

Sample Rate Protection

1 Introduction

WR now has sample rate protection, and status display on all of its screens. This protection has been added to Automation, NotePad, FileSelect, 10Deck (OnAir), Player, and MediaLog.

2 Ini Controls

Sample Rate Protection is controlled by 2 ini values in the "AudioPlayer" section of the user ini file. They are:

"Check Sample Rate" - Yes/No, default = No. This turns sample rate checking on and off.

"Sample Rate Allowed" - Any valid sample rate, default=22050. This is the sample rate that will be compared against. This value is compared against a list of valid values and if it is not a valid value, then it will be converted to 22050.

3 Status Bars

The status consists of a small area in the status bar that normally displays the audio card associated with that part of the software, as in "1:". When a cut is playing, then it displays the audio card, upto the first 8 letters of the filename (without the path or file extension), and a timer indicating the remaining time for the cut, as in "1: XXXXXXXX 00:00:01". If an error occurs, then the timer is replaced with an abbreviated error message, as in "1: XXXXXXXX BAD SAMPLE RATE".

3.1 Status Bar Error Messages

The error messages were chosen such that if the last few characters are cut off (not displayed) due to size limitations, the message will still be indicative of the error. If an error message is displayed, it will be displayed for 5 seconds, unless a different error message replaces it (for instance for the next file that was attempted to be played). After 5 seconds, display will resume normal display.

A list of all possible status bar error messages and their meaning is below:

"BAD SAMPLE RATE" - Sample Rate protection is active, and the sample rate does not match the specified sample rate.

"CANT OPEN FILE" - We cannot open the file.

"CANT READ FILE" - We can open the file, but we get an error when we try to read the file from the disk.

"MEMORY FAILURE" - We had an internal memory failure.

"BAD FILE" - The file was opened and read successfully, but it does not appear to be a suitable audio file.

4 Program Specifics

4.1 FileSelect

FileSelect is used to load audio files into a lot of different places. When it tries to load a file with the wrong sample rate, and Sample Rate Protection has been enabled, then it will display an error message box warning the user that they need to sample convert the audio file before it can be played. After the user hits OK, the file with the wrong sample rate will continue to load correctly.

If a user tries to Preview a cut from within FileSelect, it will display an error message box and not play the cut.

4.2 Automation

When automation loads a file into the playlist, for instance into a PlayWave command, it does so using FileSelect. Please see FileSelect for more details.

When Automation tries to play a file with the wrong sample rate, it will end the Play command and advance to the next command. It will not display any message boxes. The user can, however, look at the Status Bar to see the error message, which will be visible for the next 5 seconds.

4.3 NotePad

Notepad uses FileSelect to load audio files into it. Please see FileSelect for more details.

When NotePad tries to play a file with the wrong sample rate, it will advance to the line after the file and wait for another key to be pressed. There will not be any message boxes displayed. The user can, however, look at the Status Bar to see the error message, which will be visible for the next 5 seconds.

4.4 10Deck (OnAir)

10Deck uses FileSelect to load audio files into it. Please see FileSelect for more details.

When 10Deck tries to play a file with the wrong sample rate, it will advance to the next-up cut and try to play it. There will not be any message boxes displayed. The user can, however, look at the Status Bar to see the error message, which will be visible for the next 5 seconds.

A Status Bar has been added to the 10Deck to facilitate status display of the audio cards. The area between the right side of the screen and the left side of the screen appears to be a status area, even though it is simply the stretchy pane between the 2 sides. This is because of limitation in the capabilities of the Status Bar class that we are using. It doesn't seem to support the NOBORDER flag if you change the flags for a field. I tried to circumvent this operation, and get it to display without borders, for about a day, but was not able to get it to work correctly. Finally, in order to avoid spending too much time on this, I figured that if it was important enough to spend more time on it, then someone could file a bug against it and I will try again.

The Status Bar for the 10Deck display the status of the 2 audio cards that are used by the decks on the left of the Status Bar, and the one that is used by the Presets on the right of the Status Bar.

If both of the audio cards for the decks are set to use the same audio card, then only the first will be display. This can be used to indicate that the 10Deck can't do overlapping. This is the only mode of operation currently, but the code for the Status Bar is already coded to handle both the non-overlapping and the overlapping modes of operation.

4.5 Player

Player uses FileSelect to load audio files into it. Please see FileSelect for more details. One difference here is that after the error message box, the file will not load.

The Player can't try to play a file with the wrong sample rate, because it can't load the file to begin with.

When an error does occur, such as a "CAN'T OPEN FILE" error, the user can look at the Status Bar to see the error message, which will be visible for the next 5 seconds.

4.6 MediaLog

Only Preview in MediaLog is affected by this change, since there is no loading process per say. When MediaLog tries to Preview a file with the wrong sample rate, it will not play the file, but will display the error in the Status Bar at the bottom of the Window for 5 seconds.