

# WiFi DFS May Be Great for You If You Live in an Apartment or Condo

If you live in an apartment or condominium, your WiFi may be hurt by the WiFi signals coming from your neighbors. Those signals create WiFi energy that can interfere with your router or cable modem/router. One way to do a quick check is to go to the WiFi settings section of your smartphone, and first make sure that WiFi is On. You can see how many networks are within range of your phone. If it's more than three or four and they are close by, you may want DFS.

An even better way to check is to download a free app called WiFi Analyzer that's available for Android phones, but unfortunately not for iPhones at this time. Here's a link to information about WiFi Analyzer:

[https://play.google.com/store/apps/details?id=com.farproc.wifi.analyzer&hl=en\\_US](https://play.google.com/store/apps/details?id=com.farproc.wifi.analyzer&hl=en_US)

WiFi Analyzer lets you get good information about each 5 GHz WiFi channel. When you're using 20 MHz channels, there are 30 DFS channels and 15 non-DFS channels. WiFi Analyzer lets you check the strength of the WiFi channels as you walk through your home. If all your non-DFS channels have significant WiFi noise from your neighbors in some spots in your home, you should consider DFS. The reason is that DFS unlocks many WiFi channels that aren't normally used by your neighbors; so operating on a DFS channel should result in less WiFi interference and better WiFi performance.

Here's a good DFS article:

<https://netbeez.net/blog/dfs-channels-wifi/>

Note that routers with DFS capability typically let you switch that capability on or off. DFS channels are also used by radar systems at airports, weather stations, and other government radar installations. Routers with DFS turned on may have problems if the routers are too near one of these installations. You can anticipate this issue if you use WiFi Analyzer to see whether ALL 5 GHz channels are sometimes busy, even the DFS channels. If that's the case, it's probably best not to use DFS. (You can switch off DFS in Motorola products that have DFS capability.)

If you're not near a radar installation and you live in an apartment or condo, DFS may give you dramatically better WiFi. Motorola products with DFS include the MG7550 and

MG7540, and we will be adding DFS to a number of other products including the MT7711 and MG7700.

To enable DFS on current Motorola cable modem/router products, follow these steps:

1. Log in to the device's user interface.
2. Select **Advanced Pages** in the upper right-hand corner of the landing page.
3. Select **Wireless → Advanced**.

You should see the following screen (the DFS entry is circled for clarity):

The screenshot shows the Motorola user interface for the 'Advanced' wireless settings. The top navigation bar includes 'Back to Basic Page', 'Status', 'Basic Router', 'Advanced Router', 'Wireless', 'Protection & Parental Control', and 'VPN'. Below this, a secondary bar shows 'Basic', 'Radio', 'WPS', 'RADIUS', 'WEP', 'Guest', 'Access', 'Advanced', 'WMM', and 'Scan/Bridge'. The main heading is 'Advanced', with tabs for '2.4 GHz' and '5 GHz'. The '5 GHz' tab is selected. Under 'Advanced Settings', a list of configuration items is shown, each with a dropdown menu, a 'Save' button, and an information icon. The item '802.11h (DFS, Dynamic Frequency Selection)' is circled in red, showing a dropdown menu with 'Disabled' selected. Other items include Output Power (100%), OBSS Coexistence (1 (Enabled)), Hide SSID (Closed Network) (Disabled), Mode Required (None), Isolate Client (Disabled), 54g™ Mode (54g Auto), Xpress™ Technology (Enabled), 802.11n Protection (Auto), Basic Rate Set (Default), Multicast Rate (Auto), NPHY Rate (Auto), and Legacy Rate (Auto).

Setting	Value	Action	Info
Output Power	100%	Save	i
OBSS Coexistence	1 (Enabled)	Save	i
Hide SSID (Closed Network)	Disabled	Save	i
Mode Required	None	Save	i
Isolate Client	Disabled	Save	i
<b>802.11h (DFS, Dynamic Frequency Selection)</b>	<b>Disabled</b>	Save	i
54g™ Mode	54g Auto	Save	i
Xpress™ Technology	Enabled	Save	i
802.11n Protection	Auto	Save	i
Basic Rate Set	Default	Save	i
Multicast Rate	Auto	Save	i
NPHY Rate	Auto	Save	i
Legacy Rate	Auto	Save	i

4. From the pull-down menu for 802.11h (DFS), select **Enabled** and then click **Save**.

The cable modem/router will now select DFS frequencies if it detects congestion on your non-DFS bands, and if a DFS frequency is not in use by a nearby radar installation.

The cable modem/router has a Help screen for DFS that provides the detailed information below.

**802.11h (DFS, Dynamic Frequency Selection):**

Enable 802.11h only if you believe your location is experiencing heavy interference from other nearby 5 GHz networks and/or transmitters. The default setting for 802.11h is Disabled.

You can Enable or Disable Dynamic Frequency Selection, or DFS, by enabling or disabling 802.11h. The 802.11h protocol defines a process to detect whether certain frequencies within the 5 GHz band are currently in use in your location by government agencies - for example for weather or aircraft control radar. When DFS is enabled, and if your device detects marginal signals in the standard 5 GHz frequencies, your device will automatically check for available frequencies in the DFS bands. If frequencies are available in the DFS bands, your device will migrate to those frequencies, and you will typically experience better wireless performance.

However, during the process to check availability of DFS frequencies, you will lose wireless connectivity for about one minute. Depending on your environment, this process can recur up to once every 30 minutes. Because of this, the default setting for 802.11h is Disabled.