# Port Forwarding on your Home Router

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**Port Forwarding on your Home Router**

When using many internet modes with amateur radio then you need the ability to Port Forward on your home router. For many of you, this may the first time you have ever done this or logged into your router. This is not a scary thing to do but requires some knowledge to complete.

This Port Forwarding is required if you wish to use, in this example ICOM transceivers like the IC-9700 with Terminal Mode or Access Point Mode.

The example given here is generic so should/would for most people. Router used is a Netgear Orbi RB350, your router maybe different. There is plenty of Port Forwarding information on the Internet via Google or YouTube, just search for them.

First, you need to log into your router via its IP (Internet Protocol) address E.g. 192.168.1.1 The log in and password might both be *admin*, this might be printed on the rear of the router or look it up with make and model using the internet.

Once in you will probably want to look for the DHCP Server address range so that you can assign a static IP address to your radio(s). Static IP addresses within your router will stay with the radio and not change over time. A DHCP IP address range might be 192.168.1.2 - 192.168.1.100.

Go to Advanced tab>Setup>LAN Setup

If you assign your radios to a number higher than 100 say 170 then it cannot be assigned to any other radio or connected device - 192.168.1.170. This in my example is assigned using Address Reservation. ICOM is a 9700 and the other an IC-705.

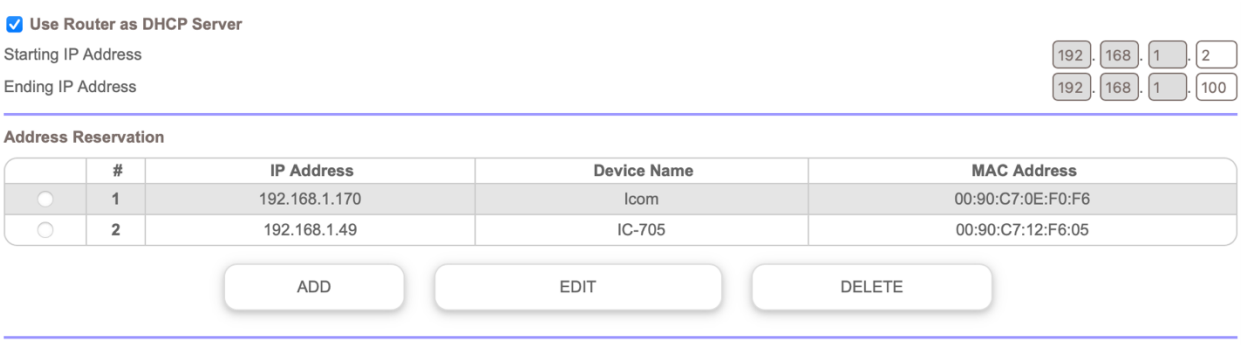


*Figure 1 – Checking IP range and assigning IP Addresses Reservation.*

Then look for the Advanced tab>Advanced setup>Port Forwarding/Port Triggering

In this example (Figure 4) the Ports Forwarded can be in a range like 50001-50003 or individually like 50001, 50002, 50003. Forward the ports using the UDP protocol (in this example). Normally you can have TCP, TCP/UDP or UDP only. As displayed, I have forwarded several Ports for the IC-9700 under the name ICOM.

Note: Ports can only be forwarded to a single IP address. So, 50001-50003 can only go to IP of 192.168.1.170. If you need to do this for another radio like the IC-705 then you would need to use a different port range for the Static IP Address and make changes within the radio for the new port numbers.

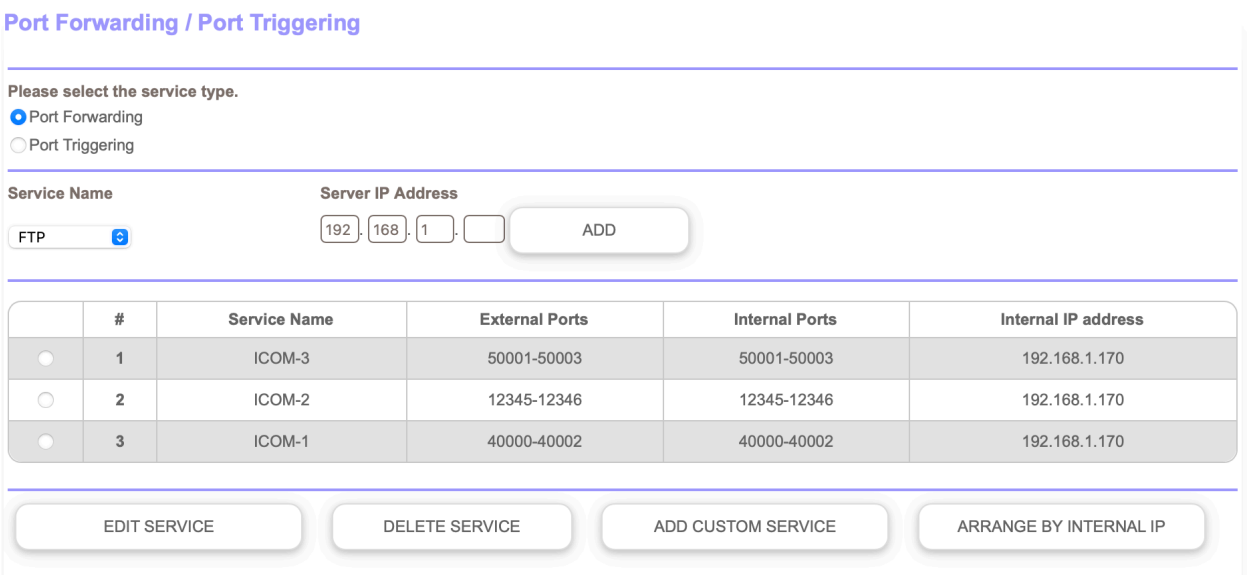


*Figure 2 – Port Forwarding to a Static IP Address.*

**Summing Up**

The purpose of all this information is to demonstrate the various additional ways to use these ICOM radios beyond just RF. It opens several possibilities to remain in contact with amateurs all over the world and beyond using D-STAR. If using a multiple protocol Gateway like XLX299 then you can get onto DMR or M17 digital protocols without he expense of owning multiple radios.