

SHURE "White Spaces" Information

NEW! Wireless Update: Final FCC Ruling Includes Protection for Wireless Microphones

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FCC Releases Full Text of 'White Spaces' Decision

On November 14, 2008, the FCC released the full text of its Second Report and Order approving the use of the "white spaces" – the TV channels that are not actually occupied by a broadcast station – to deliver wireless broadband internet and other services to consumer wireless devices. This 130-page document provides details of the technical, operational, and regulatory requirements that white space devices will be subject to, including the protections aimed at safeguarding wireless microphones from interference.

This ruling does not address the issue of wireless microphone operations in the 700 MHz band. The FCC had proposed earlier that wireless microphone operations in the 700 MHz band should cease in February 2009, but a final transition date has not been announced.

Here is a summary of what we have learned from the white spaces ruling:

- Wireless microphones and personal monitors may continue to operate in the UHF television band between TV channels 14-51 (470-698 MHz), and in the VHF television band between TV channels 7-13 (174-216 MHz).
- Portable white space devices could include mobile phones and wireless laptop computers that are carried or worn by the user, while fixed devices could deliver wireless broadband internet service to homes and businesses.
- White space devices are allowed to go on sale on February 18, 2009, but in reality, it will probably be much later. Before new devices can be marketed, they will have to pass FCC certification tests, the results of which will be open for public review and comment. Based on this scenario, we do not expect devices to go on sale until the end of 2009.
- All white space devices are required to avoid transmitting on TV channels being used by TV stations, wireless microphones, and other users. Before transmitting, the device must determine its precise location and consult a database of TV channels that are safe to use. If the device is within one kilometer of a location where wireless microphones are known to be in use, the device must move to a different channel or cease transmitting. Devices must check the database at least once per day, whenever they are powered on, and whenever their location changes.
- Wireless microphone users may register the location, time, and TV channels used for a program or event in the database. One-time, recurring, and permanent wireless microphone use will be accommodated. The FCC will solicit proposals from entities interested in creating and administering the database. According to the FCC ruling, "Sites with significant wireless microphone use at well defined times and locations may be registered in the database."
- As a secondary protection measure, all devices must also utilize spectrum sensing to detect and avoid TV stations, wireless microphones, and other users of the spectrum, whether or not they are registered in the database. Spectrum sensing technology is still under development, but as it continues to mature it will provide an important secondary layer of protection against interference.

- Only fixed white space devices may operate in channels 2-20, and they may not use adjacent channels. These “open” channels will effectively be protected from white space devices and should therefore be especially desirable for general wireless microphone operation.

- In the 13 major metropolitan areas where Public Safety agencies are permitted to use selected TV channels between 14 and 20, the FCC will designate two additional protected channels in the range between 21 and 51. These will be the first channels above and below channel 37 that are not assigned to a TV broadcast station.

Users who need to purchase wireless microphones or personal monitors can choose any current Shure wireless product (PG, PGX, SLX, ULX, UHF-R, PSM200, PSM400, PSM600, PSM700) and use it immediately with confidence that it will continue to serve them into the future.