



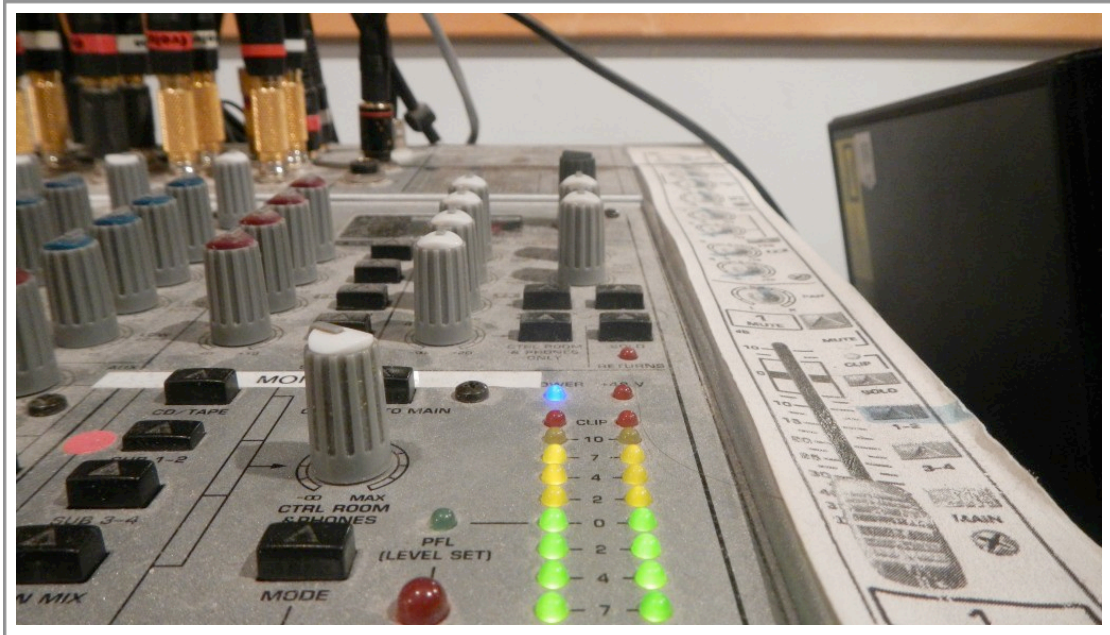
Production Workshop

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Levels and Mic Technique

Level Meter



For digitally recording through an open channel mixer you must gauge and adjust the input level.

When recording. If your levels are set too low it will cause noise floor where the background noise blends with what you are recording, making it difficult to hear.

If your levels exceed the input limit or are too high it will result in distortion.

This is usually indicated with a red light on the mixer levels.

To make sure you have a good and consistent level during a recording always monitor the levels.

A good input level should be between -12 and -6 decibel or db on the level meter. This is usually indicated by green to yellow colourations of the level.

Remember the level of the mixer signal is NOT the same as the volume. Don't use the monitor and headphones as a way to gauge a proper level.

Mic technique



Studio Microphones

Studio microphones have a “cardioid” pick up pattern. That means they DO NOT pick up sounds behind or to the side of the microphone. For this reason positioning is very important, especially for guests who may not have experience with microphones. Don’t be afraid to carefully set up microphones before you start it will greatly improve your final product.

The Number one problem that volunteers have with equipment is with the microphones. Most problems stem from some simple mistakes and misunderstandings.

Why Headphones when you use microphones?



Remember that you must always wear headphones when using the mic. There is no exception to this if you wish to produce a professional sounding recording. Headphones are critical because a microphone does not pick up sound the same way as a human ear.

There are a multitude of psychoacoustic effects that modify how we perceive everyday sounds, and these psychological effects are not replicated by microphones.

For this reason we need headphones to hear exactly what the microphone is picking up so that we can adjust our technique to compensate for the microphones shortcomings.

Basic Mic Technique



1. Assume a comfortable sitting posture.
2. Position your microphone directly in front of your mouth no more than the width of your fist away from your lips. You may place the mic closer but not in contact with your lips. The distance you set will affect how clearly the mic will pick up your voice.
3. Turn on the microphones by pressing the mic control button underneath the production table. When the microphone is on it will be indicated by a red light that comes on at the back of the mixer.
4. Put on your headphones. Set the volume of your headphones high enough so that the only way you are hearing your voice is through the phones as opposed to reflections off the walls or directly through your skull. Be careful not to set the volume so high that you will damage your hearing.

5. From this point you can adjust the microphones level on the mixer. Use the level meter on the mixer or sound editing software (Soundforge, Reaper, Audition) to gauge the correct level.

*If you have trouble with sibilants and plosives like “hissing s” and “popping p’s” very slightly tilt the microphone away from your face and talk across the mic, not into it. Remember that our microphones are directional and if you turn your head away from the mic this will drastically affect how well you can be heard.

Often times your guests won’t know proper microphone techniques. It’s critically important that you inform them of mic technique; remind them not to turn away from the mic and to speak clearly.

In general you want to find an ideal level for your mic that allows your listeners to hear clearly but does not pick up background noise in the studio. You will want to experiment with the microphones to listen for this and learn how to correct it.

Playback Devices

VIDEO: [Playback Devices](#)

Digital



Digital files are played through the PC channel on the production mixer.

Several volunteers keep digital content in their Member Files on the production computer.

Use the USB connector to transfer content from recording and USB devices.

Use the WinAmp player for playback. To load, just drag and drop the audio files into the playlist area.

Now double click on the song you want to play.

Bring up the PC channel fader to hear playback.

CD Players



The CD player operates on the same principles as a home unit.

Bring up the CD 1 or CD 2 channel faders and manual press play on the respective CD deck to hear playback.

Cassette Deck



The On air cassette operates on the same principals as a regular home model.

Bring up the cassette channel fader and manual press play on Cassette Deck to hear playback.

Turntables



Turntables play vinyl records varying in size from 12 inch LPs to 7 inch 45s.

Most turntables have two speed settings 45 and 33 and a third revolutions per minute or RPMs.

Set the speed to the correct setting. This will usually be marked on the record or its packaging.

Now gently place the tone arm which contains the pick-up cartridge and stylus or needle on the record in the correct groove position.

Bring up the faders for channels TT1 L and TT1 R. Now press play on the turntable.

Remember that our turntables are expensive and delicate machines, so please treat them with care.

Telephone Hybrid



A telephone hybrid is the device that packages all the functions needed to connect telephone lines to studio audio systems, providing electrical and physical interface between the Telco lines and studio equipment.

- Using the Production Hybrid Phone Hybrid
- Connect with your caller.
- Once you have them on the line put the receiver down. Don't hang up.
- Turn the Send and Receive threshold and level knobs to 7.
- Put on your headphones and turn on your microphone. You are now able to speak to your caller through the microphone and listen to them through your headphones.
- Adjust the Send and Receive levels until you get a good level and your guest can hear you clearly.
- Make sure you monitor the recording levels on your recording software (section 4).

It's important to note that good quality telephone conversations for broadcast are largely dependent on the quality of the phone line. Encourage your caller to use a landline if possible. If they must use a cellphone encourage them to be in an area with good reception.

Sound Editing Software Tutorials

The Production Studio contains many editing software programs that allow you to record and edit sound files through the production mixer. You may use Audacity, Sound Forge and Reaper to record, edit, mix and restore audio. Most of the programs are compatible with most audio file formats and capable of making precise restorative changes and alterations.

Introduction Tutorials on the Software Programs are linked below.

- [Sound Forge](#)
- [Reaper](#)
- [Audacity](#)

Trouble Shooting

Sometimes equipment breaks or malfunctions. Remember that our studios are being used by over one hundred different people every week and that's more wear and tear than anywhere else in the city! Because of this it is inevitable that from time to time there will be problems with our equipment.

Obviously it can be very frustrating if equipment breaks during your show. When something breaks down or simply doesn't want to work, just relax and continue programming to the best of your abilities. Do not talk about the problem on the air. Listeners aren't interested in our internal operation and complaining or whining about equipment failure isn't fun to listen to.

DO NOT TRY to FIX THE PROBLEM YOURSELF. Let staff deal with it. Please report broken or malfunctioning equipment to the staff **IMMEDIATELY** and fill out a Fault Report if staff isn't around. If you can't find a solution to your problem and it prevents you from broadcasting, call the emergency pager.