

## Operation of Wireless Microphones

**As of June 12, 2010, all operations of wireless microphones (and similar devices certified as “low power auxiliary stations”) operating in frequencies between 698 and 806 MHz (the 700 MHz Band) is prohibited, including use in theaters, churches, schools, conference centers, theme parks and by musicians.**

**Use of wireless microphones (and similar devices, including microphones with cords) that operate outside of the 700 MHz Band may continue.**

### Background

Prior to June 12, 2010, certain wireless microphones (and similar devices) operated in frequencies that are now reserved for public safety. When this equipment was first designed, the frequencies they used were in between the frequencies that television stations used to broadcast television programs. With the completion of the digital television (DTV) transition on June 12, 2009, television stations no longer use the frequencies between 698 and 806 MHz (the 700 MHz Band) for broadcast. These frequencies are now being used by public safety entities (such as police, fire and emergency services) and by commercial providers of wireless services (such as wireless broadband services).

The wireless microphones (and similar devices) that operate in the old TV broadcast channels can cause harmful interference to the new services on those channels. Therefore, use of wireless microphones (and similar devices) operating on any of the frequencies in the 700 MHz Band – by both licensed users (under Part 74) and unlicensed users – is prohibited.

### What is a ‘Similar Device’ to a Wireless Microphone?

Equipment that is a “similar device” to a wireless microphone is also known as equipment for a “low power auxiliary station.” Typically these devices can transmit over distances of 100 meters. Examples devices include wireless intercoms, wireless in-ear monitors (“IEM”), wireless audio instrument links and wireless cueing equipment (aka “IFB”).

### Unlicensed and Licensed Operation of Wireless Microphones

Wireless microphones (and similar devices) – both within the 700 MHz Band and in other frequency bands – are operated by unlicensed users (under Part 15) and by licensed users (under Part 74). As of June 12, 2010, operations of all 700 MHz Band wireless microphones (and similar devices) – whether unlicensed or licensed – is prohibited.

### Unlicensed Operations

All users of wireless microphones (and similar devices) may operate the equipment on an unlicensed basis, subject to certain restrictions, the device (1) may not cause harmful interference; (2) must not be operated at a power level in excess of 50 milliwatts; and (3) must be operated in a way that accepts any interference that may be received. For most users – such as theaters, churches, schools, conference centers, theme parks and musicians – the use of this device is unlicensed.

*Most wireless microphones are designed to operate with 50 milliwatts or less. Users are advised to consult their owner's manual or other materials provided by the manufacturer or distributor, to determine the output power of their wireless microphone.*

## **Licensed Operations**

Some users are eligible to obtain a license to operate these devices. These include specified entities – such as licensees of AM, FM or TV stations, broadcast networks and cable television system operators – set forth in the FCC's rules (pursuant to Part 74). These entities, which can operate with fewer restrictions e.g., higher power levels, with interference protections) must first obtain a license before operating under the rules permitted for licensed use.

## **Part 74 Licensees**

Under the Commission's Part 74 rules, certain licensees were permitted to operate their wireless microphones (or similar devices) in the 700 MHz Band as well as in other specified bands. After June 12, 2010, Part 74 licensees are no longer permitted to operate in the 700 MHz Band. Part 74 licensees may continue to operate in the other, non-700 MHz Bands identified in their licenses, including in the core TV bands (i.e. channels 2-51, excluding channel 37), without further Commission action. For more information about wireless microphone rules, please go to [www.fcc.gov/encyclopedia/wireless-microphones](http://www.fcc.gov/encyclopedia/wireless-microphones).

## **Determining if Your Equipment Is Operating in the 700 MHz Band**

Some wireless microphones (and similar devices) are marked with the frequency the device uses. If information on the device indicates that it operates on frequencies between 698 and 806 MHz then the device uses the 700 MHz Band and may NOT be used.

In addition, the FCC's website provides information about which wireless microphones currently operate in the 700 MHz Band at [www.fcc.gov/encyclopedia/wireless-microphones](http://www.fcc.gov/encyclopedia/wireless-microphones). Consumers may look up equipment by the manufacturer. The website also includes information about how to contact manufacturers for more detailed information about wireless microphone equipment. In addition, interested parties may call the FCC at 1-888-CALL-FCC (1-888-225-5322) for assistance.

Consumers may also contact equipment manufacturers for more information about their equipment. Contact information for the equipment manufacturers is available at [www.fcc.gov/encyclopedia/wireless-microphones-manufacturers-equipment-list](http://www.fcc.gov/encyclopedia/wireless-microphones-manufacturers-equipment-list).

## **Consequences of Using a 700 MHz Band Wireless Microphone**

Using the 700 MHz Band for a wireless microphone (or a similar device) after June 12, 2010 could be extremely dangerous and could even be life threatening. Police and fire departments, and other public safety groups, use frequencies in the 700 MHz Band. Interference from wireless microphones can affect the ability of public safety groups to receive information over the air and respond to emergencies. Harmful interference to these communications could put you or public safety personnel in grave danger. In addition, use of your microphone can cause unlawful interference to consumer services provided using the 700 MHz Band.

Operation of wireless microphones in violation of these rules may subject the user to substantial monetary forfeitures and/or criminal penalties, including imprisonment. Because any operation in violation of these rules creates a danger of interference to important radio communications services



and may subject the operator to severe penalties, this advisory emphasizes the importance of complying strictly with these legal requirements.

## Reporting Interference on Devices Operating on Licensed 700 MHz Spectrum

**Public Safety Licensees:** If you are a Public Safety Licensee you may report interference to your 700 MHz device by contacting the FCC Operations Center 24 hours a day, seven days a week, at (202) 418-1122, or [FCCOPCenter@fcc.gov](mailto:FCCOPCenter@fcc.gov).

**Consumers:** If you are a consumer that is using a device that operates on **licensed 700 MHz spectrum**, you may report interference to the FCC at [www.fcc.gov/complaints](http://www.fcc.gov/complaints).

- Click on “Wireless Telephone” for the type of complaint, then click “next” at the bottom of the page.
- Click on “Interference to Non-Emergency Devices” for the complaint category, then click “Next” at the bottom of the page.
- Click on “Continue to Online Form.”
- Complete the information on the form.

## Filing a Complaint

Consumers may file a complaint by contacting the FCC’s Consumer Center by calling 1-888-CALL-FCC (1-888-225-5322) voice or 1-888-TELL-FCC (1-888-835-5322) TTY; faxing 1-866-418-0232; or writing to:

Federal Communications Commission  
Consumer and Governmental Affairs Bureau  
Consumer Inquiries and Complaints Division  
445 12th Street, S.W.  
Washington, DC 20554

## For More Information

For information about other communications issues, visit the FCC’s Consumer website at [www.fcc.gov/consumers](http://www.fcc.gov/consumers), or contact the FCC’s Consumer Center using the information provided under Filing a Complaint.

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*For this or any other consumer publication in an accessible format (electronic ASCII text, Braille, large print or audio), please write or call us at the address or phone number below, or send an email to [FCC504@fcc.gov](mailto:FCC504@fcc.gov).*

*This document is for consumer education purposes only and is not intended to affect any proceedings or cases involving this subject matter or related issues.*

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