# Service Bulletin: Missing or truncated ECG audio beeps

# 1.0 PRODUCT(S) AFFECTED:

PC-Vet, PC-VetGard, PC-Display windows applications using any Vmed remote device for ECG.

## 2.0 REPORTED ISSUE:

Some newer PC laptops such as the Dell XPS-M1220 using Windows Vista have a large delay in the response of the audio channel. This delay either cuts off completely or truncates ECG audio beeps.

If you go into the control panel and setup sounds on an offending PC, you can test play a Windows sound, and notice a significant delay from when you click it to when it actually begins playing. The delay is about a second and a half delay for the Dell XPS-M1210.

The delay in the PC audio channel becomes unacceptable when the audio delay out of the speaker becomes greater than the interval between beats. With large delays, the audio channel gets over-run and you hear nothing except an occasional chirp or even nothing at all (except for very low heart rates).

# 3.0 RESOLUTION/WORK AROUND:

### For the Dell XPS-M1210

- a) Click on the Windows Start button in the lower left hand corner of the screen and select the Control Panel.
- b) Double-click on the "Sounds" icon in the Control Panel and the dialog box shown below should appear. Click on the "Speakers/Headphones" icon as shown;

K Sound	×							
Playback Recording Sounds								
Select a playback device below to modify its settings:								
Speakers / Headphones SigmaTel High Definition Audio CODEC Working								
Digital Output Device (S/PDIF) SigmaTel High Definition Audio CODEC Working								
Configure Set Default Prop	Apply							
					ned Tec			98052
DRAWING APPROVAL	DATE	TITLE		Servic	e Bulletin: N	lissing	Audio Be	eeps
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c) Click the "Properties" button at the bottom of the window to bring up the following window.

General	Custom	Levels	Enhancements	Advanced	
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d) Click on the "Disable all enhancements" check box and then double-click the "Preview" button to test. The audio delay between the click and the sound should be reduced significantly.

### Other PC's:

For other PC's that may have significant audio delay issues that cannot be disabled in the software driver, Vmed recommends replacing the audio channel with Logitech V10 USB speakers listed the internet link below (or you may search for "Logitech V10 USB speakers" if this link is no longer active). The laptop's internal audio generator will be bypassed by the V10 speakers, which resolves the issue.

#### http://reviews.cnet.com/pc-speakers/logitech-v10-notebook-speakers/4014-3179 7-31992144.html

These speakers are in the \$50 range and have been tested by Vmed Engineering.

Vmed Technology	<sup>SIZE</sup> A	<b>A</b> DWG NO. <b>EB-00001</b>			REV	
16149 Redmond Way #108, Redmond, WA 98052	SCALE	NONE	SHEET	2	OF	2