

# VOICE & VISION

Special Edition

A Quarterly Newsletter Dedicated to Audio & Video Issues for Houses of Worship in the Mid-Atlantic

The Give and Take of the FCC

Tech for a Day

Maintenance Service Plans

## Straight Talk about how the New F.C.C Rules will affect your Wireless Microphones

As promised, we are back to update you on exactly how the new FCC guidelines will affect you if you are currently using wireless microphones as part of your A/V system. The good news is that there isn't too much bad news.

**Quick Background:** On June 12, 2009 new rules will go into effect which mandate that all television stations broadcast their signals over the air in digital format. This will free up lots of space but has also created a lot of anxiety for the manufacturers and end users of wireless devices who make use of the "white space" frequencies in between the TV channels. In November, 2008 the FCC approved the order which allocated the frequencies available for new and existing devices.

**The New Rule:** The FCC has made the 700 megaHertz range available exclusively for new digital services such as cell phones, broadband WiFi and certain channels dedicated to Public Safety. Wireless microphones and other white space devices will not be permitted to operate in this range for much longer (the exact date is still pending). Effective immediately, the bandwidths dedicated to Public Safety broadcasts are off limits. Please see the chart below for exact frequencies.

To figure out if your wireless system is affected, you first need to find out what frequency it is using. This information may be on the receiver, the microphone or in the manual. If you find that they are working in the 700 MHz spectrum, it would be prudent to start budgeting for their replacement now. If you bought your system in the last year or so, you are probably fine because the major manufacturers such as Shure stopped using those channels as soon as they heard there might be a problem.

To figure out if your wireless system is affected, you first need to find out what frequency it is using. This information may be on the receiver, the microphone or in the manual. If you find that they are working in the 700 MHz spectrum, it would be prudent to start budgeting for their replacement now. If you bought your system in the last year or so, you are probably fine because the major manufacturers such as Shure stopped using those channels as soon as they heard there might be a problem.

TV Channels	VHF		UHF																	
	2 - 13	14 - 51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Frequency MHz	54 - 216	470 - 698	698 - 704	704 - 710	710 - 716	716 - 722	722 - 728	728 - 734	734 - 740	740 - 746	746 - 752	752 - 758	758 - 764	764 - 770	770 - 776	776 - 782	782 - 788	788 - 794	794 - 800	800 - 806
Use	OK for Wireless Mics		The Digital Dividend - Auctioned off to AT&T, Verizon and others for exclusive use for new Digital Devices										Public Safety		Auctioned for New Devices			Public Safety		

How are the remaining frequencies going to be managed? If your mics are using frequencies below 698 MHz, you should be able to continue using the white spaces between TV Channels 2 and 51, but here is where it starts getting tricky. Other white space devices will soon be competing for those frequencies and it could get pretty crowded and start causing interference. The FCC has devised several schemes to prevent toes from being stepped on.

**Protected Channels:** Between channels 14 and 20, wireless microphones will be permitted to operate on the frequencies immediately adjacent to broadcast TV channels. Other TV band white space devices will not be permitted. In major cities with more TV stations (like Washington, DC) two additional channels will be allocated.

**The Database:** Sites with significant microphone use at well defined times and locations will be able to register their frequencies in a database (not yet established) and receive the same protection as a TV or Public Safety channel.

**Geo-location:** All new white space devices will be required to incorporate geo-location technology which will be able to establish its whereabouts and then automatically avoid any frequencies registered in The Database.

**Spectrum Sensing:** The FCC will require all new white space devices to be able to detect and then avoid any nearby signals. This technology has not been perfected but is considered a valuable second layer of protection.

Call us at 1-800-668-4988 or visit us on the web at [www.audiovideogroup.com](http://www.audiovideogroup.com)

Introducing AVG's

## Tech for a Day

(or half day)

AVG has introduced a new service for all our new and existing clients. If you have major or minor issues with your system that need professional attention, consider hiring a tech for a day (or half day) at a fixed rate to address all your concerns.

Adjustments ▲ Tuning ▲ Troubleshooting ▲ Cabling  
▲ Training ▲ Updating Diagrams  
▲ Projector Maintenance ▲ System Evaluation  
▲ Routine Maintenance

Half Day Rate (4 hours) - \$350.00

Full Day Rate (8 hours) - \$680.00

*Rate includes up to 1 hour of round trip travel as well as minor cables, connectors, materials and job supplies.*

Regardless of the size of your system, preventive maintenance is going to be a money saver and will help avoid those A/V Emergencies that everyone fears.

Consider one of AVG's  
Structured Maintenance

Packages which schedules our trained technicians for regular visits to perform a thorough review and cleaning of all your components. This is the time to catch small issues before they become big problems. AVG can perform these services on an as-needed basis or, for larger systems, it is an excellent idea to enter into a service contract which, not only provides scheduled maintenance, but also gives you priority scheduling on your service calls should you need us in a hurry.

Call us at 800-668-4988 for more information.



---

### Wireless Microphones and the FCC (continued)

**No longer uncertain:** It appears that the Fat Lady has sung and that the way forward is clear as mud. The February 18th digital conversion deadline has been extended to June, the user Database has not yet been established and the spectrum scanning technology is completely unproven and might be dropped from the program. The FCC has yet to test (or approve) a single new white space device and it is anyone's guess as to when they might even begin to enter the marketplace. The audio industry has lobbied and fought hard to maintain some protection for our wireless mic users—and considering we were up against telecommunication giants with almost twenty billion dollars to spend, we did pretty well.

**Course of Action:** Audio-Video Group is committed to helping our customers through this period of transition. Our recommendation is that you identify the wireless channels you are using. Start thinking about replacing your system with something with frequency agility which will allow you to assign the channels. If your system operates in the 700MHz range, this purchase is probably going to happen sooner than you'd like. Please feel free to call us if we can help.

**More Information:** As you can imagine, this issue is far more complex and widespread than just the audio industry and wireless microphones. If it hadn't been for companies like Shure stepping up and making a strong case for us end users, we might have lost a lot more. If you would like to learn more we recommend a visit to [www.shure.com/whitespaces](http://www.shure.com/whitespaces) or simply do a web search for, "FCC and White Space" and you will get more information (some of it bad) than you can stand. Stay tuned to future editions of *Voice & Vision* for as the new policies come into effect. We'll keep you updated.