

**Accessible**

Learning Services

**FM System Accommodation Guide**

# FM Systems: What are they and how do they work?

A Frequency Modulated (FM) system is a wireless communication device used to support persons who are heard of hearing. It consists of a transmitter, also referred to as a microphone or mic, and a receiver. The transmitter acts like a radio transmitter, which picks up the signal, usually the speech of the person using the device. The receiver picks up that signal and delivers it to the listener. The receiver may be attached to a hearing aid, be an ear-level "stand alone" device, or be a speaker that is in the listening environment.

Using an FM system enhances what is referred to as "signal-to- noise" ratio, or the amount of signal, generally speech, that can be heard in relation to the competing information in the listening environment.

Poor signal to noise ratio contributes to poor speech intelligibility, or speech understanding, which is particularly problematic for a listener who has a hearing loss, auditory processing disorder, or certain types of conditions that place them in a "high risk" category, such as traumatic brain injury. This enhances both the quality and clarity of the speech signal, making it easier to hear the message.

# Tips for Using an FM System:

* Speak in a normal tone of voice with the microphone approximately 14 cm from your mouth. Your voice will be amplified, but remember that no hearing aid will allow your student to hear exactly as they would if he/she had no hearing loss.
* A personal hearing aid works best within a 2 to 3 meter radius. Beyond that, other background noise will interfere. It is important to be aware of this range for direct instruction and group activities.
* An FM system will usually transmit for a distance of approximately 45 feet. The clarity of the signal and the amount of information received depend on the student's loss and ability to process the information he or she hears. The student may need to have a clear view of the speaker's mouth to receive all of the information. The larger classroom / lab environments or outdoors may be difficult listening environments even though the FM system has an extended range.
* For in class discussions pass the transmitter to the speaker or, if working in small groups place it in a central location (e.g. the middle of the table).
* It is beneficial if the instructor repeats questions asked by classmates so that the student wearing the FM system will be aware of the discussion topic.
* Remember to take the transmitter microphone off when having private conversations or situations that the student should not be privy to.

# Need Help?

Faculty can contact the students Accessibility Counsellor (name and contact information can be found on the students CAAP) with any questions or concerns. If you are not sure who to contact then you can call 905-575-2211 or email als@mohawkcollege.ca, Accessible Learning Services directly.