

Controller Setup and Calibration

by Hammer

The first time you enter Aces High, or whenever you add a new controller, you will need to set up and calibrate your controllers in the game. You can also adjust the functions assigned to your controllers any time you wish. Before you can do this, you must make sure your controllers are set up and calibrated in Windows. To do this, go to your Control Panel, select "Gaming Options", "Game Controllers" or something similar (depending on which version of Windows you have) and follow the instructions which apply.

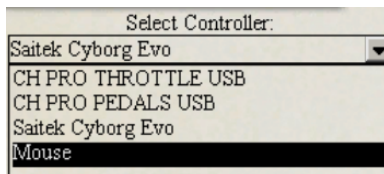
Once Windows recognizes your controllers, you will need to follow these steps before you are ready to take full advantage of your controllers:

1. [Ensure AH Recognizes Your Controllers](#)
2. [Select the Mode to Set Up and Calibrate](#)
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4. [Calibrate Your Controllers](#)
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6. [Set the Force Feedback Inputs](#) (if applicable)

To select your controllers and assign AH controls to them, go to the clipboard and select OPTIONS -> CONTROLS -> MAP CONTROLLERS from the clipboard menu. This will open the window shown to the right.

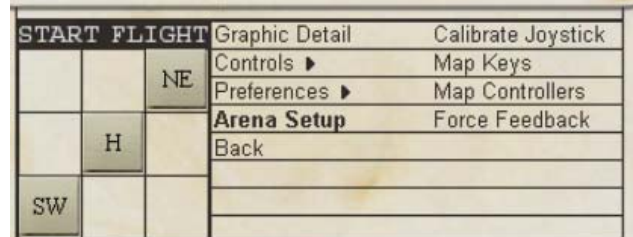
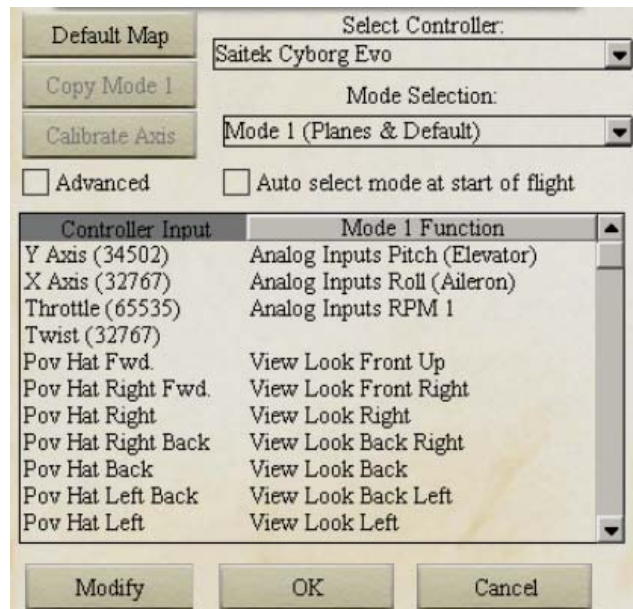
Ensure AH Recognizes Your Controller(s)

The first thing you need to do is make sure the game recognizes all of your controllers. To do this, click the drop-down box under "Select Controller" and make sure they are all listed.



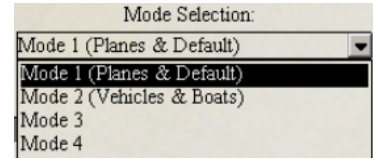
If all of your controllers are not listed in the "Select Controller" list, exit the game and ensure Windows recognizes your controllers. If Windows recognizes them, check the status of any software that may have come with your controllers.

Aces High recognizes most controllers without requiring the software that comes with them. If the game is not recognizing your controller, try shutting down the software. If you are not using the software for anything else, un-install it and see if this allows the game to recognize the controller. If your controllers still do not show up in the game, contact support by emailing support@hitechcreations.com.



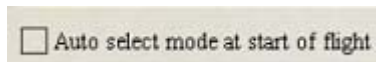
Select the Mode to Setup and Calibrate

Aces High allows you to configure up to 4 controller “modes” and switch between them at any time – even while in flight. You can have a totally different function for each button and axis for each mode or you can have some minor differences that make performing a certain mission of controlling a certain plane or vehicle a little easier. This can come in handy if you like different controller setups for flying fighters, bombers, driving ground vehicles, or performing some other specialty function.



Before you start changing things, make sure you are changing the right mode. To select the mode you want to change, use the drop down “Mode Selection” box and click on the mode you wish to modify. Mode 1 (Planes & Default) is selected in the image above and is the configuration you will set up first.

A Note on Changing Between Modes in the Game: If you wish to use different modes for different type planes / vehicles, you will need to map keys or assign buttons on your controllers to switch between the modes. Defaults for this function are not assigned.



Checking the “Auto select mode at start of flight” option will automatically set you in controller Mode 1 if you are flying a plane and Mode 2 if you select a vehicle or PT Boat. If you select this option, make sure you have Mode 2 set up!

A Note on Changing Between Modes in the Game: If you wish to use different modes for different type planes / vehicles, you will need to map keys or assign buttons on your controllers to switch between the modes. Defaults for this function are not assigned.

Assign AH Functions to Your Controllers

Default Map After you have selected the mode you are going to work on, you will want to assign Aces High controls to all of your available buttons, hats, and axis. Pressing the “Default Map” button located in the upper left corner of the clipboard assigns a function to each available button / axis on your controllers. To see what functions were assigned to what button / hat / axis, select the appropriate controller from the “Select Controller” list and look at the list located in the center of the clipboard. If you are unsure which button is which, pressing the button on your controller will highlight it in the list as shown with button “Fire 5”. The button listed as “Fire 5” on my joystick is set to transmit my VOX radio.

Controller Input	Mode 1 Function
Fire 2	Global Weapon Select Secondary
Fire 3	View Zoom Toggle
Fire 4	Global Fire Primary
Fire 5	Global Voice Transmit Channel
Fire 6	Global Fire All Guns
Left 1	Global Radio 3
Lfet 2	Flight Dive Brakes
Right 1	Flight Gear Raise/Lower
Right 2	Global Record Film
Left Shift	Global Radio 4
Right Shift	

Copy Mode 1 If you are setting up Mode 2, 3, or 4 after setting up Mode 1, you can select the mode you wish to modify and then click on the “Copy Mode 1” button on the clipboard. This copies your Mode 1 settings to the new mode allowing you to make the changes you want without having to set up all the other buttons / axis.

Modify There are two ways to set a button yourself. You can double click on an item in the “Controller Input” list or single click it and then press the “Modify” button located below the list. Both of these actions will bring up the “Select AH Function” window shown on the next page.

The "Select AH Function" window shows the controller and the specific button you are about to set the function for. The AH functions are divided into 7 categories. Six of these categories are available to any button or hat on your controllers. These categories are "Global", "View", "Flight", "Gunner", "Chute" and "Vehicle". The seventh, "Analog Inputs", are for the axis on your controllers. Global functions are those functions available to you anywhere in the game. The other categories are available for the specific locations or functions.



Once you have located the function you want to assign to your controller, simply highlight it by left clicking on it and then click the "OK" button located at the bottom of the "Select AH Function" box. You have now assigned that function to your controller. Once you are done setting all the controllers, click the "OK" button on the clipboard to ensure all changes made are saved.

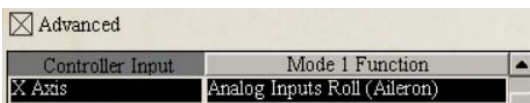
There are probably many more AH controls than available Controller Inputs. You need to decide what inputs you want available to you on your controllers. The key is to have your controls set up so you don't have to move your hands to a different controller during combat.

Calibrate Your Controllers

Once your controllers are selected and assigned the functions you want, you will want to calibrate your controllers to ensure they give the input you think they are. Aces High allows you to calibrate a single axis or all axis at once. To calibrate all the axis at once, go to OPTIONS -> CONTROLS -> CALIBRATE JOYSTICK on your clipboard's menu and follow the simple directions to calibrate your controllers.

Calibrate Axis To calibrate a single axis, select that axis from the controller list and click on the "Calibrate Axis" button located on the top left of the clipboard on the "Map Controllers" window. Once you click on this button, a text box will appear with instructions. Simply follow the instructions and click "OK" when complete.

Adjust the Settings on Your Controllers

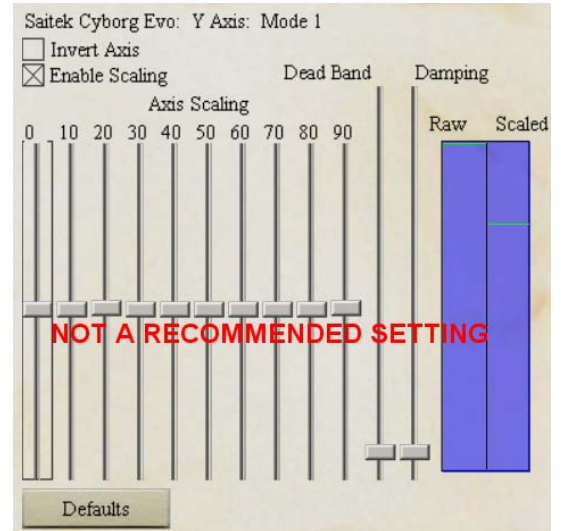
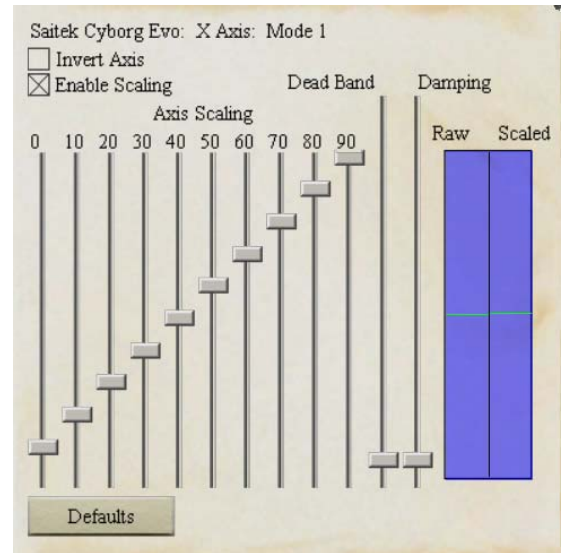


After you calibrate your controllers, you may want to experiment with stick scaling. Stick scaling refers to adjusting the amount of input the game receives from your controller. With no scaling, moving your stick 10% back will move your elevators 10% up. Scaling allows you to modify the amount of movement of your plane's control surfaces in response to your controller input. To access the scaling inputs, select the axis you wish to adjust and click the "Advanced" box on the "MAP CONTROLLERS" screen on your clipboard.

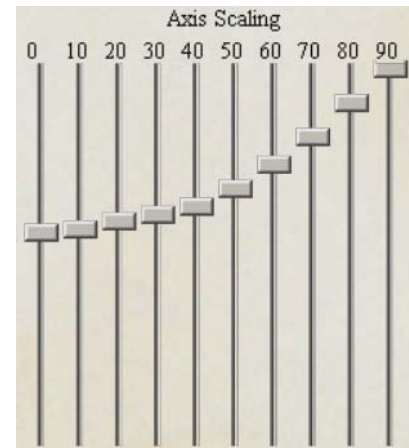
Advanced Clicking the "Advanced" box brings up the scaling window shown on the next page. This window has several parts. The two check boxes at the top left allow you to invert the axis (make it move in the opposite direction in the game) and enable scaling on that axis. Checking the "Enable Scaling" box enables the "Axis Scaling" sliders below. You also have sliders to adjust the Dead Band and Damping for the axis. Finally, you have a scale which shows your controller's raw and scaled movement. These areas are discussed in more detail on the next page.

The first thing you should adjust is the "Dead Band". A Dead Band is an area around the center of your stick which has no input. It is essentially "dead". This is useful if your stick tries to "spike" even when you are not touching it. To see if you need to increase your dead-bands, look at the blue window on the right side of the scaling window. The lines under "Raw" and "Scaled" should be in the center and not moving. If they are moving when you are not touching your controller, you need to raise the dead band slider until they stop. The farther down you can set this without the lines moving, the better.

After you adjust your dead band, you can decide whether or not you want to scale your inputs. Leaving the "Enable Scaling" box unchecked is the same as setting all your Axis Scaling sliders to the top. With all of the sliders at the top (100%), moving a controller through a certain percentage of its range of motion will move the corresponding control surface the same percentage of its range of motion. Pull the stick back 10%, the elevator will move 10% of its upward movement. Move the stick 20% to the side, the ailerons will move 20% in the corresponding direction. Moving the sliders down reduces the amount of control surface movement for a given stick movement. The blue scales to the right of this window show the absolute movement of your controller (Raw) and the movement as adjusted by the sliders (Scaled). Another way to think about this is the movement of your controller is shown by the "Raw" scale while the movement of your plane's control surface is shown by the "Scaled" scale. This can be seen in the image to the right where all the sliders are set at approximately 50%. In that configuration, pulling your joystick back 100% (shown by the green line at the top of the "Raw" scale) moves your control surface only half way through its range of motion (shown by the line half way between the center and the top on the "Scaled" scale).



Scaling your stick inputs can aid you in controlling your black-out, bouncing, or stalling tendencies by reducing the input of your stick over its range of movement. Try the default scaling, no scaling, and potentially something in-between to see what works best for you. Be careful, though, that you do not have large differences between sliders which are next to each other. A large gap will result in a large jump on your control surface. Example: if your 50% slider is set half way down, then pulling your stick back 50% will result in your elevators moving 25% of their range of motion (50% of 50% is 25%). If the 60% slider is set all the way up, pulling your stick back an additional 10% (from 50 - 60%) will result in a 35% (from 25 - 60%) jump in your elevator's position. This can cause stalling or spins from over controlling.



You may or may not want to adjust your "Damping" at this time. Damping is kind of like setting your stick's speed. With damping set all the way up, you can pull the stick back as fast as you can

but, if you watch the line on the "Raw" and "Scaled" scales, you will see them move slower than you moved the stick. This is helpful if the nose of your plane tends to "bounce" when you fly or if you tend to "twitch" on the stick and lose control.

Set the Force Feedback Inputs

To set feedbacks on a controller capable of force feedback, go to OPTIONS -> CONTROLS -> FORCE FEEDBACK on the clipboard's menu. This will open a window like the one shown to the right.

In this window, you have option of disabling all forces by clicking the "Disable All Forces" checkbox at the top left of the window. Individual forces can also be enabled and disabled by highlighting the force and either checking (enable) or un-checking (disable) the "Enabled" box located below the list of forces. The amount of feedback on the controller can also be increased or decreased using the sliding scale labeled "Force Scale". Once all forces are set, clicking the "Apply" button saves the changes.

