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Boom Car Noise

Noise is defined as unwanted sound. Although there are many kinds of sounds, there are some types that are especially dangerous to the health and welfare of the public.

Noise is the number one reason people move.

“Boom cars” are cars with loud stereo systems.

Boom cars emit high-intensity/low frequency sound (excessive amounts of bass). This type of sound is dangerous to health, reduces property values and highway safety, and forces law-abiding citizens to seek quieter locales.

Boom cars have been closely linked to murder, aggression, gangs, drugs, speeding, reckless driving, DUI, underage drinking, and other crimes.

It is difficult to discuss the noise produced by boom cars without considering the basic concepts of decibel and frequency levels of sound.

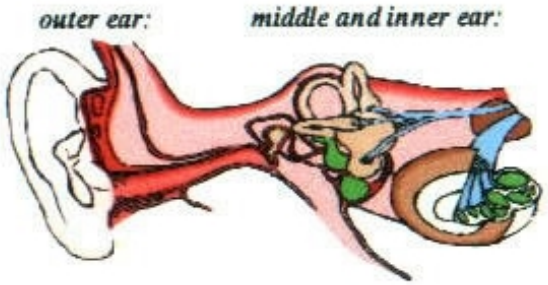
What are normal levels?

What are dangerous levels?

How do abnormal decibel and frequency levels affect the human body and behavior?

Hearing

The human ear is a masterful design of engineering. It allows us to hear, and it also works in controlling our balance. The ear is comprised of three parts:



The Ear - Cut Away View

1.) THE OUTER EAR – captures sound waves and conducts them to the middle ear.

2.) THE MIDDLE EAR – converts sound waves into mechanical vibrations.

3.) THE INNER EAR – converts the vibrations into nerve impulses and transmits them to the brain.

The inner ear contains a structure called the cochlea. It is a hollow tube coiled like a snail's shell. It contains thick fluid and the organ of Corti. The organ of Corti contains thousands of tiny cells, or hair cells. These hair cells extend into the surrounding fluid.

Incoming sound vibrations from the middle ear cause the fluid and hair cells in the inner ear to vibrate. Different hair cells respond to different frequencies. These vibrations are converted to nerve impulses, which are transmitted to the brain.

Loud noise can damage the fragile hair cells. Once a hair cell is destroyed, it does not appear to regenerate. Progressive damage and hearing loss occurs with repeated exposure to loud noise.

Decibels

Sounds consist of pressure waves. The intensity of sound is known as the sound pressure level, or SPL.

The human ear can detect a wide range of sound pressure levels. Sounds can be very soft, such as the ticking of a wristwatch, or very loud, such as a top fuel dragster doing a burnout. The intensity of sound pressure can be measured, and is expressed as decibels, or dB.

Alexander Graham Bell founded the concept of decibels and formulated a logarithmic scale based on 10. "Deci" refers to the base 10 log scale, and "bel" refers to Alexander Bell.

Each 10-dB increase represents a tenfold increase in sound intensity. In addition, a 10-dB increase is perceived as roughly doubling loudness.

A few examples of decibel readings are:

1 – 25 dB Human ear begins to detect sounds at this baseline

40 – 50 dB Sound levels in the average home

60 dB Normal conversation

70 dB Negative responses begin in the body. The autonomic nervous system kicks in.

All sounds consist of waves of pressure moving through the air. As decibels increase, these waves of pressure get stronger and have more physical force. The human body reacts to this physical force through HEARING and FEELING the bombardment of sounds.

When sudden, strong sounds reach the ear, and are transmitted to the brain, the body reacts by triggering the autonomic nervous system. This automatic system is in place to protect us against danger. This system produces the "fight or flight" adrenaline response, which prepares the body to either fight a danger, or flee from danger.

In addition, when intense sound waves are combined with excessive low-frequency vibrations, the effect is tremendously damaging to the body, as well as to physical structures, such as buildings, etc.

Noise over 70 dB

Increases the risk of heart attack by 20%

Noise over 90 dB

As this intense sound bombards the body, the adrenaline reaction is so powerful that people become openly hostile and belligerent.

120 dB

Standing behind a Boeing 707 while it is in full thrust, just before takeoff. Hearing loss can occur after just 7.5 minutes.

120 – 130 dB

Sound threshold for pain

120 – 140 dB

Inside the average street boom car. Boom cars with higher levels are usually seen in dB "drag racing" competitions.

dB Drag Racing

In addition to promoting boom cars on the highway, creating an everyday hazard to society, the boom car industry has taken this one step further. There are national and international competitions to see who can produce the loudest sound from a boom car. The boom car industry, stereo companies, and boom car owners spend THOUSANDS of dollars per automobile to get it ready for these events. The contests are called dB DRAG RACING competitions.

These events are not just "boys being boys" or "good clean fun." These competitions create death machines, due to the EXTREME intensity of sound and the ultra-low frequency levels produced.

To sit in some of these automobiles during the sound competitions would mean instant death. This type of vehicle is reinforced and highly modified to accommodate the massive amounts of amplifiers, sub-woofers, and electrical equipment. The sound produced by some of these monsters requires remote control.

Though some of these machines are not street worthy, young people who witness these competitions are inspired to go home and build their own boom car to drive on the street. Thus, even more of these hazards are on the road to be a menace to the peace and safety of society.

Boom car operators thrive on getting attention and being noticed. The more intense the decibels and the lower the frequency, the more respect and bragging rights they have over their peers.

These are a few examples of competition boom cars and the power they produce:

The Beast – a Ford Bronco owned by Alma Gates. In 2000, it had 48,000 watts of power. It was designed to pump out 175 dB. That is eight times louder than a 747. Instant death would result from it's sound if you were sitting inside of it a full power.

The Terminator – a 1960 Cadillac Hearse owned by Wayne Harris. In 1997, it easily yielded 146 dB-C and cost over $50,000 to build. Half of the total power was used at 48 Hz and below. The speakers could handle ultra-low frequencies at 10-50 Hz. Infrasound!

Dodge Caravan – an 18-year-old van owned by Troy Irving. In 2003, it had $80,000 worth of stereo equipment and 130,000 watts of power. It was designed to produce a single frequency of 74 Hz.

Stock, unmarked 1987 Impala – owned by Jason Parsons. In 2003, he won the Super Street class with 155.8 dB. He plays music through the system, and the car is driveable on the street.

Chevy Astro Van – owned by DJ Billy E., it could produce up to 155.8 dB. Though entered periodically in dB drag racing competitions, in 2000, he regularly drove it on the street to set off car alarms, disturb the peace in affluent business districts, get attention, and "get chicks." At one point, he used his 150-dB power to follow a young woman driving a red compact. Following close behind her, he repeatedly strafed her with extreme blasts of amplified bass. She turned off the street to get away from him.

In 2002, a team of German audio engineers set the dB drag racing record. The level was an astonishing 177.6 dB.

As more and more boom cars are being made by teenagers hungry to prove themselves to their peers and get attention, sadly, the automotive industry is beginning to install powerful stereo systems right from the factory. In addition, factories are now installing DVD players in automobiles.

With factory systems so powerful, police are now ticketing owners of these brand new boom cars. The sounds from their factory systems can be heard blocks away!

These are examples of a factory and an after-market audio system in 2003:

Toyota Scion – There are 3 settings in its 6 CD stereo system. The highest setting makes you feel like you are on stage at a rock concert. It has 1,350 watts of power.

Alpine Audio – Super Street magazine reviewed this 1,800-watt system, heralding, "Alpine's amplifiers are so tough that some people use them as weapons of mass destruction. With 1,800 watts of power, this thing can ruin a whole city block."

Car stereo companies make billions of dollars a year selling powerful amplifiers and sub-woofers. To name a few examples, stereo ads proudly encourage a boom car owner to "**disturb the peace," "defy authority**," **cause heart attacks in people over 40**, **refuse to turn the volume down**, **rattle people "from their cages of complacency**," **let neighbors FEEL you coming as well as hear you, buy sub-woofers that pop and bleed eardrums, buy amplifiers so powerful they can "blow the scalp off your head**,: and bolt on "**Performance they'll hear a mile away**."

Sony sells their Xplod car stereo remote by announcing, "**It's not my remote, it's my DETONATOR**."

Hollywood Sound offers "a sub designed to **SHAKE SEATS AND ANNOY NEIGHBORS**."

MTX Audio encourages a boom car owner to – "**Got loud? Get Louder! Turn it up – Keep it up.**"

The Tantrum series of amplifiers encourages boom car owners by stating, "**No one ever said you had to be good in your own car. Throw a tantrum in your car!**"

Orion car audio recommends boom car owners "**be loud… be obnoxious…man up and bounce with the legend.**"

JBL proudly proclaims, "**Either we love bass or hate your neighbors.**"

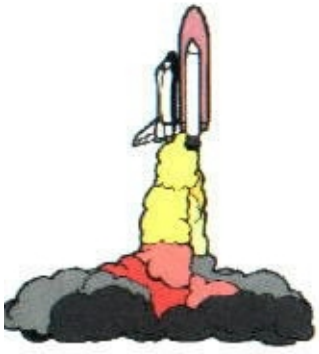
Rockford Fosgate, which has advertisements for 'The Fast and the Furious' movies on its web site, has the headline, "**GO FAST, BE LOUD**."

In 2003 Pioneer launched a new Internet program to sell their powerful systems. The web site has the 4 titles ' **DISTURB, IGNITE, DEFY, and DISRUPT**. On this web site, a viewer can watch movies and see boom car owners brag about disturbing others, talk about illegal street racing, and view boom car owners staying out all night, cruising, partying, etc.

Sony sells their XPLOD car audio system by announcing this headline on one ad: "**Mobile ES gives you the technology you need to Disturb the Peace…**" Below the headline is a boom car driver saying, "**Oh yeah? Your silence disturbs me.**"

Cerwin Vega has an ad that pictures a set of earplugs. The ear plug box reads, "**When your neighbors complain about the volume of your Cerwin-Vega speakers, kindly tell them to stick it in their ears**."

A Pyle Driver 2000 ad has a photo of a demolished house. The caption reads, "Pyle Driver was here."



From these few examples, it is clear that these stereo companies are not concerned with a law-abiding citizen's health, safety, or right to quiet.

In addition, some stereo ads have exploited women, declaring them as "trophies," and featuring women practically nude in provocative poses.

Is this "good clean fun" and boys being boys?"

SPACE SHUTTLE LAUNCH

Ground zero – 180 dB

Are these sound levels the wave of the future for boom cars?

Safe dB Levels

For the protection of public health, the Environmental Protection Agency proposed these levels:

Neighborhoods – During waking hours 55 dB

Neighborhoods – During sleeping hours 45 dB

Classrooms – during teaching sessions 35 dB

Hospitals – during waking hours 45 dB

Hospitals – during sleeping hours 35 dB

For the workplace, the Occupational Safety and Health Administration (OSHA) proposed these permissible noise exposure times (I have included examples of sounds at various levels for easier understanding):

85 dB and higher – prolonged exposure will result in hearing loss

90 dBA – no more than 8 hours per day (examples - lawn mower, truck traffic, hair dryer)

95 dBA – no more than 4 hours per day

100 dBA – no more than 2 hours per day (example - chain saw)

105 dBA – no more than 1 hour per day

110 dBA – no more than ½ hour per day

115 dBA – no more than ¼ hour per day (preferably less)

140 dBA – NO EXPOSURE TO IMPACT OR IMPULSE NOISE ABOVE THIS LEVEL (examples – gunshot blast, jet plane at takeoff)

The Academy of Pediatrics and the National Campaign for Hearing Health states 85 dB is the threshold for dangerous levels of noise.

The National Campaign for Hearing Health's Toxic Noise Guidelines (exposure times and decibel levels that cause hearing loss)

85 dB	**8-hour period**
85 – 90 dB	**2-hour period**
90 – 100 dB	**1 to 2-hour period**
100 – 110	**between 2 and 15 minutes**
110 – 120	**less than 30 seconds**
130 dB	**ANY EXPOSURE WILL RESULT IN PERMANENT HEARING LOSS**

Decibel Meters

Decibels are measured, most commonly, on the A, B, and C weighting scales. There is also a G-weighting scale that is used to measure infrasound (extreme bass frequencies below 20 Hz).

Decibel meters are impractical for gathering readings on boom cars, as the vehicles are often in motion. Plus, the operator of the decibel meter has to be adequately trained, the meter properly set up, calibrated, and maintained. Also, meters can be expensive.

For this reason, a ZERO TOLERANCEW law should be in effect for our cities and neighborhoods. This law simply states, ' A noise disturbance should NOT be acceptable at any hour of the day or night, detected past a business or residential property line or boundary, or heard outside of someone's vehicle.'

This is based on a plainly audible assessment and eliminates the use of decibel meters.

These are the most common decibel weighting scales.

Most commonly used. Basically, it indicates how annoying a noise source might be. This scale underestimates annoyance levels for frequencies that occur below about 200 Hz and is less sensitive to very low and very high frequencies. Boom cars emit high-intensity/low frequency sound, which this scale will not record accurately. This scale is sensitive to soft sounds at around 40 dB. Designated by dBA or dB(A).

Rarely used. It is sensitive to medium sounds around 70 dB. Designated as dBB or dB(B).

Sensitive to loud sounds at 100 dB and above. Most closely corresponds to the unweighted measurement of SPL. Also picks up low-frequency sounds given off by artillery fire and outdoor rock concerts. Written as dBC or dB(C).

In a May of 2003 document titled, 'A Review of Published Research on Low Frequency Noise and its Effects,' Dr. Geoff Leventhall writes about the World Health Organization (WHO) and how it recognizes low frequency noise as an "environmental problem."

Dr. Leventhall goes on to quote from WHO's publication on Community Noise (Berglund et al., 2000). These are some of those notations in regard to decibel readings and trying to properly record low frequency sounds. (As boom cars emit high-intensity/low-frequency sounds, which are excessive amounts of bass, this is especially important to note.)

- "For noise with a large proportion of low frequency sounds, a still lower guideline (than 30dBA) is recommended."
- "When prominent low frequency components are present, noise measures based on 'A' weighting are inappropriate."
- "Since 'A' weighting underestimates the sound pressure level of noise with low frequency components, a better assessment of health effects would be to use 'C' weighting."
- "It should be noted that a large proportion of low frequency components in a noise may increase considerably the adverse effects on health."
- "The evidence on low frequency noise is sufficiently strong to warrant immediate concern."

With their extreme decibel and low-frequency levels (bass), boom cars definitely exceed acceptable standards that ensure public safety, health, and welfare.

Frequencies

The speed of sound through air, at a temperature of 0 degrees C. and 50% relative humidity = 331.6 miles per second! Sounds consist of pressure waves. These waves oscillate in the air. The number of oscillations (or cycles) that are made by a sound wave can be measured. The number of oscillations that a sound wave makes in one second is known as its frequency. Frequency levels are denoted by Hertz (Hz).

All noises have a measurable frequency. Some noises are composed of many frequencies, whereas some noises contain only a few frequencies. For example, an ambulance siren consists of a myriad of frequencies. This will remain relatively constant. However, the DECIBEL level may change, depending on where the ambulance is located in relation to the listener.

As a general rule, the more decibel levels increase, the more hazardous the effects seen on the human body, emotions, and hearing.

Frequency Ranges

ULTRASOUND

Ultrasound is above the range of human hearing. Above 20,000 Hz. Dog whistles are in this category. Dogs can hear sounds at these frequency levels. In addition, studies on unborn children are studied via ultrasonic waves that are converted into real-time images.

NORMAL HEARING RANGE

The human ear begins to detect sounds at around 20 Hz. It can capture sounds up to 20,000 Hz. Hearing is most acute at the mid-range level, 1,000 to 10,000 Hz. Human speech is mainly in the 1,000 to 4,000 Hz range.

LOW FREQUENCY

This range is about 500 Hz and lower. Infrasonic sounds are included in the lower end of this category.

INFRASOUND

Infrasound is generally classed as sounds below 20 Hz. Infrasound is generally inaudible to humans, unless at very high volumes. Even at very high decibels, infrasound will not be recognized as a sound. Infrasound is more commonly FELT. Infrasound is extreme bass.

Today's car stereos are very powerful. They can be direct from the factory or installed in a boom car owner's garage.

Modern sub-woofers, and the amplifiers that give power to them are now capable of producing infrasound. All it takes is a CD with this type of extreme bass loaded onto it. Boom car web sites and boom car owners have been known to pride themselves on their ability to produce this type of sound.

Infrasound can be deadly.

Infrasound has been tested and used by the U.S., and other governments, as a weapon.

Boom car drivers are truly audio terrorists.

Infrasound

Webster's Dictionary defines infrasonic, or infrasound, as "1: having or relating to a frequency below the audibility range of the human ear. 2: utilizing or produced by infrasonic waves or vibrations."

Infrasound is especially dangerous, due to its strong vibrations, or oscillations. Infrasound waves hug the ground, travel for long distances without losing strength, and are unstoppable. Not much amplitude is needed to produce negative effects in the human body, and even mild infrasound exposure requires several hours, or even days, to reverse symptoms.

Natural and man-made infrasound occurs in our world, but thankfully, extreme manifestations and contact with humans are infrequent.

Natural explosions from volcanoes produce infrasonic waves. When Krakatoa exploded, lifting an entire island 100 miles into the air, windows were shattered 1,000 miles away from ground zero. The shock waves, affecting both earth and atmosphere, continued for hours.

Explosives, such as atomic weapons, produce infrasound. Zone one is ground zero and its destruction. Zone 2 is a powerful, speeding, sonic wave of reduced air pressure. This concussion blast travels at great distances away from ground zero and few survive its destructive path.

Waves of infrasound are invisible, but slam into living tissue and physical structures with great force. The sensation vibrates internal organs and buildings, flattening objects as the sonic wave strikes. At certain pitches, it can explode matter.

Certain animals use infrasound. Elephants use it to communicate at distances of up to 10 miles (12 – 35 Hz.). Infrasound is so powerful that it can be used as a weapon. John Cody, in his article, 'Infrasound,' writes about sea life: "It has been known that certain whiles are able to stun their prey with powerful blasts of inaudible sounds. Called "gunshots," whales focus these powerful blasts at large squid and other fish to paralyze and catch them. In some instances, they have been known to burst their prey apart by tonal projection alone." Distress calls from small, beached whales pushed a veterinarian back several feet in the water.

Other sources of infrasound include earthquakes, pounding surf, waterfalls, calving of glacial ice, tidal waves, aurora borealis (0.1 – 0.01 Hz), solar flares, solar winds, hurricanes, thunderstorms, the jet stream (30-40Hz), winds in caverns (20-30 Hz.), etc.

Man-made structures, such as engines, cars, buses, trains, motorcycles, and airplanes also produce infrasound. John Cody also noted that pilots exposed to infrasonic vibrations of jet chassis experience a reduction in "vision, speech, intelligence, orientation, equilibrium, ability to accurately discern situations, and make reasonable decisions."

Infrasonic vibrations, though harmful, can be pleasantly stimulating in mild levels. The effects of brief, mild exposure can give a feeling of invigoration for hours. While a person may FEEL invigorated and euphoric, his body is being subjected to an elevated heart rate, elevated blood pressure, a release of endorphins, and the "fight or flight" adrenaline response. Feeling the effects of high-intensity/low-frequency sound can actually become an addiction, partially due to the release of endorphins in the body.

Depending on the pitch, infrasound can cause physical pressure, fear, disorientation, negative physical and mental symptoms, explode matter, incapacitate, and kill. For example, in World War II, Nazi propaganda engineers used infrasound to stir up anger in the large crowds that had gathered to hear Hitler. The result was a nation filled with anger and hatred.

Studies show the different ways in which infrasound affects the human body. As infrasound pitches, or cycles per second, decrease, deadly effects on the body increase. Infrasound disrupts the normal functioning of the middle and inner ear, leading to nausea, imbalance, impaired equilibrium, immobilization, and disorientation. Exposure to even mild doses of infrasound can lead to illness. Increased intensities of infrasound can result in death.

These are a few examples of low frequency (below 500 Hz) and infrasound (below 20 Hz.) levels and their effects:

12 Cycles Per Second (Hz) – Walt Disney and his artists accidentally experienced infrasound on one occasion. A cartoon sound effect was slowed from 60 cycles per second to 12 cycles per second via a tape-editing machine and was amplified through the theater system. The resulting tone, though brief in duration, produced in the entire crowd nausea that lingered for several days.

100 Cycles Per Second (Hz) – At this level, a person experiences irritation, "mild nausea, giddiness, skin flushing, and body tingling." Following this, a person undergoes "vertigo, anxiety, extreme fatigue, throat pressure, and respiratory dysfunction." (source; the Sonic Weapon of Vladimir Gavreau, by Gerry Vassilatos)

60 – 73 Cycles Per Second (Hz) – "coughing, severe sternal pressure, choking, excessive salivation, extreme swallowing pains, inability to breathe, headache, and abdominal pain" were present. In the post exposure phase, test subjects continued to cough, exhibit fatigue, and have skin flushing for up to four hours. (Source – THE SONIC WEAPON OF VLADIMER GAVREAU, by Gerry Vassilatos)

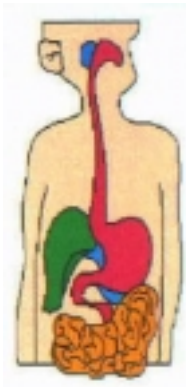
WALL CURRENT – In the United States, wall current is 60 cycles per second (Hz). In Europe, the wall current is 50 cycles per second. Since European current has a lower cycle, an observer can actually see light bulbs slightly flicker.

43 – 73 Cycles Per Second (Hz) – lack of visual acuity, IQ scores fall to 77% of normal, distortion of spatial orientation, poor muscular coordination, loss of equilibrium, slurred speech, and blackout.

1 – 10 Cycles Per Second (Hz) – "Lethal infrasonic pitch lies in the 7 cycle range. Small amplitude increases affect human behavior in this range. Intellectual activity is first inhibited, blocked, and then destroyed. As the amplitude is increased, several disconcerting responses have been noted. These responses begin a complete neurological interference. The action of the medulla is physiologically blocked, its autonomic functions cease." (source; the Sonic Weapon of Vladimir Gavreau, by Gerry Vassilatos)

50 – 100 Cycles Per Second (Hz) – at 150 dB and higher, "intolerable sensations in the chest and thoracic region can be produced – even with the ears protected. Other physiological changes that can occur include chest all vibration and some respiratory rhythm changes in human subjects, together with hypopharyngeal fullness (gagging). The frequency range between 50 and 100 Hz also produces mild nausea and giddiness at levels of 150 – 155 dB, at which point subjective tolerance is reached. At 150 to 155 dB (0.63 to 1.1 kPA), respiration-related effects include substernal discomfort, coughing, severe substernal pressure, choking respiration, and hypopharyngeal discomfort." (source; 'Acoustic Trauma: Bioeffects of Sound,' by Alex Davies)

7 Cycles Per Second (Hz) – The most profound effects at this infrasonic level occur here. Seven Hz "corresponds with the median alpha-rhythm frequencies of the brain. It is also commonly alleged that this is the resonant frequency of the body's organs and hence organ rupture and death can occur at high-intensity exposures." (source; 'Acoustic Trauma: Bioeffects of Sound,' by Alex Davies)



Scientific Applications and Research Associates (SARA) – This agency's alleged infrasound research showed, "infrasound at 110 – 130 dB would cause intestinal pain and severe nausea. Extreme levels of annoyance or distraction would result from minutes of exposure to levels 90 to 120 dB at low frequencies (5 to 200 Hz), strong physical trauma and damage to tissues at 140 – 150 dB, and instantaneous blastwave type trauma at above 170 dB. At low frequencies, resonance's in the body would cause hemorrhage and spasm/ in the mid-audio range (0.5 to 2.5 kHz), resonance's in the air cavities of the body would cause nerve irritation, tissue trauma and heating; high audio and ultrasound frequencies (5 to 30 kHz) would cause heating up to lethal body temperatures, tissue burns, and dehydration; and at high frequencies, or with short pulses, bubbles would form from cavitation and micro-lesions in tissue would evolve." (source; 'Acoustic Trauma: Bioeffects of Sound,' by Alex Davies)

Infrasound Toxicological Summary, November 2001 – "When male volunteers were exposed to simulated industrial infrasound of 5 and 10 Hz and levels of 100 and 135 dB for 15 minutes, feelings of fatigue, apathy, and depression, pressure in the ears, loss of concentration, drowsiness, and vibration of internal organs were reported. In addition, effects were found in the central nervous system, the cardiovascular system, and the respiratory system. Synchronization phenomena were enhanced in the left hemisphere. Visual motor responses to stimuli were prolonged, and the strength of the effect was reduced. Heart rate was increased during the initial minutes of exposure. Depression of the encephalic hemodynamics with decreased venous flow from the skull cavity was observed. Heart muscle contraction strength was reduced. Respiration rate was significantly reduced after the first minute of exposure."

The U. S. Navy has an anti-submarine device called Low Frequency Active (LFA) sonar. It emits 240 dB. Damage was possibly done to whales and dolphins, causing them to beach. Whales avoid areas with 120 dB or above. The Navy sets 140 dB as the maximum level of safe exposure to humans.

Long pipe organs, such as those found in churches and cathedrals produce infrasound. In one UK study, the extreme bass frequencies instilled strange feelings at a concert hall. Effects were "extreme sense of sorrow, coldness, anxiety, and even shivers down the spine." (source; Organ Music Instills Religious Feelings,' by Jonathan Amos, 9/8/2003)

Some boom cars are equipped with a device known as a *burp button*. These devices generate large amplitude pressure/low frequency noise. When the burp button is used, it activates a low-band pass-filter which forces all of the amplifier's power through the sub-woofer speakers at frequencies lower than a certain number of Hertz. At extremely low frequencies, it becomes infrasound. Thus you FEEL the blast of noise, as well as hear it.

A passenger in a boom car reported the following experience, October, 2000. The boom car was driven by DJ Billy E. The passenger told of his experience as he was subjected to the extreme bass (high-intensity/low-frequency sound) inside the vehicle. The blasts of low-frequency sound at 150 dB caused the following effects:

"Eager to crank up the system, he hands me a set of earplugs. 'Let's hear some burp.' I stick the plugs in, and he hits the burp button, a red switch on the center console. It's difficult to describe what happens next. The noise sounds like 'BRRRROONNNNNKKKK!' The vehicle vibrates like a jackhammer, but much lower and deeper. I feel air blowing the back of my hair, and my body starts to rise out of the seat. May pant legs are flapping. Everything in the car is rattling like crazy, and I realize my vision is blurred as my face pulls back taut against my skull. The only reaction left is to laugh out loud. I look over at Billy E gripping the steering wheel, squinting and grinning maniacally. He lets up on the button, and the chaos stops.

"'If you're drinking a Coke, your throat will shut.' I'm amazed I can actually hear his voice. 'It's like being under water. Your ears don't ring they're just muted. After a day, everything opens up again,' he says.

"He never uses plugs. He says high frequencies, not the lows, damage the EARS." (capitals are mine). "Like most SPL competitors, his system is bottom-heavy, consisting mostly of sub-woofers. My ears aren't ringing much at all. I felt the blast much more in my body. To some degree, he's right about the damage. According to OSHA findings on noise in the workplace, highs are much more dangerous than lows. But it's also illegal to expose American employees to anything above 140 decibels. So we're still rebels after all."

The music industry is now producing CDs and sub-woofers capable of producing very low frequencies and infrasound:

1.) Bass Mekanik: Sonic Overload – 2 CD set with a myriad of very low frequency tracks. The lowest = 1 to 10 Hz. This CD is advertised with these words, via Parts Express online: "The ultimate competition, showin' off your system and having a good time doing it disc.. you might even blow something up!"

2.) CD #101, Low Frequency Test CD – contains tracks with 10 Hz, 11 Hz, 12 Hz, etc.

3.) Hollywood Sound Labs Excursion 158D – a sub-woofer that has below 20 Hz handling capabilities. When tested, it produced 129.7 dB at 46 Hz with 1,000 watts of power.

This was what was said about the sub-woofer, via Car Sound online: "However, in the big picture, this woofer seems to be more about scaring small children and their grandparents than the finer points of esoteric jazz and classical reproduction. It definitely excels at playing music that's designed to shake your innards around. Heavy boom or hip-hop tracks are just that – heavy…To sum it up, this is not the sub that your neighbors would pick. They'd prefer that you just turn the page and stick with those ratty OEM 5X7s, thank you very much. So we should all just follow their advice (wink, wink) because I know that none of you guys out there would want to (nudge, nudge) annoy anyone. OOOOWAHAHAHAHAHAHA!!!!"

4.) Extreme SPL dB Drag Racing logo includes these words in the heading: "Infrasound – Extreme Car Audio"

5.) Virtual Bass, by Bass 305 – tracks with 20 Hz and an "ultra boom experiment."

High-intensity/low-frequency sound and infrasound are powerful forces, and governments have tested and used them as a weapon of war. For example:

A.) "Acoustic Bullets. High power, very low frequency waves emitted from one to two meter antenna dishes. Results in blunt object trauma from waves generated in front of the target. Effects range from discomfort to death. A Russian device that can propel a 10-herz sonic bullet the size of a baseball hundreds of yards is thought to exist. Proposed fixed site defense. Also known as sonic bullets." (Source – Glossary of Non-lethal weapons Terms, edited by Robert Bunker)

B.) "Acoustic, Infrasound. Very low-frequency sound, which can travel long distances and easily penetrate most buildings and vehicles. Transmission of long wavelength sound creates biophysical effects; nausea, loss of bowels, disorientation, vomiting, potential internal organ damage or death may occur. Superior to ultrasound because it is 'in band,' meaning that it does not lose its properties when it changes mediums such as from air to tissue. By 1972, an infrasound generator had been built in France that generated waves at 7 hertz. When activated, it made the people in range sick for hours." (Source – Glossary of Non-lethal weapons Terms, edited by Robert Bunker)

C.) "And for thirty years already there have been experiments with infrasonic radiation weapons, with at least two experimenters suffering severe injuries (the Hungarian government reported that 'calculations have shown that the destruction of human beings would require considerably less expenditure by infrasound weapons than by any existing type of weapon of mass destruction.')" (Source – New Armageddon Weapons)

D.) "Acoustics. Intense, high power sound energy (in the ultra, audible, or infrasound ranges) that can cause disorientation, nausea, and extreme discomfort. May be potentially lethal. Not yet a mature technology." (Source – Does Israel Have Non-lethal Options?, Updates from AIJAC)

E.) "For example, infrasound generators, designed initially for crowd control, emit very low frequency sound waves that can be tuned to cause disorientation, nausea, and loss of bowel control." (Source – LOOKING AT PEACE EDUCATION, by Roger Walters)

F.) "Today, the US Department of Defense is testing acoustic rifles that can stun and even kill solders." (Source – FEEL THE NOISE, by Jack Boulware)

G.) "During World War II, Nazi engineers prototyped a revolutionary sonic 'cannon,' which fired a shock wave strong enough to bring down a plane." (Source – Feel the Noise, by Jack Boulware)

H.) Amplified music, such as Metallica, Sesame Street, and Barney tunes were used by the U.S. government in 2003 to break the will of Iraqi captives. The goal was sleep deprivation and playing music culturally offensive to the listener. Amnesty International objected to these tactics, saying it "May constitute torture – and coalition forces could be in breach of the Geneva Convention." (Source – BBC News, Sesame Street Breaks Iraqi POWs, 5/20/2003)

I.) "Recently, psycho-acoustic warfare was allegedly used in the Waco siege at the Davidian compound in Texas, where it is said that the FBI used sounds of babies crying, dentist drills, and a variety of other unpleasant sounds to mentally influence their opponents. The Waco compound was allegedly bombarded for long durations by these sounds via large public address systems. Although this type of sonic assault can have a profound emotive effect on individuals, it relies heavily on the individual's particular experiences." (Source – Acoustic Trauma: Bioeffects of Sound, by Alex Davies)

J.) The Nazis, in WW II, used the same type of sound like boom car owners are using today! Hitler conducted noise experiments on prisoners and actually tortured them with high-intensity/low-frequency noise. In WW II, the Nazis didn't have the technology of powerful amplifiers that we do today. So, they developed a weapon that produced high intensity sound powered by "compressed air."

K.) Unbelievably, the U.S. armed forces are starting to produce their own boom cars! They are trying to interest and recruit young males. One of these vehicles is a Humvee called "Mountain Thunder," and is used by the West Virginia Army National Guard. At least 10 states have ordered similar vehicles. The conversion of each Humvee is about $25,000.00. Major Ron Garton commented on the Humvee and the current need for them in the war against terrorism in Iraq, "We've got a severe shortage of Humvees. We really needed to throw this one back into the inventory. They're a hot item right now." Had it been shipped with its sound system intact, Major Garton joked, "It could have had some psychological-operations possibilities." (Source – A Hummer of a Humvee, by Rick Steelhammer; Sunday Gazetter Mail Online, 3/2/2003)

L.) Operation Just Cause was launched on 12/20/1989 by U.S. troops. It was against Manuel Noriega in Panama. On 12/24/1989, Noriega had barricaded himself in the Vatican Embassy in Panama City. To flush him out, U.S. troops bombarded the Embassy building with "blaring rock and roll music (The Animals, Bobby Fuller, Bruce Springsteen) around the clock for several days." Noriega was forced out by January 4th. (Source – The Growley, may 2003, Essays by Michael Gilleland, Musical Torture)

M.) The prison system uses loud, amplified music to lower the morale of prisoners and prevent conversation by piping in "heavy metal or rap" from morning until night. Even the guards have to "bellow to be heard." (source – Noise as a Metaphor for Koyaanisqats!, by Maya Khankhoje)

Armed with high-intensity sound (very high decibel levels), low-frequency sounds (bass), and deadly, destructive infrasound (frequencies below 20 Hz), boom car owners threaten public health welfare and safety!

Reacting to Boom Cars

Events that disturb and harm our physical, emotional, and mental health are called stressors. Stressors can lead to the body initiating the fight-or-flight adrenaline response. The body gets ready to fight a stressor, or flee a stressor.

Boom cars, with their high-intensity/low-frequency sounds and infrasound, are a known stressor that can lead to specific, negative events in the body.

The Fight-or-Flight Adrenaline Response: Within a few seconds of being in contact with offensive noise, a known stressor, the body sets off it's fight-or-flight adrenaline response. Impulses from the brain trigger the autonomic nervous system, which sets off the general stress response. As a result, glandular, cardiovascular, gastrointestinal, and musculoskeletal systems are then affected. When the body encounters loud noise, a known stressor, the brain instantly sends a message to the adrenal glands, which quickly release epinephrine (adrenaline). Within moments, this chemical has the entire body on alert. The heart beats more rapidly and with more force. The pupils dilate to allow more light to come into the eyes. Breathing increases. The digestive system slows, allowing more blood to go into the muscles. The muscles tense. Blood pressure increases. Increased sugar, cholesterol, and adrenaline are then released into the bloodstream. Peripheral blood vessels constrict. Increased activity related to gastric ulcer formation occurs. Subjective responses begin, such as irritability and mood changes.

Pregnancy: If a boom car listener is pregnant, exposure to the high-intensity/low-frequency sound will negatively affect her unborn child, due to the fight-or-flight adrenaline response of the mother's body. If the noise assault is in the first trimester, damage to the delicate fetal organs can occur due to the interruption of normal oxygen and nutrient flow to the placenta. During the first 14 to 60 days after conception, important developments in the central nervous system and vital organs of the baby are taking place. Unborn babies have been studied and shown to be reactive to light, sounds, and touch. In addition, the fetus responds to some of the changes in the mother's body, such as negative emotions, noise, and other forms of stress. If a woman is pregnant, the last thing she needs is muscle tension, as this could induce contractions. If a woman is pre-term, she must RELAX. Muscle tension and stress increase the chances of pre-term labor and complications to her unborn child.

Dr. Luther Terry, a former U.S. Surgeon General, noted that "excessive noise exposure during pregnancy can influence embryo development."

"Growing evidence suggests a link between noise and cardiovascular problems. There is also evidence suggesting that noise may be related to birth defects and low birth-weight babies."

"The U.S. study in Los Angeles found that, in addition to greater incidence of low birth weights, there was also a greater incidence of birth defects such as clefts of the lip or palate, and spinal malformations." (Source: The Environmental Protection Agency's NOISE EFFECTS HANDBOOK)

According to NIDCD, "about 2 or 3 of every 1,000 children in the United States are born deaf or hard of hearing. More lose their hearing later during childhood." (Source: http://www.nidcd.nih.gov/health/parents/screened.htm)

Exposure to noise is related to negative physiological changes in sleep, blood pressure, digestion, and the developing fetus. Noise annoyance and adverse cardiovascular effects were correlated. Noise produces increased gastric emptying, peristaltic esophageal contractions, anxiety, aggression, violence, suicide, and murder. (Source: League for the Hard of Hearing, NOISE & HEALTH FACT SHEET)

"**The American Academy of Pediatrics policy statement 'Noise: A Hazard for the Fetus and Newborn (RE9728)**' concludes that exposure to excessive noise during pregnancy may result in high-frequency hearing loss in newborns. The American Conference of Governmental Industrial Hygienists (ACGIH) suggests that noise exposure in excess of an 8-hour TWA of 115 dBC, or a peak exposure of 155 dBC, to the abdomen of pregnant workers beyond the fifth month of pregnancy may cause hearing loss in the fetus. Note: We are only discussing prevention of hearing loss. Noise exposure to pregnant employees may need to be reduced to prevent/reduce other harmful effects such as premature delivery and intrauterine growth retardation, which results in low birth weight babies. The military, for example, has established guidelines that pregnant women should avoid any exposure to ambient noise greater than 104 dBA." (Source: Markiewicz, Dan, MANAGING BEST PRACTICES: HEARING LOSS IN NEWBORN BABIES)

HEARING: You don't have to have pain in your ears to know that hearing loss is occurring and that loud sound is dangerous to health. Most people do not like their music loud! For persons with hearing loss from boom cars, rock concerts, walkmans, etc.; "Let's assume that a single bird sitting far away in the tree produces a sound level 0 dB (barely audible). A person with hearing loss (after going to 'bad clubs') requires a minimum sound level of 40 dB in order to hear the sound. How many birds have to sit in the tree in order for this person to hear them? Answer: 10,000. For the person with 50 dB loss it will take 100,000 birds, and with 60 dB loss it will take 1,000,000 birds." (Source: PAPER: COMMON MISCONCEPTIONS ABOUT HEARING, by Marek Roland-Mieszkowski, Ph.D.)

Even chronic, low-level traffic noise at 50 – 60 dB can adversely affect children. It can cause a rise in blood pressure, heart rate, and stress hormones. In addition, it also reduces task motivation and learning.

Elevations of stress hormones are linked to the adult illnesses of "high blood pressure, elevated lipids and cholesterol, heart disease and a reduction in the body's supply of disease-fighting immune cells." (Source: http://www.newscientist.com/news/ - Ithaca, NY, 5/22/2001)

Length of Fight-or-Flight adrenaline response in the body: The length and severity of symptoms varies. It also depends on the general health of the victim at the time of the assault. The symptoms of a stress reaction don't disappear when the stress is relieved. The body takes a while to return to normal. It could take minutes, or it could take hours. Each individual is different.

Short Term Noise Assaults: On short-term noise assaults, the body generally has a chance to recover. However, the length and severity of symptoms varies. It also depends on the general health of the victim at the time of the assault. To repeat, the symptoms of a stress reaction don't just disappear when the stress is relieved.

Bursts of Noise: "One burst of noise, as from a passing truck, is known to alter endocrine, neurological, and cardiovascular functions in many individuals; prolonged or frequent exposure to such noise tends to make the physiological disturbances chronic. In addition, noise-induced stress creates severe tension in daily living and contributes to mental illness." (Source: NOISE POLUTION, Electric Library presents Encyclopedia.com)

A Warning: The body's response to even a few seconds of tremendous noise can be long lasting. After repeated exposure to harmful stimuli, the body doesn't bounce back. With repeated assaults over a long period of time, these defense mechanisms can become impaired, especially if the body is compromised with disease, age, or physical debilitation. Some studies show a few seconds of noise to be OK. Other studies have shown exceptions to this, such as the studies of Hans Seyle (1956).

"The physiologic changes involved in the fight-or-flight response, if frequently elicited or maintained for long periods, can seriously affect health." (Source: MEDICAL-SURGICAL NURSING, THIRD EDITION, by Luckmann and Sorensen)

"Research shows that intermittent and impulsive noise is more disturbing than continuous noise." (Source: League for the Hard of Hearing's NOISE & HEALTH FACT SHEET)

"A big danger with loud music is that the ear anesthetizes itself," Hull noted. "After fifteen minutes of unbearably loud music, many people just adjust – without realizing the damage that is taking place." (Source: SURVIVING THE MEDIA JUNGLE, by David Chagall)

"Listening to music for hours at lower levels can cause damage" to the ears, as well. (Source: MUSIC AND YOUR TEENS: "TURN THAT DOWN!" – Parenting of Adolescents, 3/10/1998)

"Hospital noise has been shown to slow healing." (Source: THE SOUND AND THE FURIOUS, by Corinne Asturias)

Noise sources from low-frequency components, like boom cars, deserve special consideration. "Disturbances may occur even though the sound pressure level during exposure is below 30 dBA." Low-frequency noise will penetrate walls and barriers more readily than high frequency noise. (Source – GUIDELINES FOR COMMUNITY NOISE: ADVERSE HEALTH EFFECTS OF NOISE)

Vibroacoustic Disease

Vibroacoustic Disease, or VAD, is a chronic, progressive, cumulative, systemic disease. Exposure to high-intensity/low-frequency sound and infrasound can lead to Vibroacoustic Disease. Studies have shown that environments with high-intensity sound over 110 dB, coupled with low-frequency sounds below 100 Hz, place people at high risk for developing Vibroacoustic Disease. For example, Vibroacoustic Disease has been identified in disk jockeys, due to loud music exposure.

When exposed to high-intensity/low-frequency sound, which includes loud music, the body is subjected to powerful sound vibrations. This noise stressor leads to: homeostatic imbalance, disease, interference with behavior and performance, visual problems, epilepsy, stroke, neurological deficiencies, psychic disturbances, thromboembolism, central nervous system lesions, vascular lesions in most areas of the body, lung local fibrosis, mitral valve abnormalities, pericardial abnormalities, malignancy, gastrointestinal dysfunction, infections of the oropharynx, increased frequency of sister chromatid exchanges, immunological changes, cardiac infarcts, cancer, rage reactions, suicide, and altered coagulation parameters.

Infrasound exposure INCREASES the rate of development of Vibroacoustic Disease (VAD). "The evolution of VAD is classified by three stages based on years of noise exposure – mild (1-3 yr), moderate (4-9 yr) and severe (10-15 yr)."

"VAD is essentially characterized by a proliferation of extra-cellular matrix. This means that blood vessels can become thicker, thus impeding the normal blood flow. Within the cardiac structures, the parietal pericardium and the mitral and aortic valves also become thickened. The most recent VAD studies have been suggesting that infrasound exposure may be crucial to the rate of evolution of VAD. Occupational exposure to infrasound is suspected to cause an increase in the rate of thickening of the pericardium and cardiac valves in commercial airline pilots over that of flight attendants (Alves-Pereira *et al*, 1999)."

In addition, sources of low-frequency noise that place people at risk for developing Vibroacoustic Disease are rock concerts, dance clubs, "Powerful car audio equipment," water jet skies, and motorcycles. (Source: VIBROACOUSTIC DISEASE: THE NEED FOR A NEW ATTITUDE TOWARDS NOISE, by Mariana Alves-Pereira and Nuno Castelo Branco).

"Among the most serious on-the-job consequences of untreated VAD are rage-reactions, epilepsy, and suicide. VAD patients do not have the usual suicidal profile: after the event, if unsuccessful, they remember nothing, and are confused about the entire episode (Castelo Branco *et al*, 1999). Similarly, patients who suffer rage-reactions also appear confused and seem to remember nothing (Castelo Branco *et al*, 1999). These events can have dire consequences if they occur on the job. Not only can other individuals be injured, but also costly sophisticated equipment could become irreparably damaged." (Source – BIVROACOUSTIC DISEASE: THE NEED FOR A NEW ATTITUDE TOWARDS NOISE, by Mariana Alves-Pereira and Nuno Castelo Branco)

The stages of Vibroacoustic Disease are as follows:

Stage 1 – MILD: (1-4 years) Slight mood swings, indigestion, heartburn, mouth/throat infections, bronchitis

Stage 2 – MODERATE: (4-10 years) Chest pain, definite mood swings, back pain, fatigue, skin infections (fungal, viral, and parasitic), inflammation of stomach lining, pain and blood in urine, conjunctivitis, allergies.

Stage 3 – SEVERE: (> 10 years) psychiatric disturbances, hemorrhages (nasal, digestive, conjunctive mucosa) varicose veins, hemorrhoids, duodenal ulcers, spastic colitis, decrease in visual acuity, headaches,

severe joint pain, intense muscular pain, neurological disturbances. (Source – MONITORING VIBROACOUSTIC DISEASE, by Branco, Pimenta, Ferreira, and Alves –Pereira)

"After four years of exposure, the individual tends to recognize the existence of memory lapses, mood changes become more pronounced, and a variety of simultaneous ailments can appear. In the advanced stages, neurological disorders include epilepsy, balance disorders, and a marked increase in cognitive impairment. The palmo-mental reflex – a primitive reflex that is frequently present in several pathologies associated with cognitive deterioration – is a common feature in VAD patients. Facial dyskinesia triggered by auditory stimulus has also been identified in LFN-exposed workers." (Note: LFN is low-frequency noise).

Psychiatric disorders, such as suicidal tendencies and rage-reactions, are some of the most tragic consequences of unmonitored LFN exposure. Respiratory disorders appear within the first four years of exposure, and can progress into shortness of breath, and focal pulmonary fibrosis. This is independent of smoking habits." (Source – MONITORING VIBROACOUSTIC DISEASE, by Branco, Pimenta, Ferreira, and Alves-Pereira)

Studies have been done to see what effect vibrations have on the human body. As high-intensity/low-frequency sounds (extreme amplified bass) rattles a boom car, the occupants in it, secondary listeners, and structures surrounding it, this study is interesting to note. (WBV is Whole Body Vibration).

"Vibration is believed to cause a range of problems. These include:

- Disorders of the joints and muscles and especially the spine (WBV)
- Disorders of the circulation (hand-arm vibration)
- Cardiovascular, respiratory, endocrine, and metabolic changes (WBV)
- Problems in the digestive system (WBV)
- Reproductive damage in females (WBV)
- Impairment of vision and/or balance (WBV)
- Interference with activities
- Discomfort

The most frequently reported problem from all sources of WBV is low-back pain arising from early degeneration of the lumbar system and herniated lumbar disc. Muscular fatigue and stiffness have also been reported." (Source – ATSB – ROAD SAFETY REPORTS: HEAVY VEHICLE SEAT VIBRATION AND DRIVER FATIGUE)

The SUN AND WEEKLY HERALD (Sun-Herald) recently interviewed Dr. Robert Fifer, the Director of Audiology and Speech Language Pathology, at the Mailman Center for Child Development at the University of Miami. He discussed Vibroacoustic Disease and its relation to infrasound and boom cars. The article states, "But the physical vibration so prized by car audio fanatics, and despised by their victims, is largely produced by sounds pitched too low to hear, called subsonic or infrasonic sounds. Medical research over the past four decades shows that exposure to infrasound can have devastating effects on the human body and mind that go far beyond mere hearing loss."

The article goes on to discuss the fight-or-flight adrenaline response and how it is also triggered by LPALF (large pressure amplitude – low-frequency noise) or high-intensity/low-frequency sound. In other words, **the fight-or-flight adrenaline response can be triggered by sounds you don't even hear!**

At loud enough volumes, infrasound can "shake an object o bits the same way a soprano's high motes can shatter a wine class." (Source – INFRASOUND: I'M ALL SHOOK UP! – Sun and Weekly Herald, Sun-Herald.com, 8/24/2003)

Listening to classical music, such as Mozart, can increase your IQ, heal the body, and increases brain development in babies. Classical music enhances abstract thinking. On the other hand, listening to loud, hard, grunge rock, rap, or new age music actually interferes with abstract thinking. Gansta/porno rap is a favorite choice for listeners addicted to loud, bass sounds. Gangsta/porno rap (for example, Eminem) and some acid or hard rock (Marilyn Manson) glorifies violence, suicide, illegal drug use, murder, killing police officers, rape, and promotes hatred against society, women, and the law.

Music AFECTS and REFLECTS your state of mind. In addition, your behavior reflects your personality.

Highway Safety

As boom car drivers take to the streets, they appear to concern themselves more with disturbing the peace and impressing their peers, rather than highway safety. With windows rolled down, to increase the sound pressure levels and *impress* peers and secondary listeners, boom car operators enter one of the most dangerous places on earth – a highway…

Boom cars can interfere with emergency vehicles getting to their destinations. On 9/28/1999, the Daily Oklahoman reported about a girl "who died in an ambulance because it was not able to reach the hospital quickly enough." "The driver was delayed by traffic. Paramedic Arnell Dean said he routinely has trouble with drivers getting in his way when he is rushing someone to the hospital. Dean added that today's cars are 'almost soundproof with loud stereos.'" (Source – MICHAEL WRIGHT'S BOOM CAR WEBSITE)

Boom car drivers actually experience a decrease in their peripheral vision, leading to car accidents. "Psychologists Helen Beh and Richard Hirst of the University of Sydney investigated whether loud music interferes with driving. They discovered that responding to objects intruding on their peripheral vision, people subjected to 85-decibel rock music were around 100 milliseconds slower than the other groups' in their study. Since may road hazards emerge from the periphery, drivers listening to loud music are less safe." (Source – FEELING THE MUSIC CAN BE DANGEROUS TO YOUR HEALTH, by Dr. Bart Billings)

High-intensity/low-frequency sound creates annoyance, irritability, and mood changes – thus, it could very well be a strong contributing factor in ROAD RAGE! Boom car owners often choose gangsta/porno rap as their music selection. These lyrics are filled with violence, defiance of authority, lack of respect for self and others, murder, suicide, drugs, abuse of women, etc. So, if you take a teenager with the raging hormones of puberty, combine them with angry, loud, aggressive lyrics and bass, it creates a dangerous recipe for road rage.

"Not only can listening to a car stereo potentially cause hearing loss, but it can be distracting and interfere with our ability to hear emergency sirens, she said. A siren is ineffective if it is not 8-12 dB louder than the background noise of a car. Listening levels often surpass the volume emitted from emergency sirens." (Source – HEARING CONSERVATION FOR COMMUTERS, by Kerri Waldowski)

In addition to blocking out the sounds of emergency vehicles, such as ambulances, fire engines, and police cruisers, the enormous sound levels from boom cars will block out car horns warning of danger, voices from pedestrians, children playing, school bus horns, etc.

Illegal street racing has been glamorized by the movies 'The Fast and the Furious' and its sequel. There is a strong link between illegal street racing and boom cars.

Loud car stereos can activate car alarms, causing further chaos. "In some jurisdictions, drug dealers advertise by cruising neighborhoods with the car stereo turned up loud." (Source – LOUD CAR STEREOS, by Michael S. Scott, U.S. Department of Justice COPS series)

At the WERNER ENTERPRISES web site are the following road rage facts:

1. The National Highway Traffic Safety Administration (NHTSA) says about 66 percent of all traffic fatalities annually are caused by aggressive driving behaviors, such as passing on the right, running red lights and tailgating.

2. The cost of aggressive driving is immense. Over the past decade, aggressive driving has killed an average of 1,500 people each year, injured another 800,000 and cost the country roughly $24 billion in medical costs, property damage and lost time from work. (Source – USA Today)

3. Aggressive driving incidents have risen by 51 percent since 1990 and 37% of these incidents involved firearms. (Source: U.S. News and World Report)

4. At least 20 % of adults have hostility levels serious enough to be a health hazard. (Source – USA Today)

5. Since 1987, the number of miles driven in the United States has increased 35 percent, while the miles of pavement increased by only 1 percent. (source – NHTSA)"

"Car crashes are the number one killer of teenagers in America – more than 5,000 teens die each year. Inexperience, risk-taking, and driver distractions are some reasons why."
"Loud music, changing discs and tapes, as well as tuning the radio are also potentially deadly distractions when behind the wheel. And when a teen driver has friends in the car, the risk is even higher; the more passengers, the greater the chance of a serious crash."

"You may think all the adjusting and changing is routine – after all, you've been doing it since you got your license. But inserting a CD or searching for a radio station makes you six times more likely to get into an accident than glancing at the fuel gauge or speedometer.

"Think about it. Let's say you're going 60 miles per hour. If you look down for just two seconds to choose a CD or adjust the climate controls, you'll have traveled 176 feet blindly. That's more than half the length of a football field." (Source – SHELL, DEADLY DISTRACTIONS)

Manipulating a vehicle's CD/cassette player makes "car stereos eight times as deadly as dialing a cell phone." (Source – LIBERTARIAN PRESS RELEASES, 6/26/2001

About 70 percent of the car audio market is "made up of males from 16 to 25 years old." (Source – AUTOMOTIVE AFTERMARKET INDUSTRY ASSOCIATION, IN TUNE WITH THE SPORT COMPACT PERFORMANCE MARKET, by Gary McCoy)

There are CDs that only produce bass sounds. The primary purchasers for these CDs are 16-25 years old. "I was told that the new digital sound technology on the CD's can produce lower bass frequencies than any musical instrument ever produced." (Source – FEELING THE MUSIC CAN BE DANGEROUS TO YOUR HEALTH, by Dr. Bart Billings)

"Between 25 percent and 50 percent of all crashes are due to driver inattention or distraction." (Source – ENJOYING THE SUMMER SAFELY: HOW TO DEAL WITH DISTRACTED DRIVERS, by Ann Job)

Driving safely is one of the most important jobs a person will ever do. It requires, in some cases, like foul weather or heavy traffic, extreme concentration. Driving is not a time to be entertained. It is a time to travel safely, and ensure others on the highway remain safe, as well. Boom cars, with their loud noise, are a deadly distraction to all drivers on the highway.

Property Values

Boom car owners not only disturb the peace, they have also been closely linked to other crimes, as well. As noise and crime infiltrate business parking lots and residential neighborhoods, the law-abiding citizens will seek safer and quieter locales. In addition, a property owner has to disclose any noise problems when selling a home.

Imagine this – you are a real estate agent trying to sell a home to a prospective buyer. You have just told this buyer that the neighborhood is peaceful, quiet, and suitable for young children. At that moment, a boom car whizzes by, belching out LOUD, profane lyrics, as well as the booming bass. What does that do to property values?

The 1999 report from the Census Bureau, titled AMERICAN HOUSING SURVEY FOR THE UNITED STATES, stated that noise is America's number one complaint about their neighborhoods. It is also the main reason for wanting to move to another location. Noise levels have increased 6 fold in major U.S. cities in the last 15 years. Automobiles are the largest source of noise.

In the Quiet Communities Act of 2003, preamble to H.R. 475, it is noted: "For millions of Americans, noise from aircraft, vehicular traffic, and a variety of other sources is a constant source of torment. Millions of Americans are exposed to noise levels that can lead to sleep loss, psychological and physiological damage, and work disruption."

The EPA calculates that 138 million Americans live in areas with dangerously high noise levels. If citizens are unhappy, they will leave a city, thereby causing problems with businesses, revenue, taxes, property values, crime, and lack of tourism. When the good citizens of a city start leaving, the bad element is left to thrive. And thrive they will!

Our neighborhood has really gone downhill since the arrival of boom cars, and their associated bad behaviors. In 2001, we conducted a local online forum to discuss this serious issue for Savannah, GA. This was a message we posted regarding our experiences:

"Boy, I can really identify with the earlier post, in which the author talks about noisy neighbors! In my experience with boom car owners, I have seen them exhibit other behaviors aside from just the inconsiderate booming music and bass. This is just a FEW of the examples of what I have seen from our boom car neighbors and boom car drivers on the street – in the daylight hours – openly using drugs, urinating in the street, cursing everyone that passed by their car, using profane hand gestures to other drivers, speeding, reckless driving, underage drinking AND driving under the influence, vandalism, littering, destruction of property, and retaliation. Have you ever noticed that bad habits usually lead to other bad habits? I think that's what happens when you don't respect the law, don't respect yourself, and don't respect your fellow human beings!"

A member named Reedie, who resides in Savannah, posted one of the responses we received on 6/16/2001:

"You must live in my neighborhood! I have witnessed drivers of boom boxes using them to alert the drug buyers and sellers. They would stop at the end of a street, sit there in their cars with their boom boxes and wait for the clients (plus going across the street to urinate on a neighbor's yard)! The clients come out and gather around the car (these are always young males). It doesn't happen as much on my street as the police are more evident now.

I know of one house that was closed down a few months ago where dealing (and buying) was going on. There was always a crowd in and out of that house all hours of the day and night. There were gunshots fired and you could hear them go off. Also there is another house under surveilance. Just recently, I heard gun shots go off in that vicinity also. The word may be getting around, as it isn't as bad as it has been.

We have our share of break-ins and for those who work during the day, they seem to be hit the hardest. Everyone is afraid to go off on a vacation and leave their house unattended. Cars have been broken into and property stolen. The trouble is that it happens in just minutes before you can even have time to call the police. I believe that unmarked cars would be very instrumental in cutting down on crime. I have noted marked cars patrolling my area and maybe there are some unmarked ones too that I'm not aware of."

Boom Cars & Crime

Children in our modern world learn to tolerate, expect, and look forward to loud intense sounds. It begins in early childhood with noisy toys. It continues into teenhood with walkmans, discmans, TV, radio, etc. This activity progresses into early adulthood as they buy loud car stereos and go to loud dance clubs. Our nation's youth actually become addicted to the loud, amplified, bass music and think that it is normal. As time progresses, more and more is required to satisfy the needs of the listener.

Endorphins are released when the body is subjected to loud, overwhelming sounds. As a result, the listener experiences a sensation of elation, similar to a "runner's high." Though the listener feels good, his body is actually trying to compensate for the dangerous noise assault it is experiencing.

"Noise is the etymological grandchild of the Latin word, 'nausea,' and a younger cousin to the archaic English word for strife, contention and quarreling; not a surprising fact, since noise can lead to conflict and even litigation. Noise has also been implicated in the onset of hypertension, increased cholesterol levels, and frequent migraines. Noise can 'drive people crazy,' as evidenced by the young people who have turned to violence to get the adrenalin rush that noise get the addicted to." (Source – NOISE AS A METAPHOR FOR KOYAANISQATS!, by Maya Khankhoje)

Boom cars and loud music have been linked to murder and other crimes! A few examples follow:

1.) In 1995, in Los Angeles, California, an innocent family took a wrong turn on a city street in their family car. Gang members had gathered in the area where this family happened to find themselves. Seeing the car, the gang members opened fire on them, killing a 3-year-old child and wounding the 2-year-old child. The gang was known for their violence and loud music from their car stereos. (Source – WRONG TURN COSTS A CHILD'S LIFE, by Jennifer Auther, CNN U.S. NEWS, 9/18/1995)

2.) In 1999, in St. Petersburg, Florida, a homeless man was punched and kicked to death by two boom car boys. The two young men murdered the 51-year-old homeless man after "he or someone with him complained about their loud car stereo as they cruised by." (Source – HOMELESS MAN MURDERED AT BUS STOP IN SAINT PETERSBURG, FL, USA, by Tom Boland, 8/12/1999)

3.) In 2003, a boom car owner was murdered by a local resident tired of hearing the blaring "combination of rap and hip-hop music" from the parked car at 12:50 a.m. The boom car owner, Carlos Perez, was 44 years old and an executive chef. Unhappy with the music blasting in the middle of the night, the resident went to confront Perez. Words were exchanged, and the two men got into a fistfight. Perez, the boom car owner, died during the scuffle. (Source – SF.com 2/5/2003, FIGHT OVER LOUD MUSIC TURNS DEADLY IN SF, by Bay City News Report/SF.com 2/6/2003, POPULAR CHEF DIES IN FIGHT: LOUD MUSIC IN CAR LEADS TO FATAL FISTICUFFS, by Henry K. Lee and Steven Rubenstein, San Fransisco Chronicle)

4.) In 2002, a man was shot twice by a boom car owner. The man was visiting a friend when both became irritated with the boom car owner's loud car stereo. When they asked him to turn it down, the boom car owner left the area. He left long enough to retrieve a .25-caliber pistol. The boom car owner came back to the local residence of the complainants and promptly fired four shots. Two of the shots hit one of the men who complained. The man was injured so severely that he will walk with a limp for the rest of his life. The boom car owner was 18 years old and had a history of run-ins with the law. Two 'juvenile girls' were in the boom car at the time of the shooting. (Source – the Cincinnati Enquirer, COVINGTON MAN SHOT IN LOUD-MUSIC DISPUTE TESTIFIES, by Jim Hannah, 6/20/2002)

5.) A woman was stabbed to death when she complained about a neighbor's loud stereo at 11 PM. The loud stereo was located in an apartment building. The two women involved "had called police on each other about loud music at least eight times since 1999." (Source – Dayton Daily News, GREENE

WOMAN STABBED TO DEATH: OBJECTIONS TO MUSIC VOLUME LEADS TO HOMICIDE, by Amelia Robinson)

6.) In 2001, a boom car owner in Vermont also had a laundry list of other crimes, as he stood before the judge. These other offenses included, "possession of ecstasy (an illegal drug), possession of marijuana, failure to appear for a court hearing," having a role in a teenage prostitution ring, rape of a 17-year-old girl, attempted murder, and robbery. (Source – 2/6/2001, FEB. 6: SUSPECT IN TEEN'S DEATH WAS IN VT CUSTODY: RODRIQUEZ MIGHT HAVE BEEN HELD FOR PAROLE VIOLATION, by Ed Sharny)

7.) In 1999, a boom car owner murdered his 18-year-old girlfriend. He was only 19, but had a laundry list of other offenses along with his loud car stereo: DUI, "drug paraphernalia, telephone harassment, traffic violations." (Source – The Cincinnati Post, 3/26/1999, HAMILTON TEEN KILLED: BOYFRIEND HELD; 'DOMESTIC DISPUTE' CITED BY GA POLICE)

8.) In 1997, Santa Ana, California had a problem with up to 1,000 cruisers in their city. Because of the loud car stereos, drugs, alcohol, murders, and violent conflicts between rival street gangs, gang members yelling obscenities and firing their guns into homes and cars, and clogged traffic, residents and businesses were leaving the area. "Cruising, a seemingly harmless event was the cause of traffic gridlock, noise, general disorder, crime, violence, and great fiscal expense." When the city eliminated the cruisers, the residents and businesses moved back in and thrived in the safe and peaceful environment. (source – CRUISING ABATEMENT PROJECT: REDUCING STREET CRUISING AND RELATED CRIME, Santa Ana Police Department, CA, 1997)

9.) Los Angeles, California and Hollywood contain a wealth of gangs. One man lived among them for a period of time and related this statement, "I sometimes would watch the gangsters with shaved heads, white T-shirts, gold chains, tattoos, and baggy pants in with their low-rider cars and loud stereos and I would wonder if they actually wanted someone to shoot them. The gang members weren't hard to identify! They might as well have painted targets on the back of their shirts. These gang members were like a cancer and affected the life of the community adversely in a myriad of different ways, both large and small. Residents of our block simply tried to survive the best they could by ignoring, collaborating, and/or simply putting up with them. Yet with the gangsters there ultimately could be no doubt: the neighborhood was THEIRS!" (Source – HOLLYWOOD!, by Richard Geib) (HOLLYWOOD DAYS! LA GANGS, RUNAWAYS, DRUGS, AD NAUSEAM – ALL THE PROBLEMS IN THE WORLD!)

10.) In 2001, in east Palo Alto, three men were arrested for attempted homicide and assaulting a police officer. The two male victims were stabbed over an argument over "vehicular noise." When the police arrived on the scene, they found "active fighting in the streets" and a "crowd of dozens." (Source – the Daily News, 8/13/2001, FIGHT OVER LOUD CARS LEAVES TWO CRITICAL, by Christine Lias)

11.) In 2002, a Gainesville, Florida police officer cracked down on loud car stereos, as a way to contact possible gang members. He was nominated for Officer of the Month! These are some of the things the officer found as he pulled boom cars over: a fully loaded .45 Glock automatic under one driver's seat (the owner was a convicted felon and not allowed to possess weapons), marijuana, and a major pot dealer was arrested and taken off the streets. (Source – http://www.gainsvillepd.org/officer_of_month.htm – GAINESVILLE OFFICER OF THE MONTH)

12.) In 2003, the Savannah police were called to a residence, due to loud noises. The found a large amount of marijuana, a .45 caliber semi-automatic handgun, and cocaine. (Source – Savannah Morning News, 6/19/2003

13.) In 2003, Savannah boom car owners have also been arrested and ticketed for engaging in other crimes. For example: DUI, drug paraphernalia, cocaine, delinquent child support, driving without insurance, tag registration, or license; wrong tag on vehicle, possible arsonist, loitering, leaving a restaurant

without paying, etc. One Savannah police officer informed me that the majority of his boom car investigations have led to finding the drivers to be involved in other crimes.

In general, bad behaviors tend to lead to other bad behaviors and crimes cluster and escalate! What other offenses might a vigilant and observant police officer find if he pulls over a boom car? The high-intensity/low-frequency noise from boom cars is a powerful and dangerous force. The time for viewing boom cars as a "lesser offense" and "boys being boys" is at an end.

We need to work together to rid our nation's streets and highways of this dangerous offense! We CAN reclaim peace, quiet, and safety for our cities and neighborhoods!

The right to quiet is a RIGHT – not just a privilege!

Noise….

It's not just about hearing loss anymore.

Do unto others, as you would have them do unto you.

- *The Golden Rule*

Resources

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