**WIP**
This mod is a Work In Progress, and should be completed in the very near future.

Process developed by Doramius
Wiki created by Doramius

I did this with a WRT54GS v7.2, that has non-detachable antennas, but the method should follow similarly for Any device with non-detachable antennas. Having non-detachables became a problem as I sometimes need to attach a higher gain antenna or a cable extension for certain uses and situations.
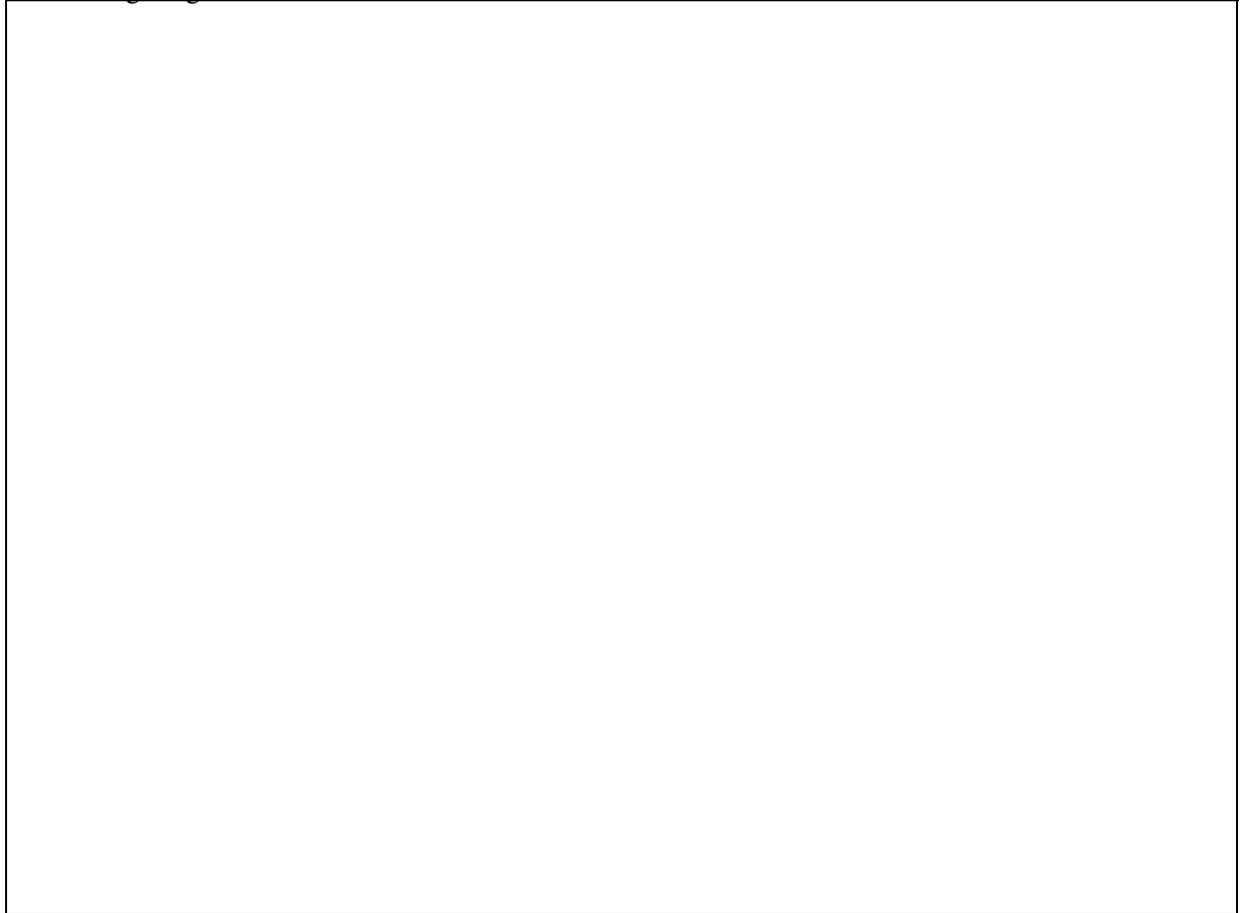
Contents

Required Tools & Items

- RP-TNC or SMA connectors
- soldering iron & supplies or crimping tools (depends on the type of connectors you use)
- #1 Phillips head screwdriver
- heavy duty diagonal cutters

Step 1

You're going to need either RP-TNC connectors, or you can use SMA connectors. I used RP-TNC connectors, since they are the type that natively are use on Linksys products. Making it compatible with other Linksys products was a somewhat of an important issue.
I had a couple of bad BEFW11SR units, which graciously donated a few antennas for this cause. Here are the RP-TNC connections I removed from the donor router. I had unsoldered the whole wire from the router board, with the connector attached, as I figured it would be easier.
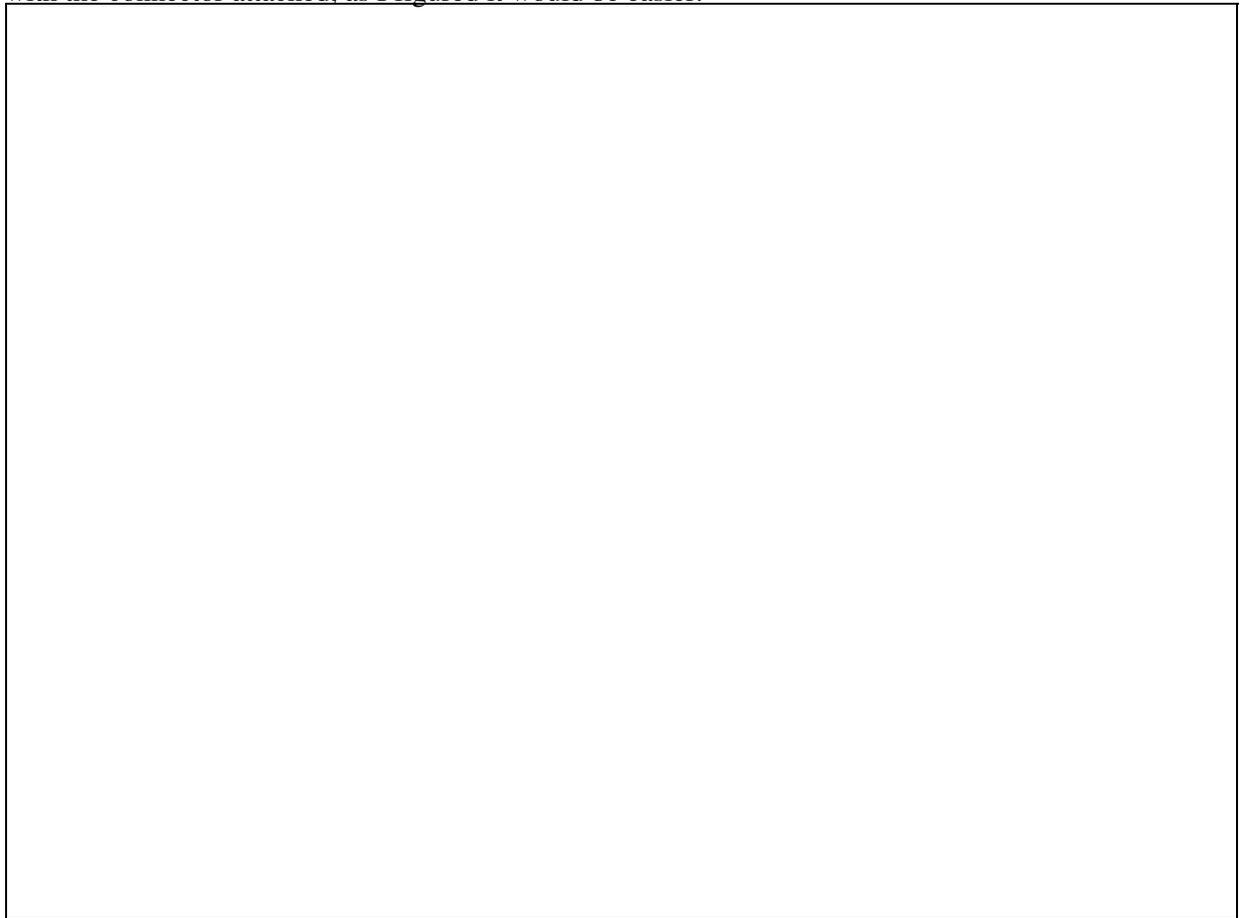
It's possible to get crimping TNC or SMA connectors and just cut the wire inside the non-detachable antennas. A good set of diagonal cutters snipping the antenna at it's midsection should give enough required length. The non-detachable antennas are pretty much useless after the whole procedure, so destroying them shouldn't be a concern. Might be a better choice for those who don't have a soldering iron or may not have reasonable soldering skills. It's not rocket science to solder or unsolder the connections, but if you have questions about your ability to solder...crimping might be the wiser choice. After all, there are small surface mount resistors

and capacitors nearby that you don't want to accidentally remove or short out. Image:002

Step 2

I unsoldered the points on the WRT54GS so I could remove the top that contained the non-detachable antennas. **USE FLUX**, and be sure to completely remove the solder from the pads on the board, but do not accidentally remove any nearby SMD components. Flux is not an option in this process. You WILL need to use it. I suggest a water soluble flux over an acid flux. Although water soluble is a little bit "gummy" and can sometimes be a pain to clean, acid flux that doesn't completely get removed may cause corrosion on components. Image:003 I have a variable temperature soldering iron and set it to 840F. I also used a solder braid to wick the solder away. Personally, I've accidentally sucked up small nearby components or moved them using a solder sucker. I recommend a light bit of flux on the braid to aid in transferring heat.

My suggestion for resoldering, is lightly solder the braided copper wire, of the antenna cable, to the large pad first. It will help hold the wire in place while you solder the core wire to the smaller pad. Then you can go back and completely solder the braided wire as seen in the pictures above.

Step 3

I was initially going to use a Dremel to cut the area on the shell to where I was going to attach the TNC connectors. However, I noticed the BEFW11SR shell fits EXACTLY over the ports. This is not always the case where they match up nicely. I discarded the original shell and used the BEFW11SR top. I did use the original face and the bottom plate. The face has the label with the MAC address and other info. Image:004

Additional Notes

I've used a similar method to attach SMA connectors to a WRT54G2 (hoping to post that tutorial in the near future), and also replaced the non-detachable antenna on a WMCE54AG Media Extender so I could attach a high gain antenna to it.

Other Links

Original forum thread: http://www.dd-wrt.com/phpBB2/viewtopic.php?p=233317#233317

To Do

... for finishing this wiki Entry:

- Follow up with testing method to check signal strength.