

Sound Mixer

A sound mixer is useful for

- controlling levels of input devices like microphones, CD players etc
- merging different sounds together, like a voice and a phone call, or a voice and music.

But you don't necessarily need to have a mixer – some microphones can feed directly into a PC via a soundcard or USB connection.



- Generally mixers work from left to right. Input channels (microphones, CD players etc) are on the left and the master fader(s) are on the far right.
- You may also find the monitor control on the right hand side. This area controls what you hear in the studio speakers and its volume level. Monitor volume does not control the level going into the recording device.
- By understanding one input channel you can begin to understand them all. For example the input channels shown in the mixer in this document follow this top-to-bottom layout:
 - Microphone / Line input connectors. This allows you to plug in a XLR/Cannon microphone cable or a 1/4" jack line cable.
 - Low cut: an equaliser button that rolls-off bass frequencies. This can be useful in removing air-conditioning rumble picked up by microphones.
 - Gain: This knob allows you to set the "broad" input level. Once you have set the general level you can use the fader at the bottom of the channel to tweak the input level (increasing/decreasing the volume).
 - Compressor: This knob allows you to compress or squash the audio signal. This can be useful if you have a very dynamic input (e.g. a vocal that is soft and then LOUD). As you turn the knob clockwise you will hear the input getting more and more squashed.
 - Three band equaliser: These knobs allow you to adjust the high, mid and bass frequencies. Their default position is set to 12 o'clock. Turn the knob to the left and you will reduce frequencies, turn the knob to the right and you will increase frequencies.
 - Aux sends: These two knobs allow you to send the same audio signal to an outboard device like a reverb unit. The knob acts the same as the volume fader below it (i.e. it controls the amount of level going to the outboard device).

Some Aux sends have a pre/post button. If set to pre (fader), then the input is sent to the outboard device regardless of where the channel fader is positioned. If set to post (fader), the amount of input sent to the outboard device is controlled by the channel fader. So if the fader is completely down audio will not be fed to the outboard device.

- Pan / Balance: A mono input channel will have a pan knob. This adjusts whether the sound will be more on the left or right channel or in the middle. A stereo input channel will have a balance knob which will allow you adjust whether you have more sound on the left or right channel.

- Mute: This button will cut the audio from the main mix. There may also be a solo button, which allows you to hear just this channel on your studio monitors (without affecting what is being sent to your recording device).

- Fader. The fader ultimately how controls how much volume from this channel goes into your mix. Generally there is a line or 0 mark on the fader which is the optimum point for the fader to be set at. It is a point on the fader which allows you to either increase or decrease the volume.

To set a microphone level on a mixing desk: position the fader at the optimum point, adjust the Gain to get a general ball-park level and then tweak using the channel fader.

- On the bottom right-hand side of the mixer you will often find a fader that is the master output (or main mix). This fader controls the overall level leaving the mixer and going to your recording device. Generally this fader should be set to the optimum point (a line or 0 mark on the fader).

- Above this master fader you may find an area that controls what you can hear on your studio monitors or headphones. This may have source buttons and a volume knob.

Note: altering your monitor volume will not affect the volume level going to your recording device.