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Alert Sounds: Distortion at Lower Volume Levels (8/94)

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TOPIC -----

Our customer is hearing distorted audio in Sound Control Panel at low volumes. When selecting alert sounds, as the audio level is reduced, the distortion increases. This problem occurs in 8 bit and 16 bit sounds at all resolutions.

The audio does not distort when triggered from the Volumes menu, only the Alert Sounds menu.

Steps we used to reproduce the problem:

1. Open Sound Control Panel.
2. Set volume slider to full volume.
3. Gradually lower slider. As volume decreases, distortion increases.
4. For maximum distortion, set slider to the lowest possible audible volume level.

DISCUSSION -----

This is actually normal behavior for Sound Manager 3.0. The loss of resolution is due to scaling of the actual sound samples. For 8-bit samples (and especially quiet sounds), there isn't much resolution to begin with (256 levels). The alert volumes slider scales each of these samples when sending them to the output channel, causing the distortion noted.

In the future, the Sound Manager might apply some sort of non-linear scaling for 8-bit sounds to minimize this problem.

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