

Automotive EMR, Unsafe at any Speed

By James D. Honeycutt, PhD, July 2013

Published in 1965, *Unsafe at Any Speed: The Designed-In Dangers of the American Automobile* detailed the reluctance of American automakers to spend money on improving safety and made Ralph Nader a household name. In the nearly 50 years since its publication automobiles have become more complex, replacing mechanical systems with a myriad of microcomputers and increasing the amount of ElectroMagnetic Radiation (EMR) for the occupants¹. Current automobile designs have nearly 100 microprocessors and this number is expected to double in 5 years². A typical automobile contains about 5 miles of wiring to connect and control the engine, transmission, suspension, braking, steering, entertainment, navigation, emissions, safety, security, communications and comfort components, to name only a few. And all these systems' computers communicate with each other³. The protocol primarily used in today's cars is called CAN, Controller Area Network, introduced by Bosch in 1986. Another network called MOST, which is focused on the human aspects of the automobile, encompasses the navigation and entertainment components. The following diagrams illustrate these systems.

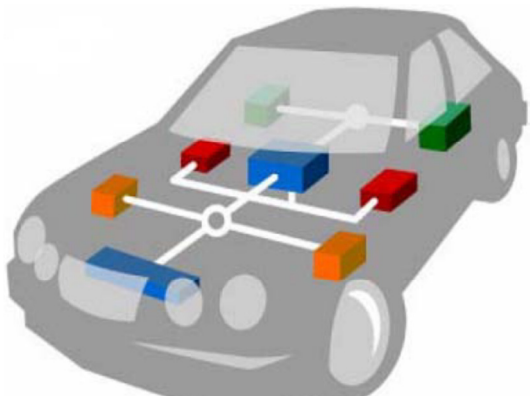


Figure 1 Controller Area Network

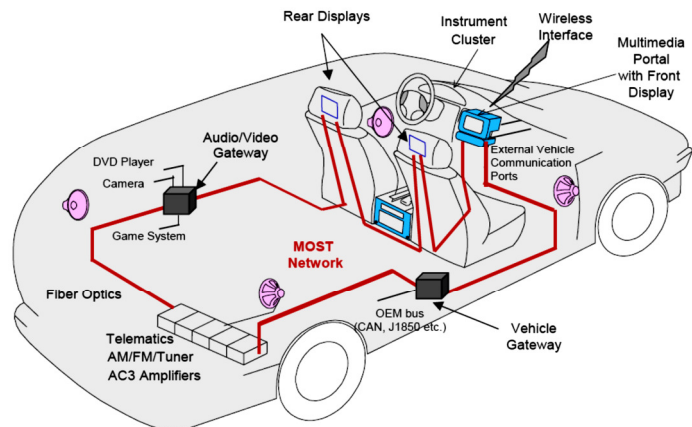


Figure 2 MOST Network

The greatest amount of pollution from today's automobiles is not from the exhaust; it's EMR from networking. Today's 'safer' cars are still *unsafe at any speed* and auto makers are not addressing this issue with any urgency.

Eliminating EMR related pollution from our automobiles presents a greater challenge than reducing air pollution did in the 1970s and 80s. The networks and controllers creating the EMR are a necessary part of both

reducing air pollution and improving safety in the modern automobile. Hybrids and electric vehicles have EMR emissions similar to conventional vehicles⁴. And adding more controllers as is expected only increases the number of networks and network speeds in our automobiles which further increases the EMR pollution. It's comparable to having a leak in the exhaust system that is slowly poisoning the occupants. Both carbon monoxide and EMR are odorless and dangerous.

Shielding and avoidance of EMR as promoted by The World Health Organization (WHO) (<http://www.who.int/peh-emf/en/>) and the International Commission on Non-Ionizing Radiation Protection (ICNIRP, <http://icnirp.net>) are not feasible in an automobile. Shielding is generally accomplished by placing a grounded covering (e.g. a wire braided sheath) around a network data path⁵. In an automobile the shield is connected to the vehicle's frame. Because the vehicle is rolling on rubber wheels and is not connected to an 'earth' ground all the metal connected to the frame becomes an antenna for transmitting EMR. Thus, attempts to shield the network connections by the vehicle 'ground' is a contradiction, as there is not a true vehicle 'ground'. Grounding straps, sometimes called anti-static straps that connect from the vehicle's frame and hang to touch the actual ground below the car, are not a viable solution as they do nothing when the car is in motion, and are principally intended to discharge static electricity, not to provide an earth ground.

A 1996 University of Washington study⁶ showed that increasing the time of exposure to previously 'safe' levels of EMR resulted in an increase of its detrimental effects. Thus long term exposure to even low level EMR from vehicles has become a concern. Since the focus in EMR studies has been epidemiological, rather than etiological, there is no clear understanding of the risks from this unavoidable exposure.

Short of a complete redesign of the automobile's chassis and frame to use tuned channels for the network connections to divert EMR away from the occupants, there have been few options available to reduce EMR pollution until now. NuTesla's Rhythmedics® overcomes harmful EMR and restores the body's biological clock by emitting ultradian rhythmic queuing signals called Bio-Pulses™. Rhythmedics applies the resonant energy discoveries of Nikola Tesla combined with leading edge microprocessor technologies clocked by a fundamental Fibonacci number quartz crystal.

Rhythmedics Bio-Pulses are based on Galvani's and Volta's theory of 'animal magnetism' from the late 1700's that all living cells contain a voltage

potential. As explained in "Frequencies that Heal and Frequencies that Kill"⁷ when Electromedicine fell out of practice, engineers quit applying 'safe' frequencies to their designs. Rather than engineers continuing to build new Electromedicine devices, they allowed cost and time saving shortcuts to be applied to new electronic devices without regard to their impact on health.

In vitro studies with explanted Guidant cardiac pacers and defibrillators revealed that the Rhythmmedics Bio-Pulse fields improved the immunity to EMR. The Guidant devices operating within the Bio-Pulse field had significantly fewer 'events' as reported by the devices where such events would have caused a painful V-fib stabilizing pulse to be delivered to the patient.

Rhythmmedics Clarius™ was developed as the solution for mitigating automotive EMR. Clarius overcomes the inherent unhealthiness in modern automobiles by emitting healthy Bio-Pulses with ultradian queuing wellness frequencies to interrupt unsafe EMR. All you need to use Clarius in your automobile is a 12 Volt to USB A adapter, as commonly used with most mobile phones, and a USB A to Mini-B cable, the same one that is shipped with Clarius for performing updates. These are both available here <http://nutesla.com/members/warranty-and-service/#Programming>.

Clarius produces a donut shaped barrier called a Torus that extends 6 feet (2 meters) in all directions from its center, providing excellent coverage for all occupants in most vehicles. The longer Clarius operates the further its field of influence extends. Clarius owners report that not only does the driver feel more alert; the passengers feel more uplifted during the drive time and rested when they arrive.

Mixed EMR signals from your automobile's networking can induce random brainwave entrainment leading to irritability and restlessness and eventually to exhaustion or road rage. One Clarius owner said the feeling in the car with Clarius running reminded her of when she was a child and the family sang camp-songs on long drives, "everyone was happy and seemed 'in-sync' with each other".

While Clarius won't help you stay on pitch, its Ultradian Bio-Pulses will help interrupt unwanted EMR signals and reinforce healthy brainwave patterns. The four recommend preset programs for use while driving are: Preset #1, Focused Attention, which flashes Red when selected, and helps drivers stay focused and relaxed. Preset #2, Solfeggio Plus, which flashes Amber when

selected, and blends the ancient Solfeggio chanting frequencies with Rife energies to help everyone feel more balanced and in harmony with each other. Preset #3, Body Blaster, which flashes Yellow when selected, and is great if someone is feeling a bit under the weather and needs a boost to his or her immune system. Preset #5, Prana Yama, which flashes white when selected and helps to bring everyone back into the present moment by focusing the energies into his or her center.

Clarius is a US patented 2 and 1/2" square, thin USB powered instrument based on the resonant energy discoveries of Nikola Tesla. Clarius uses Rife frequencies blended with the Solfeggio notes and Schumann's earth resonance to create the most amazingly effective and simple to use instrument for combating unwanted EMR in automobiles, homes and offices. It's Fibonacci number generated Bio-Pulses create non-sensory brainwave entrainment for increased mental focus and energy while helping you stay relaxed. Clarius restores your daytime Circadian Rhythms and interrupts unwanted electromagnetic radiation that can interfere with your wellness. There are no pills to take and no headphones to wear, just plug it in. Clarius is less than the cost of two months of energy drinks or specialty coffees with none of the jittery or crashing side-effects, is made in the USA and comes with a money-back 30 day risk-free guarantee To learn more visit <http://SimplyClearing.com>.

¹ <http://arstechnica.com/science/2010/08/hybrid-vehicles-an-insidious-threat-to-ankles-we-kid/>

² June 2011 slide presentation by Thomas R. Kurfess, Ph.D., P.E., Professor and BMW Chair of Manufacturing, Department of Mechanical Engineering and Department of Automotive Engineering, Clemson University – International Center for Automotive Research, Clemson, South Carolina.

³ <http://johndayautomotiveelectronics.com/broadcom-claims-worlds-broadest-automotive-ethernet-product-portfolio/>

⁴ <http://news.consumerreports.org/cars/2010/08/mythbuster-emf-levels-in-hybrids-.html>

⁵ http://www.siemon.com/us/standards/Screened_and_Shielded_Network_Cabling_Guide.asp

⁶ https://www.researchgate.net/publication/14130162_Acute_exposure_to_a_60_Hz_magnetic_field_increases_DNA_strand_breaks_in_rat_brain_cells

⁷ <http://nutesla.com/wp-content/uploads/2013/06/Frequencies%20that%20Heal%20and%20Frequencies%20that%20Kill.pdf>