

The Punch And Crunch Filter Explained

Diamond Cut comes with an interesting tool that you'll want to use a lot. Just look under the effects menu and choose Punch and Crunch and prepare to have a great time making your audio sound better. The P&C filter is in the category of Audio Enhancement as it doesn't remove noise - it allows you to adjust the overall sonic balance of your audio so it sounds more the way you like it.

P&C is great for audio that has experienced a lot of compression in the recording studio or was made with older recording equipment that has stripped it of a portion of its dynamic range.

When you bring up the P&C filter, you'll see a complicated looking screen, but don't worry, it's really very easy to just preview the audio and adjust while you're listening. Here is a summary of the controls:

Ratio - this is the amount of expansion or compression that may be applied to your audio. You can expand up to 15 times or compress down to 30 times

Attack and Release - these two controls allow you to adjust how "quick" the program is in providing the compression. Attack is in milliseconds and release is in seconds. A setting of 58 of the attack control means that the effect will happen when the audio has surpassed the threshold for 58 milliseconds. A setting of .58 in the release means that the effect will go away when the audio has dropped below the threshold for a little more than half a second. This allows you to set the tool so that it doesn't sound "jittery" as it tries to follow fast changing audio.

Output Level allows you to adjust the...uhhhh...output level. You can look at the Overload light on the filter to see if you have the output cranked too high and are clipping the signal - a great way to induce a lot of distortion.

Now for the real fun... As the audio is being previewed, you'll notice that you have found green audio bars that are jumping. Each bar corresponds with a frequency range of the audio. Here are the ranges that are displayed here:

Band 1: 0 to 125 Hz

Band 2: 125 to 900 Hz

Band 3: 900 to 4000 Hz

Band 4: 4000 to 20,000 Hz

As you can see, the bottom two bands are useful for Bass, the top one for high frequencies and Band 3 is great for vocals.

You'll also notice the red bars on the screen. These bars are moveable with your mouse and allow you to set the threshold for each frequency band. In expansion mode, any audio that crosses the bar for a sufficient period of time (the attack time) is expanded.

Preview your audio and play with the red bars. You'll find it quite easy to pump up vocals, bass, brass, etc. Remember, only audio that surpasses the red bars gets expanded, so in an example where you want to pump up the bass, only real bass notes get made louder. This is unlike an EQ that will make all low frequencies louder. .

That's all there is to it. It's easy to use, sounds great, and is a lot cheaper than a \$500 hardware unit!