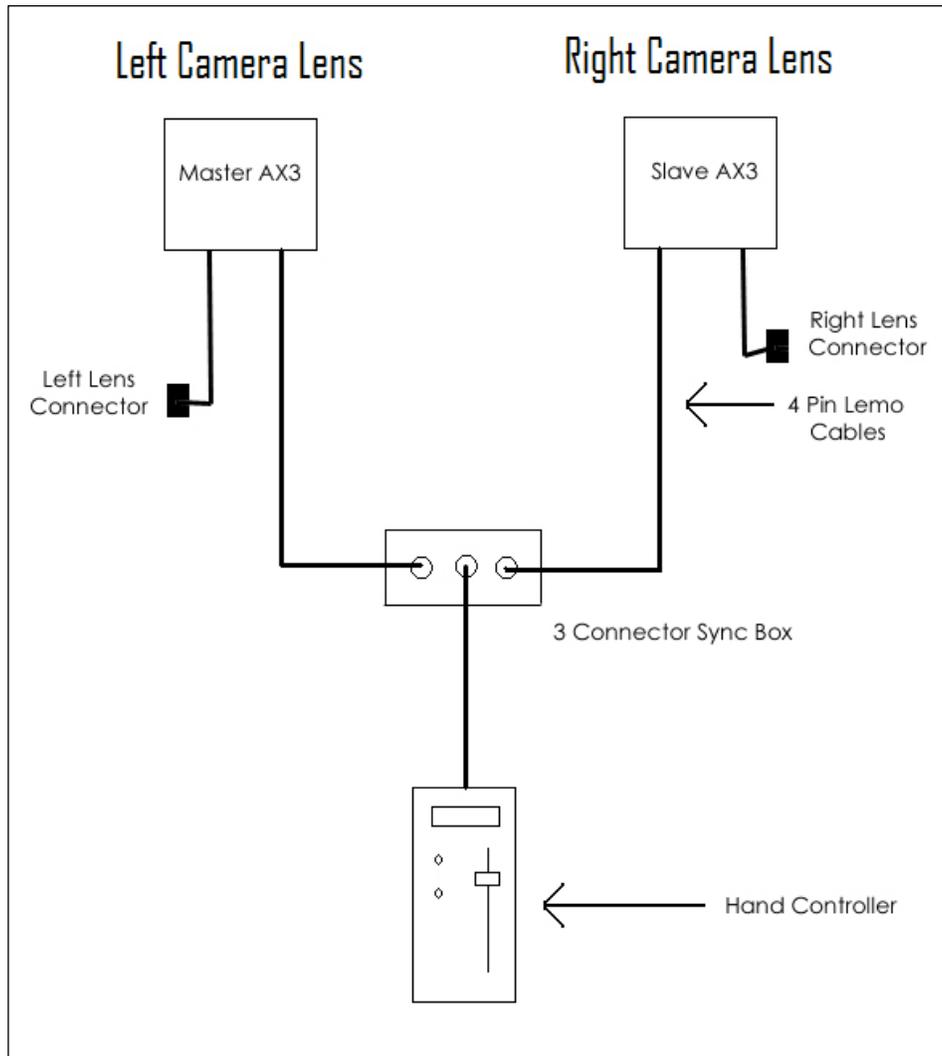


## AX3 v3D Setup Instructions



**v3D AX3 Connection Layout**

The following are the AX3 setup procedures for stereoscopic shooting in v3D. It assumes that each camera has completed the steps to setup the white shading and color balance necessary for proper use of parallax scanning lenses with prism video cameras (see AX3 Operators Manual). To setup two cameras to shoot in v3D perform the following:

1. Make sure the optical surfaces of both lenses are clean and free of dust.
2. Mount an AX3 equipped lens on the left and right cameras.

3. Attach the Hirose connector cable from each lens to the Hirose panel receptacle on bottom of the AX3 Units.
4. Attach the Hirose pigtail cable from the each AX3 Unit to the camera lens connection.
5. Attach a 4 Pin Lemo Serial Cable to the 4 Pin panel connector on the bottom side of each AX3 Unit.
6. Attach the 4 Pin Lemo Serial Cable from the left camera to the 3 Connector Sync Box connection labeled M (Master).
7. Attach the 4 Pin Lemo Serial Cable from the right camera to the 3 Connector Sync Box connection labeled S (Slave).
8. Attach the 4 Pin Lemo Serial Cable from the Hand Controller to the 3 Connector Sync Box connection labeled HC (Hand Controller).
9. Power on both cameras at the same time if possible.
10. The Hand Controller LED screen should scroll through its setup display when power is applied to the system ending with *AX4* (the Ax3 Units have been upgraded with *AX4* firmware) on the display. If an error is displayed, check your connections, power off and then back on to reset system.
11. After the *AX4* appears on the LED, press both white buttons simultaneously on the Hand Controller (HC) to activate the v3D functions. The HC will display either *CW* or *CCW*. (Skip to Item 12 if Master Unit has been established) If this is the first time the Units have been used for v3D do the following:
  - a. Move the HC slider up or down until the display reads *CW*
  - b. Press the lower white button on the HC to display *NoB4* or *B4*. If *B4* is displayed move on to item c below. If *NoB4* is displayed, move the slider up or down to select *B4*.
  - c. Press both white buttons on HC to display AX4 function menu.
  - d. The Iris Menu is the first menu displayed. Move slider to open iris to full f/1.7 aperture. If the display does not change when the slider is moved, move the slider slowly in one direction and then the other until the display locks up to the slider. This is the case with each menu. The slider must lock up to current menu setting before adjustment can be made.

- e. Press lower white button on HC to display the Amplitude Menu. Move the slider down to zero (0) amplitude.
  - f. Mark the current right camera lens as Master and power off the units.
  - g. Switch the current right camera AX3 equipped lens with the current left camera lens. Attach 4 Pin Lemo Serial cable to Master connection on Sync Box. The former right lens becomes the left lens and Master AX4 Unit. **Once this left Master lens is setup and identified this process will not need to be repeated.** The Left lens should be scanning in a clockwise (CW) direction and should be the Master Unit.
  - h. Return to Item 9 and start the process again at that point (skipping steps 11 a to g - the Master set up process you just completed).
12. If *CW* is displayed move the slider until *CCW* is displayed. The HC displays the Slave right camera lens information. The Slave should scan in a counter clockwise (*CCW*) direction in normal v3D operation.
  13. Press the lower white button on the HC to display *NoB4* or *B4*. If *B4* is displayed move on to item 14 below. If *NoB4* is displayed, move the slider up or down to select *B4*.
  14. Press both white buttons on HC to display AX4 function menu.
  15. The Iris Menu is the first menu displayed. The Iris Menu is identified by an *I* (for iris) that displays intermittently in place of the decimal point in the displayed value. Move slider to set the desired f/stop for both lenses. If the display does not change when the slider is moved, move the slider slowly in one direction and then the other until the display locks up to the slider. This is the case with each menu. The slider must lock up to current menu setting before adjustment can be made.
  16. Press the lower white button on HC to progress to the Scan Amplitude menu. The Amplitude Menu is identified by an *A* (for Amplitude) that displays intermittently in place of the decimal point in the displayed value. The Scan Amplitude range is from 0 to 10 in 1/10<sup>th</sup> increments. Scan Amplitude is the amount the lens iris is offset from the lens center. As a rule of thumb, the amplitude should be increased until the scan motion is visible in the camera view 2D monitor and than backed off slightly to where it is imperceptible. Camera motion allows for higher scan values than a static camera.
  17. Press the lower white button on HC to progress to the Frequency menu. The Frequency Menu is identified by an *F* (for Frequency) that displays

intermittently in place of the decimal point in the displayed value. The Scan Frequency range is from 0 to 16 in 1/10<sup>th</sup> increments. Scan Frequency is the speed the lens iris rotates around the center of the lens. The value is displayed as cycles per second (Hz). It is by default set at 4.3 Hz. 4.3 Hz is the optimal frequency when the shooting and display speeds are the same. If the shooting speeds are changed to adjust the presentation of time (i.e. slo-mo), then the frequency must be adjusted to compensate so that the parallax is presented to the viewer at 4.3 Hz. For example, if the shooting speed is 90 fps and the playback is 30 fps, the Scan frequency must be increased by a factor of 3 to 12.9 Hz so that it will be 4.3 Hz when played back at 30 fps.

18. Lastly, **when the units are power off for the last time each day, the iris should be set to full open (f/1.7) and the Scan Amplitude should be set to zero (0)**. This will prevent a conflict when the units are first powered on at some other time after being disconnected from the Sync Box. This task is not necessary when changing batteries while you are still connected to the Sync Box in v3D sync mode. The AX3 Units will return to previous settings when powered up after a battery change. **For AX3 basic operation refer to the AX3 Operators Manual.**