

Remote Connections

RSS can be accessed from anywhere via the Internet. Access must be made available through RSS settings. All user accounts must be password protected before you allow any access.

Four ports must be opened: one for a browser, a second for VoIP, a third for VNC viewer and a fourth for the Video Camera (optional).

Service	Normal Port	Protocol
RSS Browser access	80	TCP
Mumble (VoIP)	64738	TCP/UDP
VNC	5900	TCP
Video Camera	8081	TCP
Remote CW	30040	UDP

Browsers, by default, connect to port 80 on a server. This access port must not be blocked by a router or firewall. Your router's advanced settings provides a way to forward connections from the outside to a specific LAN IP and port.

The LAN IP for RSS can be found on the System settings page (SETTINGS>System). It will be an address like 192.168.1.20. The RSS browser, Mumble, VNC and Video Camera ports must be able to transverse your router. This is called Port Forwarding.

Many routers provide a way to translate an incoming port to a different port. This translation provides a higher level of security than simply forwarding port 80. Set the External Starting and Ending port to something like 7488. Set the Internal Starting and Ending ports to 80. Your router will now accept an incoming connection on port 7488 and forward it to port 80 on rigpi3.local. When away from home you would instruct your browser to connect to port 7488. If your router does not provide port translation, open port 80 instead and you will connect to the default browser port, 80.

The default Mumble port is 64738. This port must be forwarded through your router. You can use the same translation trick as with browser connections, but you must also tell the mumble client which port to use if not the default.

VNC Viewer gives you access to the RSS Desktop from any device. VNC Viewer clients are available for most operating systems and devices. To use VNC Viewer from a remote location you must forward the port used by VNC. The default port for VNC viewer is 5900.

Configure Your Router's Port Forwarding

The following instructions apply to a Netgear R8500 Router. The steps for your router will be different.

Netgear routers do port forwarding by assigning port numbers to a "service" that is associated with the application you want to run.

To open the ports for RSS:

1. Type the router's address in an Internet browser's address bar. (By default the router's address is 192.168.0.1 or 192.168.1.1). The Setup Wizard appears
2. Enter the router's username and password
3. Under Advanced, click Advanced Setup, then Port Forwarding on the left menu bar (varies slightly by Router)
A Port Forwarding Screen appears
4. Click Add Custom Service. The Custom Services window opens
5. Enter **RSS** for the service name
6. Select TCP in the Service Type drop-down
7. Enter 7488 in the External Starting Port box
8. Enter 7488 in the External Ending Port box
9. Remove the check for Use the same port range for Internal Port
10. Enter 80 in Internal Starting Port
11. Enter 80 in Internal Ending Port
12. Enter the LAN IP for RSS in the Internal IP address
13. Click Apply
14. To add **Port Forwarding for Mumble**, click Add Custom Service and follow the same steps
15. Use Mumble for the name. TCP/UDP for the type and 64638 in the External Port boxes
16. Enter 64738 in the Internal Port boxes
17. Enter the LAN IP for RSS in the Internal IP address
18. Click Apply
19. To add **remote VNC viewer** access to open RSS Desktop, click Add Custom Service and follow the same steps
20. Use VNC for the name. TCP for the type and 5900 in the External Port boxes
21. Enter 5900 in the Internal Port boxes
22. Enter the LAN IP for RSS in the Internal IP address
23. Click apply
24. To add access to the **RigPi Video Camera**, click Add Custom Service and follow the same steps
25. Use VideoCamera for the name. TCP for the type and 8081 in the External Port boxes
26. Enter 8081 in the Internal Port boxes
27. Enter the LAN IP for RSS in the Internal IP Address
28. Click Apply
29. Click Logout to exit from router settings

With RSS running, open canyouseeme.org with your browser and confirm that ports 5900, 7488, 8081 and 64638 are open.

To connect to RSS using a browser when away from home, enter the WAN IP (from SETTINGS>System) followed by a colon and 7488:

97.222.46.198:7488

The WAN IP above is fictitious, use your own. Now you can log in and control your radio from anywhere Internet access is available.

To connect Mumble on your remote client, open the Edit window for the rigpi server connection and change the port to 64638.

Important Port Forwarding Note

Some Internet Service Providers supply a Modem that contains a single-port router. If you use an external router with such a device, port forwarding will not work without extra settings. Here is an article on the web that explains the 2-router problem. If port forwarding doesn't appear to work for you, please read this article.

[Click to Go to PortForwarding.com](#)

Note: Port Forward is an excellent resource for help if you run into trouble with port forwarding. They also sell programs to aid with the process. Most port forwarding issues can be solved without the need for other programs.

Password Protection

Since RSS is now open to the Internet, add passwords to all accounts before proceeding.