

## **Repairing Noisy MP3 files with Diamond Cut**

A lot of our customers are interested in Old Time Radio programs, or other low quality audio that is frequently downloaded from the net in MP3 format. To make these files as small as possible, they are frequently encoded as low as 32kbts/seconds. This results in a small file size - about 5 MB for a 30 minute show, but also results in a file that has a lot of its spectral information stripped out. This spectral information is used by the Continuous Noise Filter in Diamond Cut.

Let's say you download a 1954 Gunsmoke episode. It's very noisy. It's also had the heck compressed out of it using an MP3 encoder. Since it's mostly just speech, you decide to use the Continuous Noise filter to get rid of the noise. You've done this 100 times with records and we know it works fine. Yet, you find it very difficult to remove the noise. When you crank up the filtering, you get lots of artifacts.

This is caused by the too heavy MP3 compression, but you can still noise reduce the file with Diamond Cut - you just have to use a couple of controls you may not normally work with in the CNF.

First, we want to reduce the FFT size to around 256. The default is 2048. This increases the transient response of the filter and allows for greater noise reduction. Next, we need to increase the attack time. I'd set it to 150 or more.

Now preview normally with the filter and you'll notice a big difference with these damaged files. Give it a try! These small FFT sizes are useful for forensic and other really noise files - including MP3 files.

One note on this - you should retake your sample AFTER you change the FFT size. Don't attempt to take a sample and then change the FFT without retaking the sample.