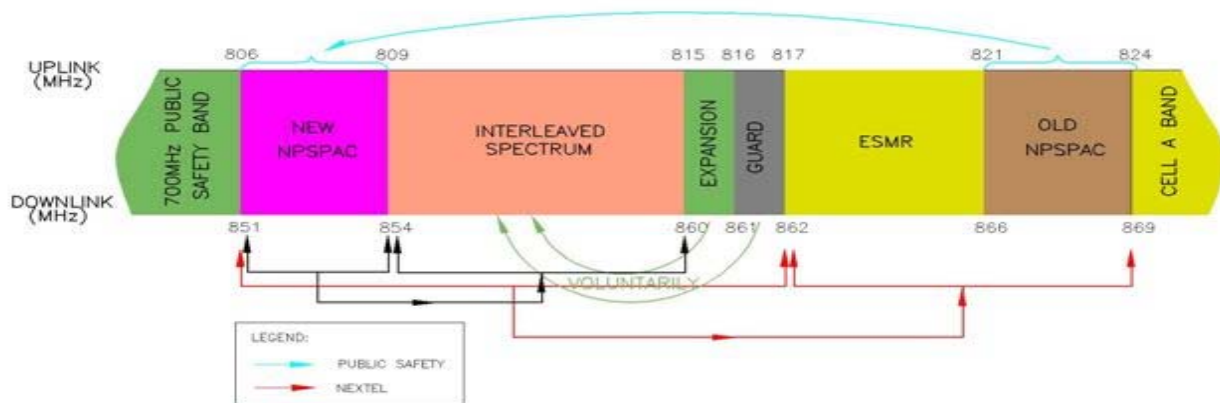




800 MHz Re-Banding

What is Re-Banding?

The FCC has mandated that the services in the 800 MHz band (806-824 MHz Uplink, 851-869 MHz Downlink) be moved around to reduce the chance of interference between public safety services and cellular services. The following is a depiction of how these frequencies are moved around within this band:



Q: Who will be affected?

A: Public safety services and SMR services in the 800 MHz band (806-824 MHz Uplink, 851-869 MHz Downlink).

Q: What is affected?

A: Two-Way Radios

- Radios may have to be reprogrammed, retuned or replaced. Contact your radio manufacturer.

Repeaters

- Repeaters may have to be retuned or replaced. Contact your repeater manufacturer.

Distributed Antennas Systems (DAS)

- The extension systems are made of passive and active components.
- Passive components are not affected.
- Active components (such as BDAs) may be affected.



- Two types of BDAs are commercially available:
 - Fixed Bandpass
 - Flexible Bandpass
- Fixed bandpass BDAs may need to be retuned or replaced.
- Flexible bandpass BDAs need only minor changes in software settings.

Q: System Performance**A:**

- The system will encounter a new RF interference scenario.
- Changes in the frequencies will mean new neighboring RF channels.
- This may improve or exacerbate the interference situation.
- New intermodulation products may be created.

Q: What Can I Do About It?**A:**

- Find out which FCC category your service falls under (A, B, C, D).
- Your category tells you which frequencies need to change and when.
- Do a system inventory of your hardware.
- For radios and repeaters, contact the manufacturer.
- Determine how your BDAs can or cannot be used after re-banding.


List of options for the re-banding process as well as Powerwave BDA product options:

Type	Previous Intended Band	Future Service Band	Application	Action	Comment
18 MHz Fixed Bandpass BDA	806-824	806-815	Public Safety	Still Usable	The product is still usable without any modifications. It is recommended to either change duplexers to avoid Nextel interference or purchase a flexible bandpass BDA.
15 MHz Fixed Bandpass BDA	806-821	806-815	Public Safety	Still Usable	The product is still usable without any modifications. It is recommended to either change duplexers to avoid Nextel interference or purchase a flexible bandpass BDA.
15 MHz Fixed Bandpass BDA	806-821	817-824	Nextel	Replace	Replace the duplexers or purchase a flexible bandpass BDA.
5 MHz Fixed Bandpass BDA	806-821	806-815	Public Safety	Confirm Frequency	If the previous 5 MHz fell into the 809-815 bands, the product is usable. Otherwise replace the duplexers or purchase a flexible bandpass BDA.
3 MHz Fixed Bandpass BDA	821-824	806-809	Public Safety	Replace	Replace the duplexers or purchase a flexible bandpass BDA.
Powerwave Products					
ALR 4600 Series, Flexible Bandpass 15/18 MHz	806-824	806-824	Public Safety/Nextel	Still Usable	Due to the product's programmable passband, it is still usable for both applications.
AR 4600 Series, Flexible Bandpass 18 MHz	806-824	806-824	Public Safety/Nextel	Still Usable	Due to the product's programmable passband, it is still usable for both applications.

Powerwave Services:

- Investigate the impact of re-banding on system performance
- Evaluate how the new interferers will effect system performance
- Evaluate the possible new intermodulation products and their effect on system performance
- Evaluate the products and determine what needs to stay, what needs to be modified and what needs to change
- Technical coordination with Nextel