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Introduction

If you got here from Google you may wish to read [Linking Routers](#) first. In fact, no matter how you got here, you should look at that page first.

This mode is NOT for WIRED connections between two routers! It is a wireless connection only.

- No setup changes are required to be made to your host-router / AP except that you usually must use WPA2-AES ONLY for dd-wrt to work. Also, some other revisions or adjustments may be desirable, as stated below.
- if your host AP is 192.168.1.x, then your repeater could be subnet 192.168.2.x or 192.168.69.1 or ... any other unique subnet in your network. If you need a repeater-type solution in the same subnet you are in the wrong place. You need to read [Linking Routers](#) first..!

Preparation

You need to know the host router's access credentials:

- SSID
- the security settings
- its IP address
- prepare and verify the DD-WRT to be configured as a repeater
 - ◆ Note: **Make sure you are using a RECENT STABLE BUILD!!! DO NOT USE THE RECOMMENDED BUILDS ON THE DD-WRT HOMEPAGE, those are outdated and buggy. [Where do I download firmware?](#)**
 - ◆ cable-connect your repeater-to-be to a laptop or desktop

Wlan_Repeater

- ◆ install or upgrade the DD-WRT firmware (if required)
- ◆ do a 30 sec reset (see [Hard reset or 30/30/30](#)).
- ◆ verify which chip set your device uses and read Broadcom / Artheros considerations, below
- ◆ proceed with installation

Broadcom Considerations

Note: **NEVER** use v24 SP1. As mentioned above, check the forum stickies (such as the Peacock thread) for the latest recommended stable build.

Atheros Considerations

There is no "Repeater" mode on Atheros units, but you still can use it as repeater, just set the original interface as "client" and get it to connect to your AP, then create a virtual interface (VAP) to broadcast the new SSID.

Repeater Setup

To set it up as repeater do the following:

1. Do a 30 sec reset (see [Hard reset or 30/30/30](#)).
2. Under **Wireless -> Basic Settings**:
 - ◆ Wireless mode: Repeater
 - ◆ Wireless Network mode: (set to match the host)
 - ◆ Wireless Network Name (SSID): the SSID of the network you connect to
 - ◆ Save
 - ◆ Add 1 virtual interface
 - ◆ Enter a new (unique) SSID of your choice
 - ◆ Save
3. Under **Wireless -> Wireless Security**:
 - ◆ Physical Interface wl0:
 - ◇ Enter the necessary settings to connect to the wlan you'd like to repeat (if no security, leave disabled...but consider enabling security for both host AP and Repeater)
 - ◇ Save
 - ◆ Virtual Interface wl0.1:
 - ◇ Choose the best security mode, which should be WPA2-AES whenever possible. The only other mode that will usually work is wep, which is not secure. Other modes normally do not work with ddwrt. See the peacock announcement
 - ◇ Enter a security key
 - Note: When using security on both the physical and virtual interfaces, you **MUST** usually use the same security type, and exactly the same passphrase on both the physical and virtual ssid. If you cannot connect when trying different security or passphrases, make them identical.
 - ◇ Save
 - ◆ Note: If you experience problems when setting up for the first time, a leading practice is to configure without any encryption (i.e. setting security to "None") at first, until the unit is confirmed to be working properly, and configuring encryption as a later step.

Wlan_Repeater

4. Under **Setup -> Basic Setup:**

◆ Network Setup:

- ◇ Here you define the repeater's own subnet
- ◇ Set IP address to a different subnet from the Host AP you wish to repeat
- ◇ Example: if host AP is 192.168.1.x, assign repeater to 192.168.2.1
- ◇ Set up your DHCP range if you desire

◆ Save

5. (Optional but recommended) Under **Security:**

- ◆ Uncheck all items in the "Block WAN Request" section (except Filter Multicast)....THEN disable the SPI firewall

◇ Note: If you are very concerned about security, a Repeater might still work okay with the SPI firewall enabled. If you decide to leave it enabled but experience problems, keep this step in mind.

◆ Save

6. Go back and check each page to ensure that your settings are correct. If they are, hit APPLY. APPLY writes the changes

Testing

- After the Repeater has rebooted, disconnect power and let it cool a bit... (let ARP expire)
- Turn power back on and let it boot
- See if you can ping 192.168.1.x and access an outside web site, say Google or Yahoo

Footnotes

When the unit has logged onto the Host WLAN and has begun repeating its signal, you will see the DHCP address (generally in the 192.168.1.100-150 range) in the upper right-hand corner as the WAN address. As long as you see quad zeros up there (0.0.0.0), you are not linked and are not repeating. You might click the "reload" button on your browser once or twice to make sure the WAN IP is fresh while you are making changes. Make sure your repeater is within radio range of your host network.

If you wish to be able to access your secondary router from devices on your primary LAN, enable Web GUI management in the Remote Access section of the Administration/Management page. You should then be able to access the secondary router by typing in its WAN IP. Setting up a static lease for the device in Services/Services will allow you to always know where it is to access it.

But for the pièce de résistance, go into the Host WLAN router's web GUI (NAT/QoS/Port Forwarding on DD-WRT.v24 beta) and set up a port forward so you can check on and fully access and control your new repeater from Outside, i.e. via the Internet. Look up the address that DHCP has assigned to your new repeater (the name you entered in Setup/Basic Setup/Optional Settings/Host Name will appear in the DHCP clients table of the Host router under Status/Sys-Info), and write it down. Then go to Port Forwarding and click "Add." Make the forwarded port (Port from) something you can remember easily, like 8128 if you found your repeater on 192.168.1.128, for example. Click Both for Protocol, enter the IP private IP address of your repeater in the IP Address box, enter Port 80 (http default) in the "Port to" box. Or if you want to be tricky, enter something besides 80, but just be sure this matches the active Web GUI port number on your repeater). Lastly, be sure to check "Enable," and then click "Save Settings" (v23) or "Apply" (v24 beta). Then go Outside, and take a look at your main WLAN router at its public IP address (or DDNS link), and then take a peek at your repeater's Web GUI on the same address (or DDNS link) followed by :8128, e.g. <http://yourwlan.dyndns.org/> for your Host router and <http://yourwlan.dyndns.org:8128/> for the repeater. But

you knew that already.

Voilà!

Tips/Gotcha's/Problems

- Note copied from Repeater Bridge mode, possible that it applies to Repeater mode too: "Repeater Bridge with WPA2-AES is broken for k2.6 builds after 25974, though some models might work through 26125." See [Repeater Bridge](#) for original note.
- If you cannot get this to connect, first try disabling ALL wireless security to test. If that does not resolve your problems, try putting both the primary and secondary routers into "G only" mode.
- When MAC Address Cloning is enabled, the Wireless Security Mode of the repeated AP has to match that of the Virtual AP. So if the AP you wish to repeat has WEP encryption you need to use WEP for the Virtual AP. Without MAC Address Cloning, you may select any Wireless Security Mode for the Virtual AP, and it need not match the repeated AP.
- I have seen on some networks where Repeater mode will not provide a reliable connection if the STP function is Enabled on the Basic Setup page...Set it to Disabled and see if your connection improves.
- If the host AP settings Wireless>>Basic Settings>>Wireless Network Mode is set to "G-only" then your repeater must also be set the same way....otherwise you will not make the connection from the repeater side - 09/22/07
- Tests have shown that there is no way to lock a Repeater onto a particular channel - 2/12/2009
- I was not able to get online with the Gateway and the Local DNS containing my router's IP as Stuckeymax suggested. Instead I left them as 0.0.0.0 and all was good.
- Also take note of the fact that all repeaters, including this Wlan Repeater mode, will sacrifice half of the bandwidth available from the primary router for clients *wirelessly* connected to the repeater. This is a result of the repeater taking turns talking to not just one partner, but to two, and having to relay the traffic between them. As long as your bandwidth requirements are within this halved bandwidth amount there will be little or no reduction in "speed". This is exactly the same as having two active wireless clients on one router.
- I tried a daisy chain of 4 routers AP-Rpt-Rpt-Clt, G-Only WPA2, all DHCP client from the previous, all managing it's own subnet with it's own DHCP-DNSMasq Authoritative (192.168.[1-2-3-4].0/24. Worked fine even with SPI firewall defaults enabled. No issues to manage all nodes from the net with the help of Port Forwardings and Port Range Forwardings.

See also

[Repeater Bridge](#)