Using a laptop as a hotspot on Windows

Router software must be loaded, such as MyPublicWiFi (www.MyPublicWiFi.com).

Before starting it:

- Ensure the Microsoft Virtual WiFi Miniport Adapter is enabled (Network and sharing centre)

Then start the router:

- Configure the SSID and WPA-PSK password.

One problem is that the Wi-Fi channel cannot be specified. The router will use the current settings of the network driver. For example, if the laptop was previously connected to channel 11 when the router was started, then the router will continue using channel 11.

This means that the router will be sharing the same channel as another network in the area, giving rise to interference between the two networks.

If the laptop is disconnected from one Wi-Fi network and then connected to another Wi-Fi network on a different channel while the router is running, the router channel will automatically change to the channel currently in use.

How to set the hotspot’s Wi-Fi channel

In essence:

- Connect to a sample Wi-Fi network running on the same channel as that required (e.g. channel 6)
- Run the router software so that it adopts the same channel (e.g. channel 6)
- Configure the laptop/PC so that it does not automatically connect to any other Wi-Fi network by:
  1. Disable the sample network (e.g. switch the router or tethering device off), or
  2. Move the laptop outside the network area (e.g. 100 metres away), or
  3. Forget the connection (the WPA password will need to be entered to reconnect)
- Disconnect from the sample Wi-Fi network
- The router will remain on the last-used channel (e.g. channel 6) even though there are other Wi-Fi networks available, because the laptop/PC will not successfully connect to any of the other networks.

Notes:

You can create your own sample Wi-Fi network using a mobile phone or tablet hotspot. Some devices may have a preconfigured channel, others may adopt the same channel as the local Wi-Fi network. If the latter, then lock onto a remote Wi-Fi network with a suitable channel, enable tethering, then ‘carry’ this back to the laptop, where it can be used as above to set the router channel.

With Windows, if all your stored Wi-Fi networks are configured to automatically connect when in range, this feature will need to be disabled (in the Network and Sharing Centre) for each network in range. Alternatively, remove the network from the list of “Managed wireless networks” which is equivalent to ‘forgetting’ the password.

As long as the laptop/PC cannot connect to another Wi-Fi network (e.g. in range, but password required), the router’s channel will not be changed.

If the laptop/PC does connect to a Wi-Fi network, the channel will immediately change to the one used by the Wi-Fi network.