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Broadcast radio consultant Richard Arsenault has a bold idea to offset electrical interference to the reception of AM radio in the United States.

He is petitioning the Federal Communications Commission to allow virtually all AM stations, if they wish, to increase daytime power 10-fold or, if that's not possible, at least four-fold.

This is separate from his earlier petition, addressing pre-sunrise authorization rules, on which the commission is taking comment.

Arsenault argues that the AM service has suffered serious degradation of coverage from interference caused by new technologies. He cites broadband over power lines, computers, appliances like microwave ovens, energy efficient fluorescent lighting with integrated solid-state switching circuitry "and virtually all other electronic devices and services." In his eyes reception of AM radio is almost useless in many areas.

"Typically, co-channel and adjacent channel interference are no longer the limiting factors to interference-free reception during daytime hours," he told Radio World in a summary of his new petition. "The commission established service contours and interference protection ratios at an earlier time when interference from existing electrical equipment was minimal and interference from digital electronics did not exist. At that time, the protected contours and the interference ratios made sense. Unfortunately, they were calculated without available foresight of the future digital technological revolution."

Arsenault says few radios are capable of satisfactory reception under the protected daytime service areas out to the 0.5 mV/m contour that applies to most AMs. "What we currently have are AM broadcast stations adequately protecting each other in the AM radio band, but these same stations are not receiving protection from the intense electromagnetic interference from unintentional sources." He wants the FCC to rethink its protected service contours: "The sources of electromagnetic interference are part of our current lifestyle and will only get worse."

Increasing power during daytime hours would solidify daytime coverage of participating stations without altering the interference ratios between them. "I recommend that a ten-fold (10 dB) power increase be adopted. If this can not be achieved, alternately, power increases of four-fold (6 dB) could be adopted and still be

significant. Ultimately, anything less than a doubling of power (3 dB) would be almost insignificant."


Arsenault suggests that the FCC allow the increases during a five-year window. He also suggests a grace period to allow stations that elect to participate the time to install upgrades. Stations would need only to send a letter to the FCC specifying the degree of power increase and date of implementation. "All future interference calculations could be made utilizing the previous lower power levels of all stations, simplifying future allocation issues."

As to border areas and those where "a salt-water interference path to foreign stations exists," stations could use directional antennas or a partial power increase.

Arsenault would limit the power hike to daytime hours, at least at first, until nighttime interference concerns could be worked out.

He concludes: "AM radio service will further decline without serious intervention to remedy the interference issue as the ratio of the unintentional interference to AM radio will only increase further with the addition of each new technology. The time to get the static out of AM radio is past due."

Comment to Radio World at [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com). Contact Arsenault via his website.

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