



MALLORY SONALERT PRODUCTS, INC.

Product APPLICATION Guide

Product Application Guide- IEC60601-1-8 Medical Speakers

cUL On-line Listing of Models Approved to IEC60601-1-8:

MDAF8.E480572

General Medical Equipment Certified for Canada - Component

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General Medical Equipment Certified for Canada - Component

[See General Information for General Medical Equipment Certified for Canada - Component](#)

MALLORY SONALERT PRODUCTS INC

E480572

4411 S High School Rd
Indianapolis, IN 46241-6404 USA

Additionally Investigated to CAN/CSA-C22.2 No.60601-1, CAN/CSA-C22.2 No.60601-1-8

Alarm Speakers and Transducers "Mallory Sonalert Products Inc." Model(s) MSS5M0, MSS5M3, MSS5MMC, MSS5MMD, MSS5MME, MSS5MMG, MSS5MMP, MSS5MMT, MSS5MMV, MSS5MMX, MSS300R, SBS12M0FL, SBS12M0PC, SBS12M1PC, SBS12LMMCPC, SBS12LMMDPC, SBS12LMMEPC, SBS12LMMPPC, SBS12LMMTPC, SBS12LMMVPC, SBS12LMMXPC, SBS300FL, SBS300PC, SBT5LM0FL, SBT5LM0PC, SBT5LM1PC, SBT5LMMCPC, SBT5LMDPC, SBT5LMEPC, SBT5LMMPPC, SBT5LMMTPC, SBT5LMMVPC, SBT5LMMXPC, SBT12M0FL, SBT12M0PC, SBT12M1PC, SBT12MMCPC, SBT12MMDPC, SBT12MMEPC, SBT12MMPPC, SBT12MMTPC, SBT12MMVPC, SBT12MMXPC, SBT200FL, SBT200PC



Marking: Company name, model designation and the Recognized Component Mark for Canada,

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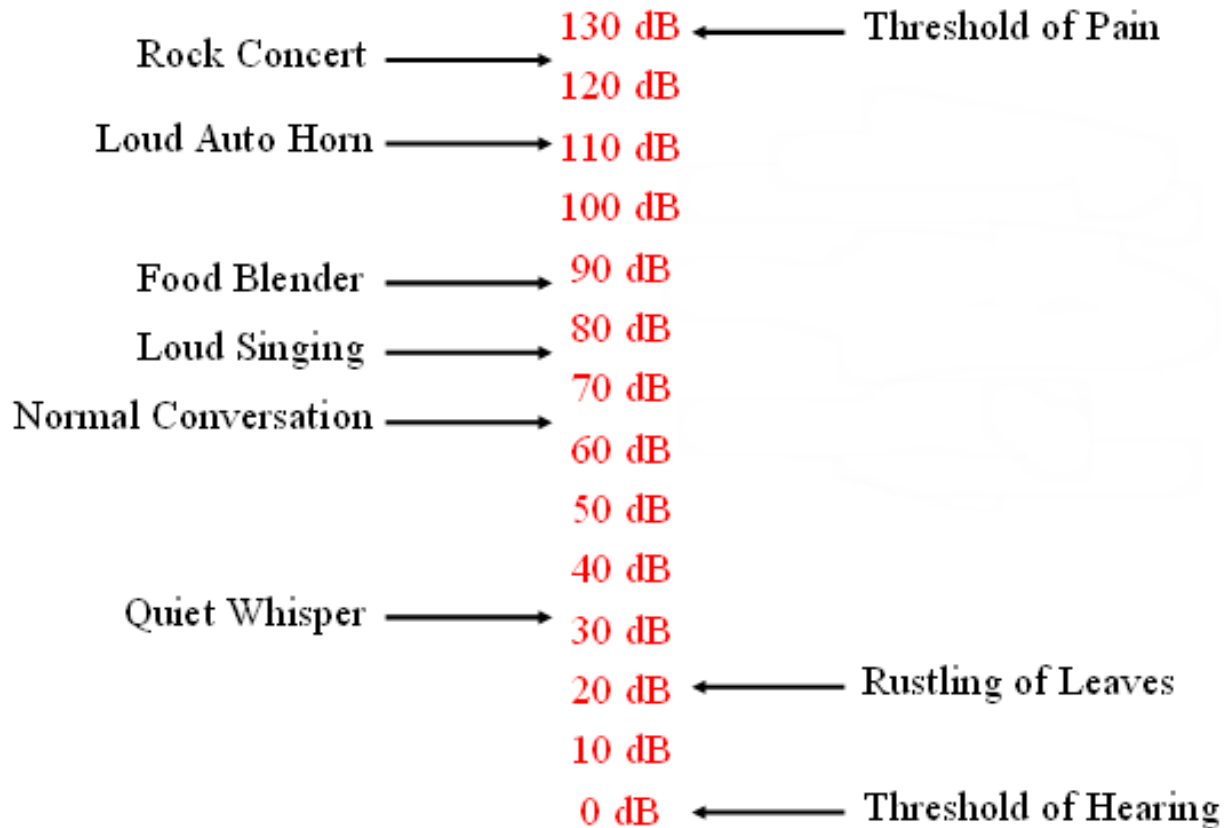
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Decibel Sound Level Scale

The decibel sound level scale is an arbitrary scale that ranges from 0 dB (threshold of hearing) to 130 dB (threshold of pain). The chart below shows where some common sounds fall on this dB scale. Audible alarms are available that have sound levels as soft as 55 dB at 2 feet and as loud as 110 dB at 2 feet.

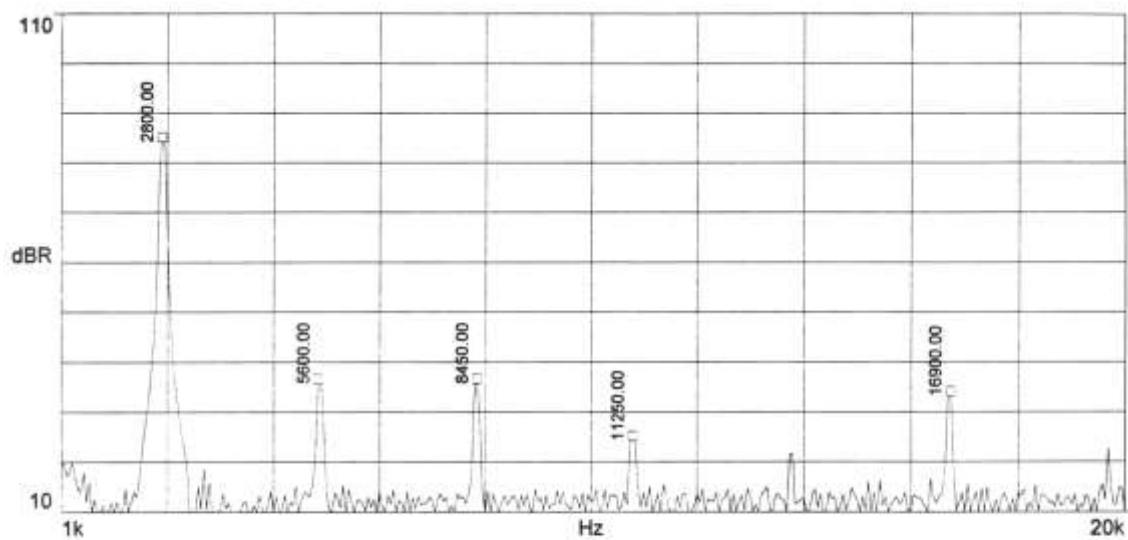
Reference Sound Levels

(as if you were standing 2 feet from the sound source)



Fundamental Frequency & Harmonics

Below is a frequency scan of a piezoelectric audible alarm that has a resonant frequency of 2,800 Hz. As you can see, there is a strong frequency peak at 2.8 kHz and several smaller frequency peaks that follow called harmonic frequencies. The table below the chart shows that the size of the harmonic frequencies are significantly smaller than the fundamental frequency for this particular alarm unit. Because this alarm has a large fundamental frequency and much smaller harmonic frequencies, the sound quality of this part will be very good. When this alarm is activated, the listener will hear one clear frequency (also called sound pitch) from the alarm. Other electronic alarm technologies such as electro-magnetic or electro-mechanical type alarms often have much larger harmonic frequency components resulting in less clear tone.



	Frequency	dB	% dB of Fundamental
Fundamental:	2.800 KHz	86.1	100.0%
2nd Harmonic:	5.600 KHz	37.6	43.7%
3rd Harmonic:	8.450 KHz	37.6	43.7%
4th Harmonic:	11.250 KHz	26.1	30.3%