

# FCC Bans Wireless Microphones from Parts of the Spectrum

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The spectrum already vacated by television broadcasters in their switch to digital TV now is being cleared of low-power equipment users, mostly wireless microphones, by an order from the Federal Communications Commission. "In this Report and Order, we establish a firm deadline of June 12, 2010 (one year from the end of the DTV transition) for wireless microphones and other low-power auxiliary stations to cease operation in the 700 MHz Band," the FCC order says.

The spectrum is being freed up for 4G broadband communications being developed by commercial carriers and for public safety communications. The order also allows immediately halting any low power use that interferes with licensed operation in that band, or within 60 days of notice by a licensee that the spectrum is being put into use.

Wireless microphones still will be allowed to operate in 11 other RF bands. The order is part of a major reallocation of RF spectrum due to the development of digital technology. Switching television broadcasts from analog to digital signals allowed the government to free up the 700 MHz band for development of new broadband communications networks. Licenses for three blocks of reclaimed radio frequency spectrum raised more than \$19 billion in a 2008 auction. A 10 MHz swath of that band has been set aside for a national public safety network. Still unallocated is a 10 MHz block of spectrum adjacent to the public safety channels that failed to sell at the 2008 auction.

Public safety organizations are calling for Congress to allocate that block for additional public safety bandwidth, but it could also be offered for sale again to a commercial licensee. The FCC is expected to make a recommendation for handling this spectrum in a National Broadband Plan due to be delivered to Congress within the next two months.

The order clearing low-power users from the band was expected. The commission imposed a freeze on Aug. 21 on the filing of new license applications in any 700 MHz band frequencies after the end of the DTV transition. It also imposed a freeze on granting any request for equipment authorization of low-power auxiliary stations that would operate in the band.

The order prohibits "the manufacture, import, sale, lease, offer for sale or lease, or shipment of wireless microphones and other low-power auxiliary stations intended for use in the 700 MHz Band in the United States," and requires that all such devices cease operating in that band by June 12.

The equipment is widely used in musical and theatrical performances and

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in sporting events. The microphones typically have operated in the unused “white space” of the bands where they are authorized, between channels or on frequencies that are not being used locally by licensed users. Because of their low power and ability to change frequencies, they usually operate without interfering with licensed signals.

“As a general matter, wireless microphones operate in a relatively narrow bandwidth and may choose a frequency from multiple vacant channels available for operation,” the FCC order states. The 700 MHz band was one of 12 in which the wireless microphones were allowed to operate, and the remaining 11 bands still are open for this use. The FCC plans an aggressive public outreach program to make equipment buyers aware of the new restrictions and will require makers and vendors of the equipment to disclose the conditions.

“We will work with organizations whose memberships include wireless microphone users so that they help us inform all affected users of our decisions in this Report and Order, particularly the need to clear the 700 MHz band,” the order states. The commission also will make information available through its call center and its Web site at [www.fcc.gov/cgb/wirelessmicrophones](http://www.fcc.gov/cgb/wirelessmicrophones) [1] on which wireless microphones operate in the prohibited band, and what options are available. Some microphones can be retuned to operate at other frequencies.

The one-year delay in banning the legacy equipment from the 700 MHz band was a compromise. Some users argued that interference in the band is not a significant concern. But new developers wanted an immediate ban. AT&T, one of the new licensees in the band, had told the commission that delaying the ban could slow the introduction of new networks, raising the possibility that it would run afoul of build-out requirements in its license.

Verizon Wireless told the commission that it intends to launch commercial service using Long Term Evolution technology in the 700 MHz band in 30 cities by mid-2010. CTIA, the wireless communications industry association, preferred a ban on the low-power equipment at the end of the DTV transition but agreed to support an extension if there was a firm cut-off date no later than one year after the transition.

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