

# DAW Functions



**Audio Recording:** The basic function of any DAW is record audio. This can be done in a single pass, or by “punching in” exactly where a trouble spot began. DAWs can handle dozens to hundreds of audio tracks without causing too much strain on most systems. Where it used to take highly-skilled professionals a lot of time to physically cut and join tapes, now anyone can press a single key and they’ve hit the ground running.

**Audio Editing:** Audio clips can be cut, copied and pasted. They can be nudged around with the accuracy of a single sample. Audio levels can be raised or lowered at any point in the clip. Fade ins, outs, and crossfades are common. Coupled with extra tools, audio clips can be mostly relieved of distortion, pops, clicks, noise, and other artifacts.

**Audio Routing/Mixing:** DAWs generally have an edit window for recording, editing, and arranging clips; the other essential window is the mixer. It usually resembles a hardware mixer, with a fader to mix levels, input and output selection, pan, mute, and solo. The main difference is it’ll have spots to insert more effects and send audio to more places (to a bus) than are usually available on a hardware mixer (and you don’t have to actually buy gear or fuss with patch cables).

**Applying Audio Effects:** Audio effects can alter dynamics, time, placement, filter, pitch, and just about anything else you can think to do with audio. They are used to alter the sound to whatever is needed for a given project. The most common effects are compression to level out audio, EQ to fix undesirable frequencies, and spatial/panning effects to place audio in different sonic locations.

**Automating Effects:** Effects don’t have to be static, nor do you have to physically move a knob during a performance. Automation can alter any parameter of any effect over time. To write automation, you can either physically move a controller during playback/performance, use the mouse to create and move points, or employ the small array of drawing tools most DAWs make available.

**Working with MIDI Data:** Now we get to the sequencing part. DAWs read MIDI data, which is usually notes and their accompanying dynamics/time signatures/tempo/pedal states, etc . . . from notation programs and prior MIDI performances or programming. They also have the ability to write new MIDI data from controllers, including the humble computer keyboard and mouse. The most common MIDI creation tool is the MIDI keyboard.

**Playing Instruments with MIDI Data:** Like effects, software instruments can be a deep and expensive rabbit hole if you aren’t careful. Similar to how DAWs get better and more feature-rich over the years, software synths and sampled instruments get significantly better regularly. For schools, there are many free options and huge discounts on some of the finest commercial libraries.

**Audio for Video:** Most DAWs can now import videos, and some can also export them with the accompanying audio or stream them live. This makes tasks like film scoring immensely easier than before. Since it’s a newer feature for a lot of DAWs, there are still some bugs to work out in some programs.