



56 Hudson Street  
Northboro, MA 01532  
(800) 833-4459  
Fax: (508) 393-0255  
[www.wireready.com](http://www.wireready.com)  
[sales@wireready.com](mailto:sales@wireready.com)

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## **MpegReady 6.029 and later supports user defined Codecs like LAME Mpeg1/Mpeg2/Mpeg3 decoder**

WireReady NSI has created a new version of MPEGReady for Content Depot that can be set up to use LAME's GNU public domain mpeg decompressor as an alternative to QDesign. QDesign doesn't seem to handle some of the encoding systems that some NPR providers apparently are using. Testing has shown LAME appears compatible with all of them so far encountered. Since some customers asked us to support any 3<sup>rd</sup> party external codec the new version allows user defined and installed codecs. A new installation wizard will be created to make this upgrade process simple, but if you don't want to wait for the easy one step update package, below is the info you need to modify your dbcapture and copy the LAME codec files and set everything up by hand.

Below is information on the issues and solutions found. If you want to get to the step-by-step information, skip to the *Setup* section below.

### OVERVIEW:

Version 6.029 contains support for external LAME decompression instead of calling Windows' ACM/QDesign. 6.029 and later versions allow the use of ANY external decoding product a station could find now or anytime in the future. It's an expansion of a system we've had in place that allows stations to encode real audio products using Real's real producer command line codec. We enhanced this to allow command line calls of any 3<sup>rd</sup> party codec engine. We built it out to be compatible with the LAME program (a shareware public domain all-purpose mpeg1, 2 and 3 decoder) and it should work with others as well.

Background: all RIFF WAV files have a CODEC number assigned by an international standards body. Since no one uses numbers above 1000 we give customers the ability to create their own codecs by assigning virtual numbers to the IN paths we process. So in other words, if you define an IN path for MPEGReady (via the dbcapture.ini file) with a user defined codec, then we will use that "virtual" codec number and the associated rules and batch file you have specified for that codec number as defined in our INI file- instead of using the true codec number in the RIFF header of the WAV file and therefore bypass Windows' ACM, and any ACM codecs like QDesign for any files we process. Each IN folder is definable so you can have some paths using the ACM where as others do not. For Content Depot there is only one relevant IN path: the longname folder.

We made a couple enhancements to make this easier. You'll define an audio format (user defined) as explained below which calls a \*BAT file (which includes passable parameters that dbcapture passes %1 %2 and %3 respectively as shown below and it's a handy dandy way to ask the LAME.EXE to process the supplied WAV file). You have to copy the lame files to some folder, and that folder is referenced inside the batch file. The default path we recommend is wire\dbcapture\batfiles\. We recommend you name the batch file something similar to the number you've assigned just so everything is easy to read from a directory standpoint. We decided to use a batch file since some stations have asked for the ability to add their own process steps, and a batch file is the simplest way to do it.

### **Kick-Off Setting Changes**

If you are not using a Kick-Off device on the computer running MPEGReady for Content Depot, you can skip this section.

If a Kick-Off device is being used to restart the computer in case of a lock-up, the settings should be changed. Due to the potential for the LAME.exe to have a longer processing time for the files, the Kick-off Timeout settings should be increased. In the DBCapture.ini file, the "Timeout in Seconds=" line under the "[Kickoff]" group should be set to "600". This will give a 10-minute window between when we reset the timer and when the computer will restart if we don't reset the timer again. Since 10 minutes should be longer than the maximum time to process a file, this will not cause the Kick-Off to reboot the computer. If the settings are left at the default of 30 seconds, the Kick-off may reboot the computer before the LAME codec is done processing a file.

### **Step by step Setup (a GUI install program will automate this in the future)**

Needed Files (in addition to current setup you have):

- 1) There are several LAME files. You only need 3 of them in the folder. They are: Lame.exe, Lame.css, and Lame\_enc.dll. Download the **lame3.97.zip** file from <http://www.rarewares.org/mp3.html>. (There are other files in the zip file, but the rest are html files for human documentation sake and are not needed. They can be put with the 3 above without issue). Unzip the files to a BatFiles subfolder of DBCapture (which will need to be created).
- 2) You will need to edit or create the following group in your existing dbcapture.ini file: Be sure to exit the dbcapture program (MPEGReady) before doing this.

```
[Audio Formats]
```

```
1001 Exe=C:\Wire\DBCapture\BatFiles\AF1001.bat
```

```
1001 Ext=wav
```

[MoveFiles]

AudioFormat0=1001 This line should already exist, but you are changing the format from "1" to "1001". This line defines the user defined external codec to use.

- 3) Create the batch file that is referenced in the above dbcapture.ini line. Our example uses a batch file called AF1001.bat. Put it in the same BatFiles subfolder of DBCapture that the new LAME files were unzipped to. If you are handy with WordPad, just copy and paste the lines below and save it as a TEXT/MSDOS formatted file and call it whatever name the 1001 Exe= line is pointing to (AF1001.bat).

```
;rem %1 = input filename and path  
;rem %2 = Output filename and path  
;rem %3 = Output filename without the path  
C:\wire\DBCapture\BatFiles\lame.exe --mp2input --decode "%1" "%2"
```

The use of 1001 is arbitrary- you can pick any number 1001 or greater. AudioFormat0= is the format you are using for your IN0 settings. If you have a 2<sup>nd</sup> in path being processed i.e. In1 then you would want to define an AudioFormat1= as well if you are trying to use LAME. When no format is specified then by default we do as we always have- we get the true codec number from the WAV file RIFF header and we ask the Microsoft ACM (a part of windows) to find a codec (such as QDesign) to decode the file.

- 4) Replace your existing DBCapture.exe with the 6.029 version of dbcapture or later and restart.
- 5) Run the new MPEGReady for Content Depot (i.e. start DBCapture) , and it should use the new LAME codec to decompress the audio files. You will know we are bypassing the windows ACM/QDesign codec if you see a command line session window open for a short time on your desktop. This DOS-looking command line window will pop up while/whenever the program is decompressing the audio file.