

Configuring ZEISS Primostar HD for Demos

Glenn Doherty

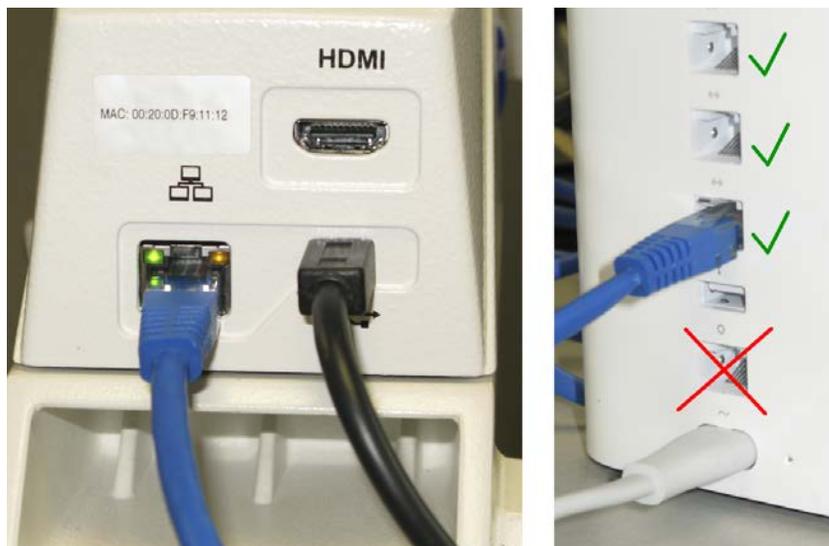
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All AirPorts and Apple TVs should be configured AHEAD of the demo – need AirPort Utility (for Windows or for Mac - <http://support.apple.com/kb/dl1547> or check iTunes) and iTunes (<https://www.apple.com/itunes/>). You WILL need some sort of internet connection for both (more so for Apple TV). Most institutions have some sort of wifi network available. Furthermore, some businesses may have Apple IDs you can use in order to download and install the app on the iPad(s). You might not want to configure customer's iPads using your own email address as an Apple ID, but for demos, it should be fine.

To set up ZEISS Primostar HD and ZEISS Labscope

- 1) Set up wireless router (AirPort – white) – connect white power cable to the back and to an outlet.
- 2) Set up ZEISS Primostar HD microscope – use the attached power supply to power the microscope body. For the camera binocular head, attach the supplied “Y” USB cable to the back of the head and to the included wall charger adapter (only one end of the “Y” needed for this, when used in stand-alone mode, ie. not connected to a PC). The GREEN light on the side of the camera head should turn light up, assuming power is available. Attach the Ethernet cable from back of camera head to the back of the AirPort (not to the WAN port).



You can add up to three microscopes directly to an AirPort. If you need to connect more microscopes, consider adding an **unmanaged switch** and connecting that the microscopes to that (and the switch to the router).

NOTE: Labscope supports, in general, an unlimited number of microscopes. When there are more microscopes in the network than fit on one page in the Live tab, another page (and

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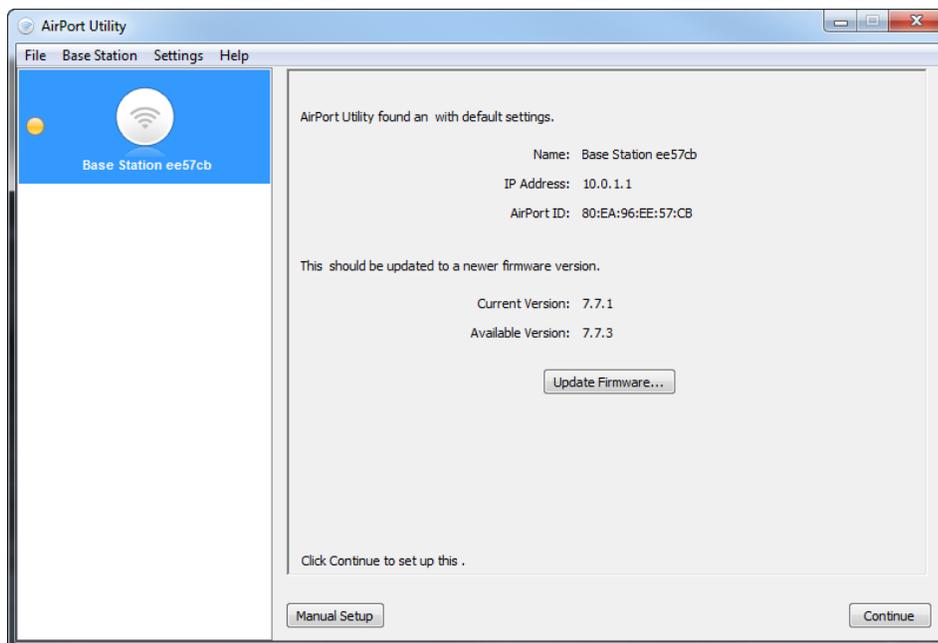
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another, etc.) will be added. They can be accessed by swiping left or right.

The AirPort router (or any SOHO router for that matter) will have a hard time serving more than 20 live streams wirelessly though, because it will run out of bandwidth on the WLAN channel. Therefore for larger installations, multiple WLAN access points (could be AirPorts, but other 802.11n/ac access points will also work) will be needed, interconnected via LAN.

- 3) Open Airport Utility on your computer (the iPad App does not detect unconfigured routers). Scan for the AirPort (probably called "Base Station xxx"). If you have multiple routers to connect, click on the first one, configure it, and then repeat the process for the other routers later. (Those routers might need to be configured as Extenders – not covered here.) Click on the correct router and hit Continue.

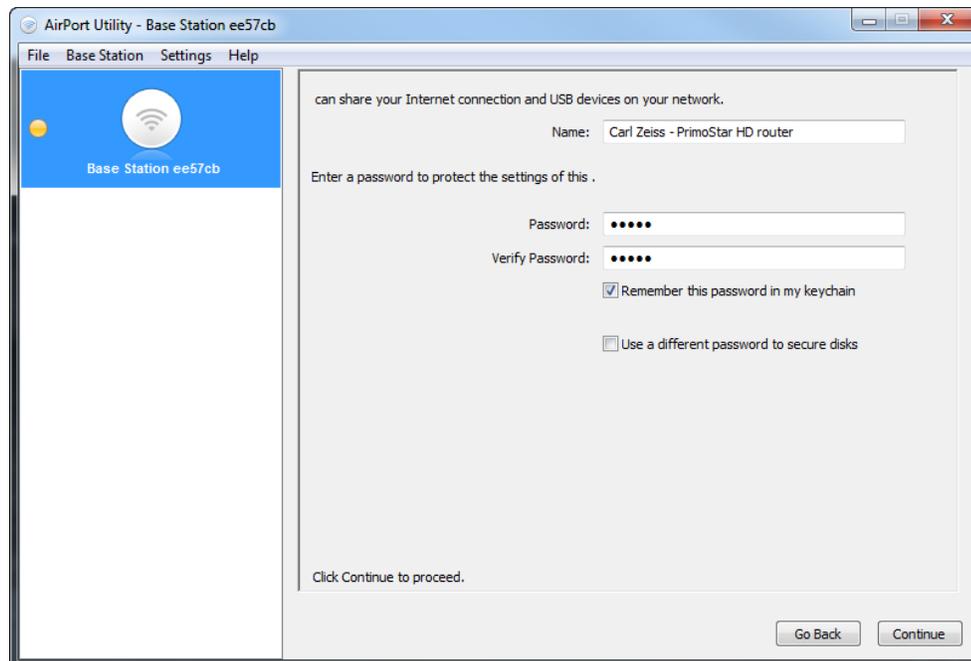


- 4) Name the wireless router. In this example, I called it "Carl Zeiss – Primostar HD router" and if you need to, add a number at the end, so you can tell all the routers apart. The password for ALL router configurations should be "zeiss" (no quotations – case sensitive). Hit Continue.

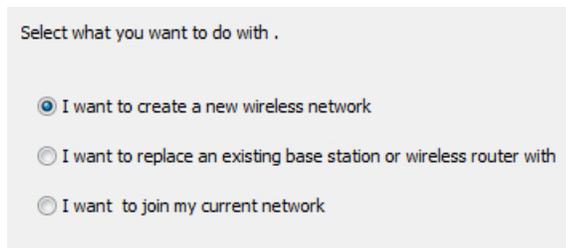
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5) Click **I want to create a wireless network** and Continue.

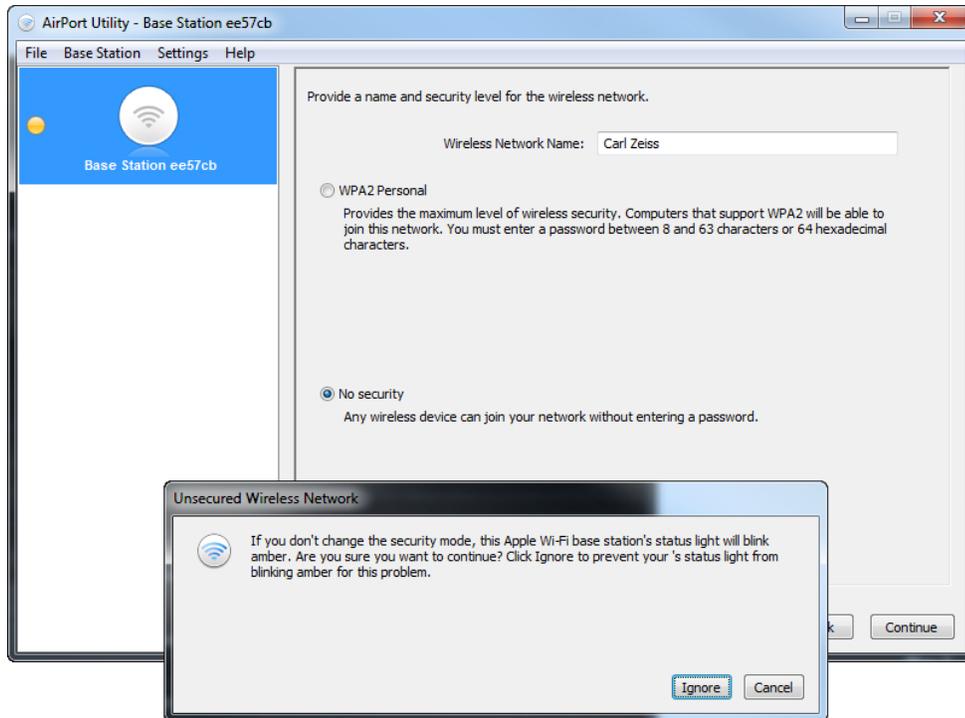


6) Call the wireless network "Carl Zeiss". Choose "no security" and **specifically click Ignore** in the window that pops up after hitting Continue.

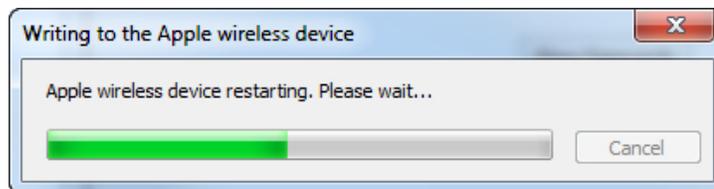
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- 7) Disable the **guest network**.
- 8) Select **I am not ready to connect to the Internet right now** (unless you are, but this configuration is for a stand-alone system).
- 9) Click **Update** and the device will restart.

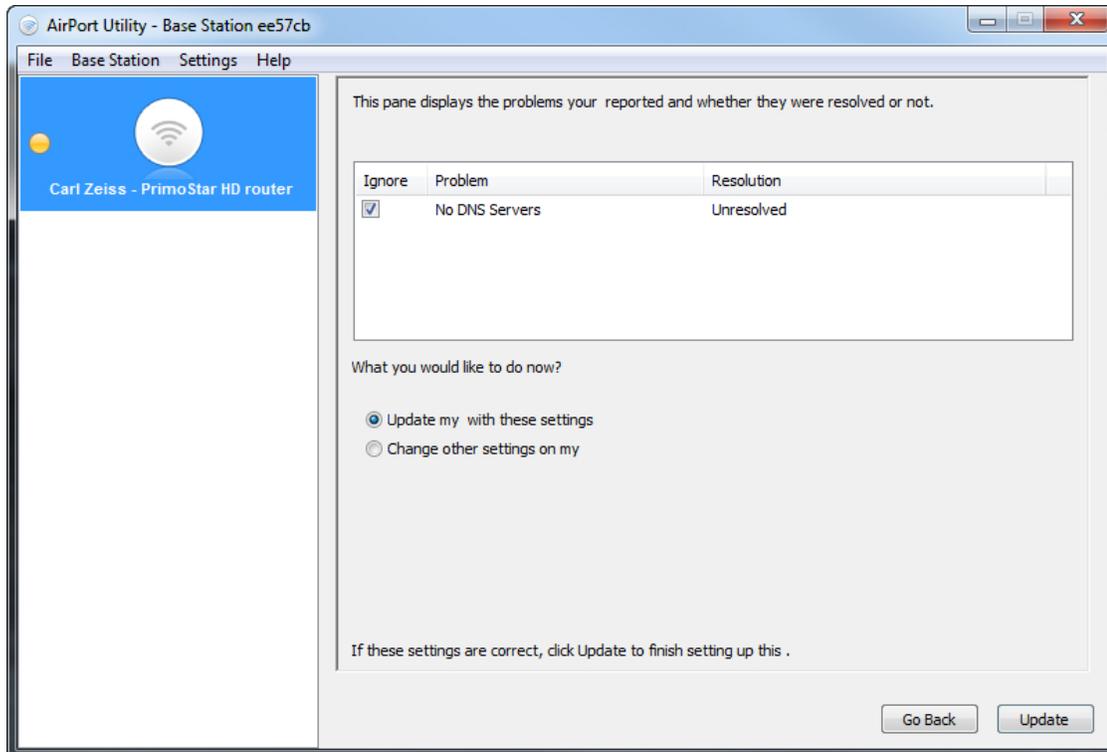


- 10) When looking for DNS Servers, simply click Continue. You will get a warning. **You MUST hit Ignore** in order for the status light on the AirPort to turn GREEN and for the connections to ultimately work.
- 11) Click Update again.

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12) Setup is now complete. You should be returned to the home screen which lists all available AirPorts in the area. You can close the AirPort Utility at this point.

13) **Set up the iPad – If you DO have a wireless network available to you** – Start the iPad (not connected to a computer). Choose a language and a country. When prompted to connect to an existing WiFi network – if you have an existing WiFi network, you may connect to it for the configuration to proceed. Disable Location Services. Select “Set up as new iPad.” When prompted for an Apple ID – you can skip this step. Agree to the Terms of Service. You may create a passcode for the iPad at this time, or can do so later. Don’t use Siri. Don’t send diagnostics. Click Get Started to reach the Home screen. Open the App Store and search for “Labscope” to download it. You will be prompted for an Apple ID. You may use your own Apple ID, or you may create a fake one (although you’ll need a real email address to receive the verification email). You can associate a maximum of 10 iPads with this Apple ID, so it is likely that one fake account should cover your needs (you could use both your old and new ZEISS email addresses, for instance, to add the app to 20 iPads). If you set up the iPad in this manner, simply install Labscope directly from the iPad.

14) **Set up the iPad - If you DO NOT have a wireless network available to you** – Start the iPad. On the iPad, select a language and country. Select “Connect via iTunes” when prompted for a network connection. The iPad will prompt you to connect the included USB charger cable to the iPad and a computer that has iTunes installed. iTunes and the iPad will load automatically. In

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iTunes, select “Set up as new iPad” and click Continue. The iPad will now progress to Location Services. Disable Location Services. Select “Set up as new iPad.” When prompted for an Apple ID – you can skip this step. Agree to the Terms of Service. You may create a passcode for the iPad at this time, or can do so later. Don’t use Siri. Don’t send diagnostics. Click Get Started to reach the Home screen. From the iTunes Store, search for and download Labscope. You will be prompted for an Apple ID. You may use your own Apple ID, or you may create a fake one (although you’ll need a real email address to receive the verification email). You can associate a maximum of 10 iPads with this Apple ID, so it is likely that one fake account should cover your needs (you could use both your old and new ZEISS email addresses, for instance, to add the app to 20 iPads). If you set up the iPad in this manner, switch to the Apps tab in iTunes and click Install next to Labscope, then click Apply at the bottom of the window. iTunes will then sync with the iPad and install the application.

- 15) On the iPad, open the Settings. Click WiFi and locate the “Carl Zeiss” network that you created. Click on that network to connect to it, and type in a password as necessary. Return to the Home screen and start Labscope.
- 16) On the overview tab (top tab, left side), you will see two Virtual Microscopes and eventually, you should see Primostar HDs. Initially, each one may have a strange number associated with it.
- 17) Click on the gear, located in the lower-right corner of each microscope, to configure that microscope. On the left side of the window, you will be able to choose if this setup is for Primostar HD or AxioCam ERc 5s Rev. 2 (compound or stereo). For “Microscope name,” you may call the microscope whatever you want, or along any naming convention. For direct identification, you might want to name the microscope by the Serial Number on the back of the microscope body, so there can be no confusion which microscope you are receiving images from. Configure other information about the setup as appropriate. You may lock this configuration, if desired.

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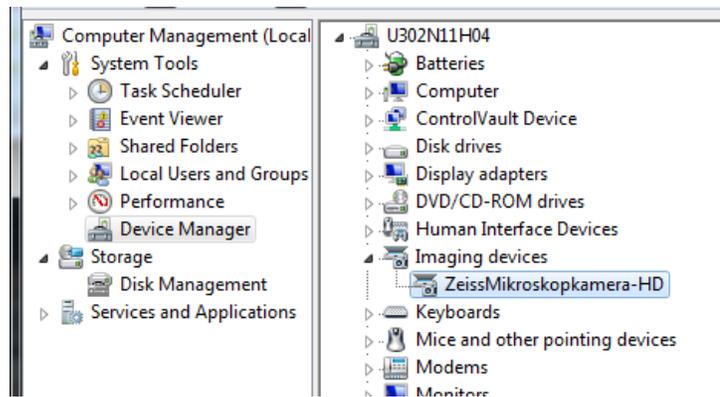
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To connect ZEISS Primostar HD directly to a computer

- 1) Connect the provided “Y” USB cable to the back of the camera head. Connect BOTH ends at the opposite end of the cable to the computer. If DVD 52 is installed already, the driver should automatically install, as with other USB devices. In Device Manager, the camera will show up as such:



- 2) Open ZEN (lite, Pro). The camera will show under the Active Camera dropdown as an “AxioCam ERc5s”.

Operating Notes

- **NOTE:** The HD head CANNOT be connected to an iPad and to a computer simultaneously.
- **NOTE:** SD Card must be formatted to FAT32 prior to recording images.
- **NOTE:** SD Card can be read by computer if HD head is connected to a PC. (It might prompt you to format the SD Card – DO NOT DO THIS. The images are available in the removable drive that now shows up in Computer.) Images can no longer be captured to the SD Card; they must now be captured using ZEN.
- **NOTE:** SD Card and AirPort connection are possible simultaneously. Labscope will simply show a “Snap Delay” screen. If you remove the SD Card in the middle of shooting, you must close and re-open Labscope app. If you re-insert the SD Card, you must close Labscope via double-tapping the Home button (from the Home screen on the iPad). Re-insert the SD Card and re-open the app. Images snapped from Labscope will be saved to the iPad; images snapped via the “Snap” button the camera head will be saved to the SD Card.