horizontal bar (slider) move to the left and right as you cycle this brake pedal.
22. Click “Next.” Save Your Control Calibration Setting under the Second Calibration Function.
23. Click “Finish”
24. Click “OK” on the “S/A Properties” Panel – this locks the calibrations just set for input devices.

The third and final group of control devices you will calibrate are:

- Steering Wheel
- Transmission Control Lever (on Right Control Pod)

Start this process by following these steps:

1. Select and double click on the third “S/A Combo Sim Controller” line.
2. Double click on the “Properties” panel.
3. Select the “Settings” tab.
4. Click on the “Calibrate” Button
5. The “Welcome to the Device Calibration Wizard” will appear.
6. Click “Next.”
7. Click “Next” again.
8. Click on the “Display Raw Data” button.

### Find Center Point

9. This option is not used with this simulator.
10. Click “Next.”
11. Click “Next” again.

### Axis Calibration – X-Y Axis

12. This option is not used with this simulator.
13. Click “Next.”
14. Click “Next” again.

### Steering Wheel Calibration – Z Axis

15. The first device to be calibrated under this 3rd Function is the Steering Wheel.
16. Rotate the Steering Wheel to the left stop and to the right stop. The Steering Wheel should rotate approximately  $3\frac{1}{2}$  turns between these stops.
17. You should see the *horizontal* bar move to the left and right.
18. Return the Steering Wheel to a centered position. (The right end of the Slider Bar should be approximately in the center of the display.)
19. Click “Next.”
20. Click “Next” again.

### Transmission Control Lever Calibration – Z Rotation

21. The second device to be calibrated under this 3rd Function is the Transmission Control Lever.
22. Move the Transmission Control Lever through the full range of motion forward and backward.
23. You should see the horizontal bar move to the left and right.
24. The Transmission Control Lever *must* be left in the full forward position.
25. Click “Next.”

### Axis Calibration - Slider Bar

26. This option is not used with this simulator.
27. Click “Next.”
28. Click “Next” again.

### End & Save Control Calibration Setting

29. Click “Finish.”
30. Click “OK” on the “S/A Properties” Panel – this locks the calibrations just set for functions.
31. Click “OK” on the Game Control Pane to close out the calibration procedures.

The input devices located on the Left Control Pod, Right Control Pod, Pedal Assembly and Steering Wheel are calibrated. The calibration procedure is done only once unless a simulator component is replaced or if you notice a change in control response. The Off-Highway Truck Simulator is ready to use.

Click on the Off-Highway Truck Simulator icon on your Windows Desktop to start the Simulation software.

# Client Services Support

Cat Simulators come with support services for the first year (nominal subscription fee applied after the first year). Technical support is included (in English) Monday-Friday 6 a.m. to 7 p.m. CST. The support staff will answer any questions, trouble-shooting needs, warranty requests or relicense and transfer needs.

- Call 1.877.434.7467 (inside the U.S.); 1.309.266.2640; or e-mail [support@catsimulators.com](mailto:support@catsimulators.com)
- On-site set up and installation of the simulator is available. Call for quote.
- Simulator instruction is available by a trained simulator operator on-site or over the Internet. Call for quote.

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