

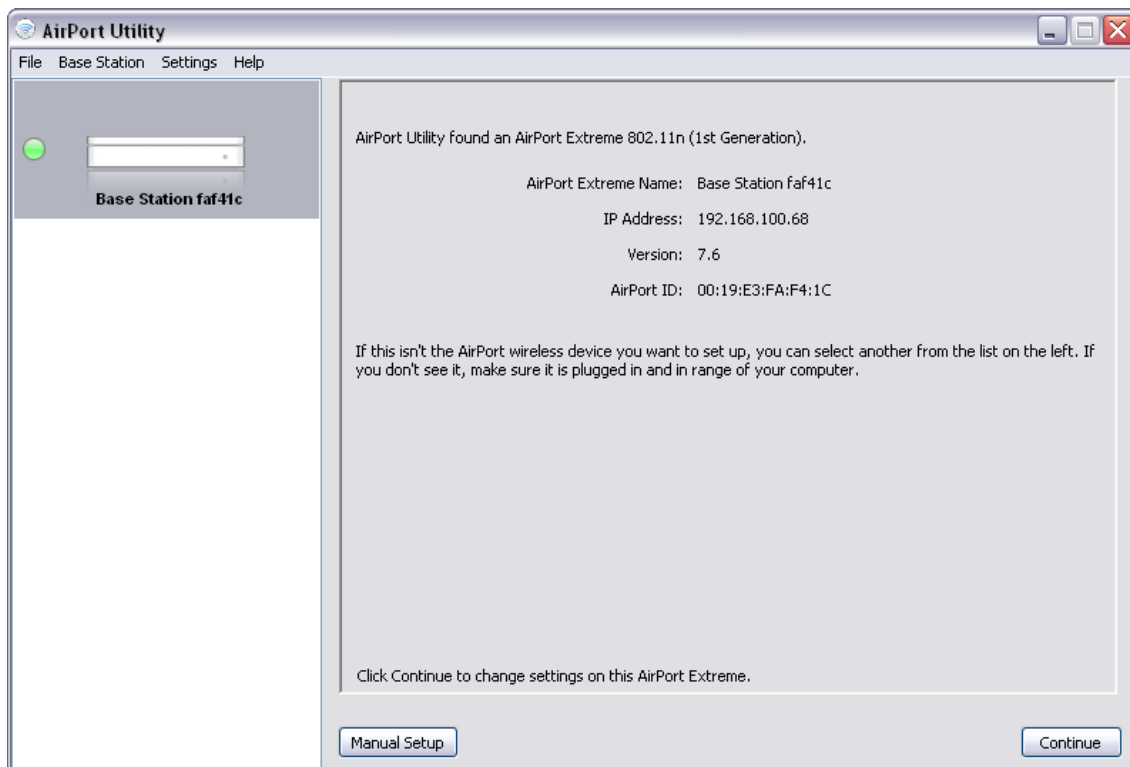
The following guide is intended to provide some basic information on where to confirm optimal network settings for Zeppelin Air and AirPlay operation when using Apple network products such as the Airport Extreme or Time Capsule and the Apple Airport Utility. Please note that this guide is intended for experienced users only. If you are not comfortable using this guide then we recommend contacting your router manufacturer for support.

Recommended network settings:

- The network name and password must contain only alphanumeric characters and cannot contain any special characters (such as !@£\$%^&\*()\_+!";<>~).
- Your wireless network must be operating in Wireless G only, or Wireless G & N mixed mode.
- The recommended wireless security method is WPA/WPA2 Personal. WPA/WPA2 Enterprise is not supported.

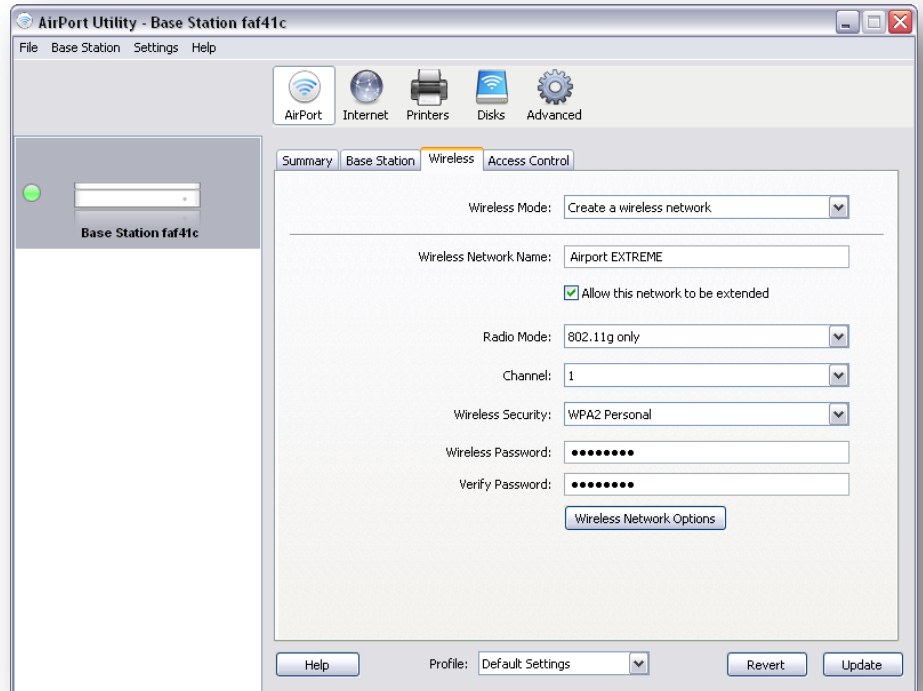
To confirm these settings, launch the Airport Utility program on a computer that is currently on the same network as the router.

1. Once the Airport Utility is open, choose the Apple network device that the Zeppelin Air will be connecting to from the left side, and click the "Manual Setup" button to view the network settings for the device.



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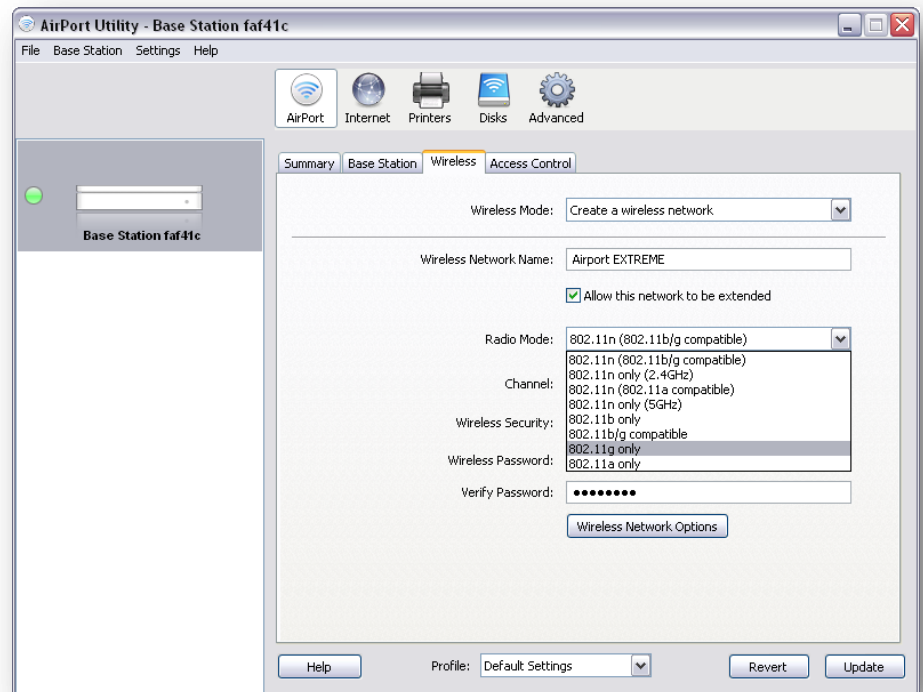
2. On the “Wireless” screen, confirm that the Wireless Network Name does not contain any special characters.



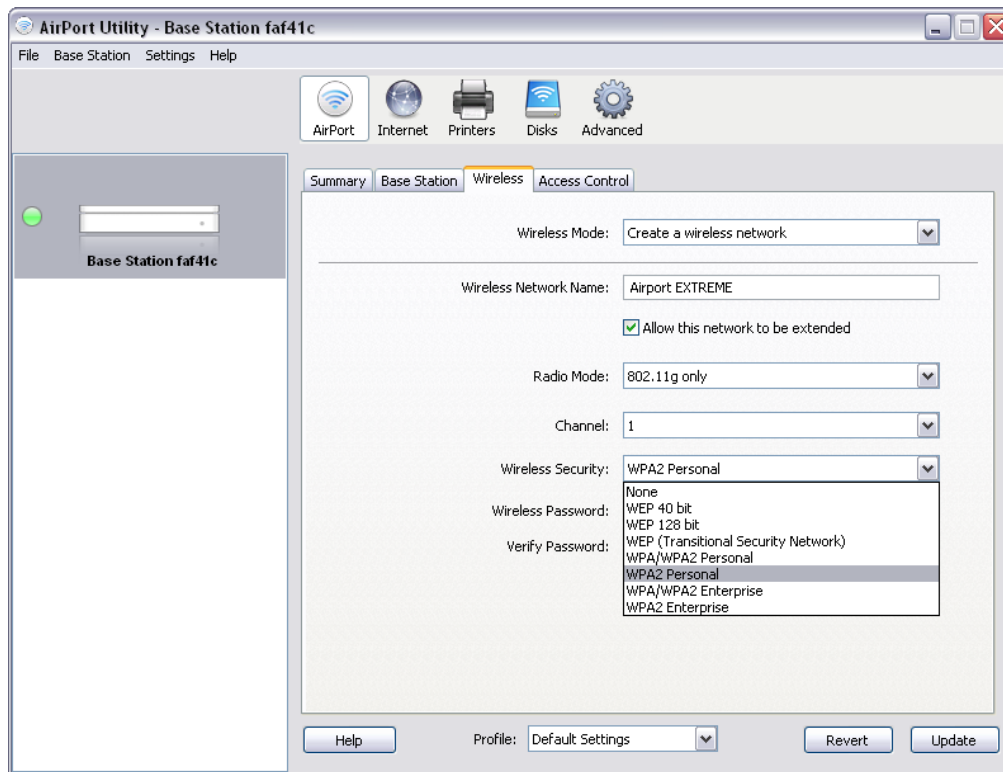
3. On the same screen, verify the “Radio Mode” is either 802.n (802.11b/g compatible), or 802.11g only.

**NOTE:** If audio dropouts are occurring when using AirPlay, try changing from 802.n (802.b/g compatible) to 802.11g only.

To change to the 802.11g only setting, you must press and hold either “Ctrl” (Windows), or the Apple Key (Mac) while clicking the Radio Mode drop down list.



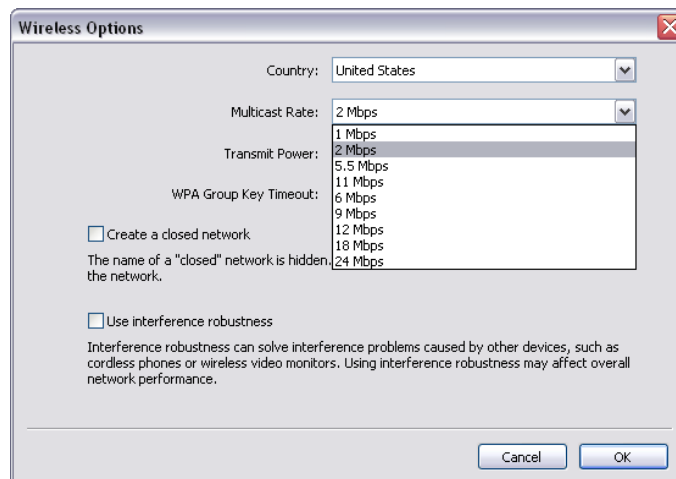
4. Verify that “Wireless Security” is **not** WPA/WPA2 Enterprise or WPA2 Enterprise.  
*Please note that if the wireless security settings are changed, all wireless devices that connect to the network will also need to be updated with the new security settings.*



## Advanced Settings

If the Zeppelin Air and AirPlay operate normally, you need not make any further adjustments. However, if issues such as dropouts occur, the following settings may help.

**Multicast Rate** – Increasing the multicast rate on the router will reduce the effective range of the wireless network but may improve signal quality within the working range. Access this setting by clicking “Wireless”, then “Wireless Options”



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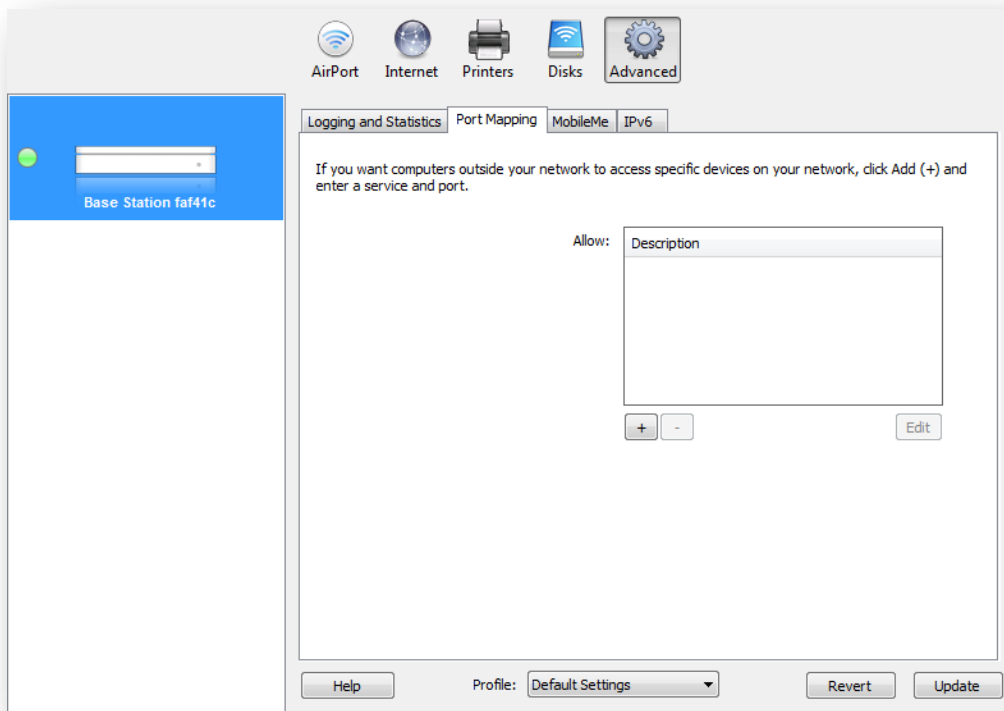
**Port Mapping** – Setting up Port Mapping on the Apple network device may resolve AirPlay streaming issues.

What firewall ports need to be open for AirPlay to work?

The ports that need to be opened are:

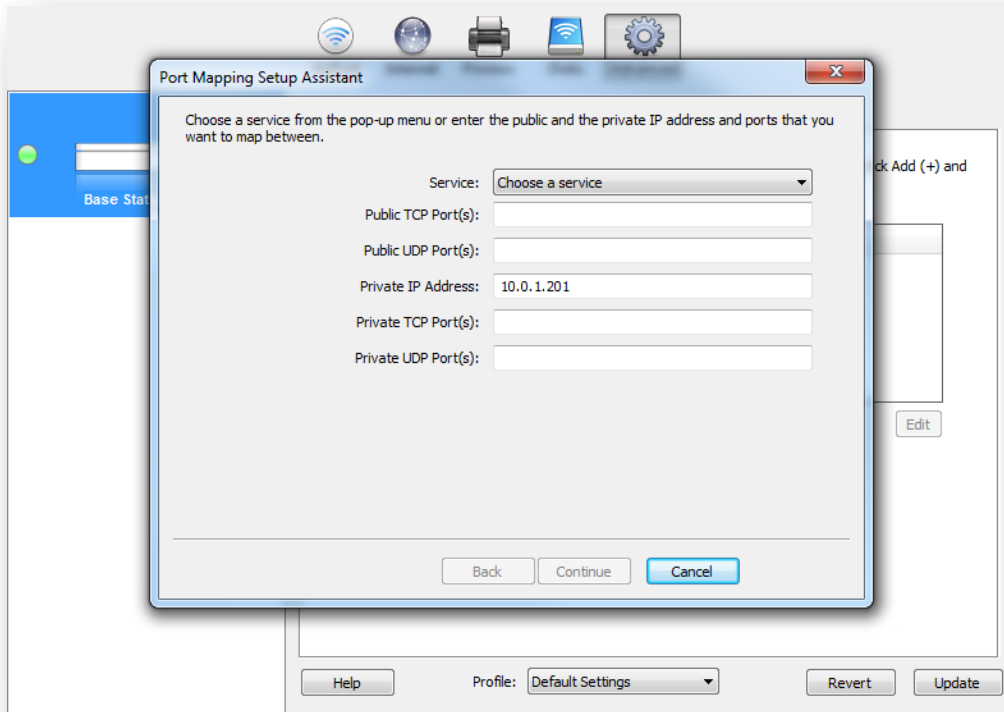
Port Number	Type	Protocol	RFC	Used by
80	TCP	HTTP	2616	AirPlay
443	TCP	HTTPS	-	AirPlay
554	UDP / TCP	RTSP	2326	AirPlay
3689	TCP	DAAP	-	iTunes Music Sharing / AirPlay
5297	TCP	-	-	Bonjour
5289	TCP / UDP	-	-	Bonjour
5353	UDP	MDNS	-	Bonjour / AirPlay
49159	UDP	MDNS (Windows)	-	Bonjour / AirPlay
49163	UDP	MDNS (Windows)	-	Bonjour / AirPlay

1. Click the “Advanced” icon, then click “Port Mapping”. Click the “+” icon to create a launch the Port Mapping Setup Assistant.

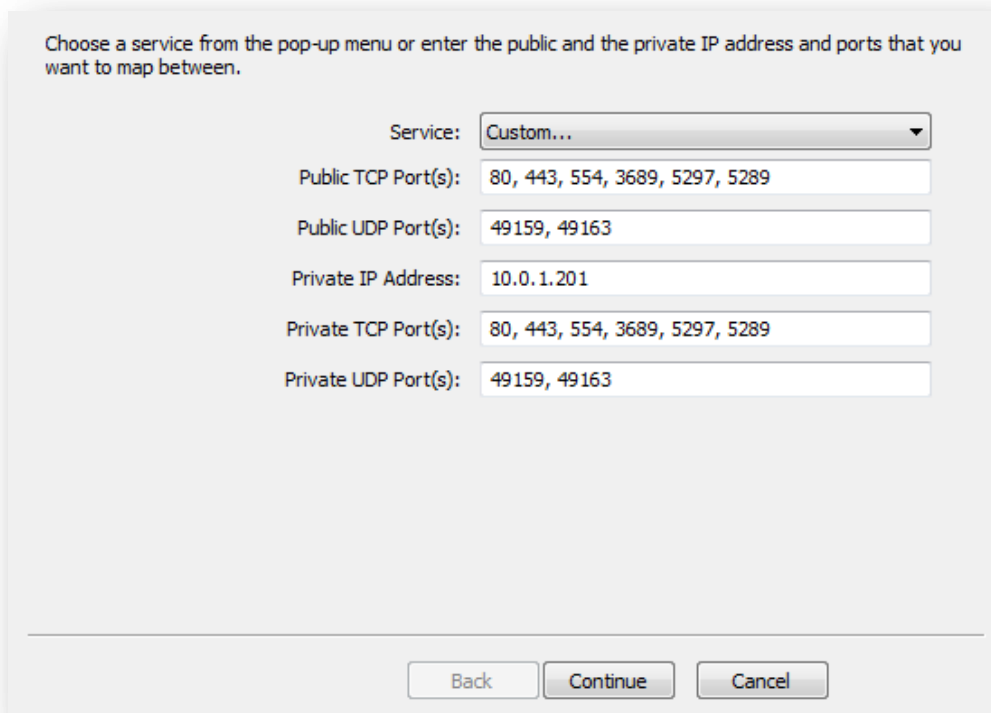


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2. From the Service drop-down menu, choose “Custom...”

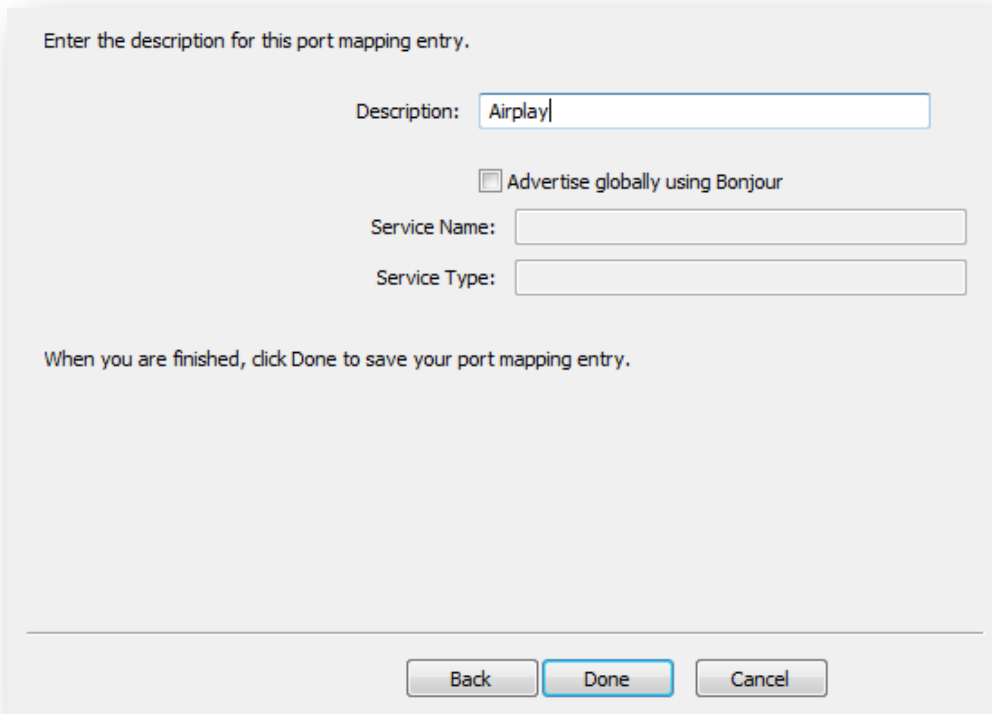


3. Fill out the ports fields with the ports listed below, then click “Continue”.



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4. Enter a description for the new entry, such as “AirPlay”, then click “Done”.



5. The new Port Mapping entry should now appear in the “Allow” section of the screen.

