**Introduction**

A microphone is a device that captures audio by converting sound waves into an electrical signal. The signal can be amplified for public address purposes or converted to a digital signal which can be processed by a computer or other digital audio device.

**Terminology**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Wired Microphone</td>
<td>Wired microphones are tethered to the sound equipment with a cable. The advantages of using a wired mic are: Reliability, easy to setup and use, no batteries required and no loss of signal. Disadvantages include: Limited range/mobility, wiring increases tripping hazards and wiring can make staging unpresentable.</td>
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<tr>
<td>Wireless Microphone</td>
<td>Wireless microphones connect to the sound equipment with radio signals eliminating the need for a cable connection. The advantages of using a wireless mic are: Better mobility with the option to move freely about the stage, easy to setup, reduction of tripping hazards and makes the stage look presentable. Disadvantages include: Signal disruption can occur, batteries need replacing and some models may produce a lower quality sound compared to a wired unit.</td>
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<tr>
<td>Handheld/Lavalier</td>
<td>Determines the style of microphone. Handheld is used by the operator holding the microphone or using a Microphone Stand. Lavalier is a small microphone that typically attaches to clothing freeing the operator’s hands.</td>
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<tr>
<td>XLR</td>
<td>Most commonly used connector style to connect a microphone to an audio device.</td>
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<tr>
<td>Feedback</td>
<td>Microphone feedback is a high-pitched sound loop that occurs when a microphone is placed too near an audio output device such as a PA speaker.</td>
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<tr>
<td>Mic Level</td>
<td>The amount of microphone signal being amplified by the audio processor. Mic level is typically adjusted by increasing or decreasing the amount of signal being sent from the microphone.</td>
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<tr>
<td>Mic Stand</td>
<td>A free-standing mount for a microphone placed on a floor, table or podium. It allows the mic to be positioned without requiring a person to hold it.</td>
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</tbody>
</table>
### What’s in the bag (wired)

- ✓ Microphone  
- ✓ Connection Cable (Optional)  
- ✓ Carrying Case  

### What’s in the bag (wireless)

- ✓ Microphone  
- ✓ Wireless Receiver  
- ✓ Receiver Power Supply  
- ✓ Batteries (for mic)  
- ✓ Receiver Antenna  

### Care

- ✓ Check microphone mesh for buildup of particles. Clean mesh using a soft dry brush while holding the mic mesh pointing down.  
- ✓ Microphones will be damaged if dropped on a hard surface. Secure mics properly.  

### Get familiar with these parts of the equipment

<table>
<thead>
<tr>
<th>Mic level adjustment knob</th>
<th>Connection cables for mic to PA/Amplifier</th>
<th>Battery installation for wireless equipment</th>
</tr>
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</table>

### Basic Operation

**Step 1** While all equipment is powered OFF connect microphone to PA using cable or wireless option.  
**Step 2** Ensure mic level input and PA volume level output are adjusted to minimal or 0 setting.  
**Step 3** Turn PA and (wireless mic receiver if used) power to ON.  
**Step 4** Adjust PA volume output level to 3/4 power.  
**Step 5** Adjust mic level input to 1/2 power.  
**Step 6** Speak into mic to check sound level and adjust PA output volume and mic input levels accordingly.  

### Operating Tips

- ✓ Always test mic levels by speaking directly into the mic with your normal speaking voice volume. Referred to as a Sound Check.  
- ✓ To avoid feedback do not place mic directly in front of PA speaker.  
- ✓ Mic placement should be no more than 2 hand widths away from the person speaking.
Advanced Features/Instructions

✓ Wireless microphones will have an On/Off switch on the mic as well as on the receiver.
✓ Wireless microphones may have a Mute button on the handheld mic.
✓ Wireless microphones will typically allow frequency adjustments to obtain a clear signal.

Advanced features depend on the make and model of the equipment and may not be available on all units. Consult the accompanying user manual for the specific make and model of microphone you are using.

Troubleshooting

No sound from microphone
Check all connections. Ensure all components are powered ON. Ensure mic level and volume level are adjusted for desired output. If mic has a mute button ensure it is disengaged. Check and replace dead batteries if required (wireless).

Low volume
Adjust mic level and PA volume levels. Move mic closer to person speaking.

Feedback
Move microphone away from PA speaker. Shorten the distance between the mic and person speaking.

Training

If you would like to book a training session, please call the Audiovisual Technician at the campus nearest you to setup an appointment.

<table>
<thead>
<tr>
<th>Campus</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>Cloverdale</td>
<td>(604)598-6041</td>
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<tr>
<td>Langley</td>
<td>(604)599-3209</td>
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<tr>
<td>Richmond</td>
<td>(604) 599-3350</td>
</tr>
<tr>
<td>Surrey</td>
<td>(604) 599-2216</td>
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C.Pfahl
June 2017