Configuring an Aluratek AIRMM01F Internet Radio and Linksys WRT54GX Wireless Router for WPA Security

By Bret A. Bennett, October 2011

Note: The Linksys/Cisco Systems WRT54GX used in this procedure is Firmware Version: 1.02.15 with Boot Version 2.01.06. It's a b/g "old man" but still works like a charm. Per Wikipedia.org at <u>http://en.wikipedia.org/wiki/Linksys WRT54G series#WRT54GX</u>," WRT54GX comes with SRX (Speed and Range eXpansion), which uses "True MIMO" technology. It has 3 antennae and was once marketed as a 'Pre-N' router, with 8 times the speed and 3 times the range over standard 802.11g routers."

Here's how I get the Aluratek wizard to connect wirelessly to the WRT54GX with WPA security:

- 1. Download and flash the AIRMM01F bios to the latest version (currently "AIRMM01F_1.50(beta03).zip") per Aluratek's instructions.
- 2. Move the AIRMM01F at least 6 feet away from the WRT54GX. You may not need to do this, but I did because I've setup other wireless equipment where it was advised to do so.
- 3. Http into the WRT54GX with your web browser and select "Wireless" settings:
 - a. "Basic Wireless Settings" tab:
 - i. Wire network mode = G-Only (I did not try mixed, ie. b and g).
 - ii. Wireless Network Name (SSID) = user determined.
 - iii. Wireless channel = Auto.
 - Note: I've had this set to a specific channel, and then later changed to Auto. Surprisingly the Aluratek seems to handle this without problem and automatically connected on the new channel the next time I turned on the AIRMM01F. This is good because when set to Auto, the channel may change due to new wireless routers being installed near your location and we are not necessarily aware of that.
 - iv. SSID Broadcast = Enable.
 - v. ACK Mode = Immediate ACK.
 - vi. 802.11e Qos = Enable.
 - b. "Wireless Security" tab:
 - i. Security Mode = WPA Pre-Shared Key / WPA 2 / Pre-Shared Key
 - 1. WPA Pre-Shared Key = Enabled
 - 2. WPA2 Pre-Shared Key = Disabled
 - a. Note that WPA2 will not allow the AIRMM01F to connect to the WRT54GX and, it must be disabled here. It does not matter whether AES or TKIP is selected (see next step).
 - 3. Encryption Algorithms = AES

- a. Note that TKIP will not allow the AIRMM01F to connect to the WRT54G.
- 4. Pre-Shared Key = user determined (between 8 and 63 characters long). For testing purposes, do yourself a favor and choose something easy to key in like 1234567890. Later, you can repeat this entire setup and enter a more non-guessable secure Key. Btw, you have to press a key repeatedly to get its the non-numeric characters.
- 5. Group Key Renewal = 900 (the default)
- c. "Wireless Network Access" tab : user determined.
- d. "Advanced Wireless Settings" tab : I have all items set to the default.
- e. Press the "Save Settings" button at the bottom.
- 4. Turn on the Aluratek with the power button on the back of the unit.
 - a. Do: Setup > Advanced Setup > Reset to Default > Yes.
 - i. Choose you language.
 - ii. Choose your V-Tuner language.
 - b. Select your wireless network from those that are discovered (that's why you need the WRT54G's SSID Broadcast enabled). Enter your same WPA-PSK Pre-Shared Key that you created in the WRT54G setup above.
- 5. Using the above procedure, I have not had to power cycle (ie. unplug AC power/turn off power switch/etc.) either the WRT54GX or the AIRMM01F before or during this procedure.

Hope this helps ...

Bret

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