

Editorial Director

Gary Breed
gary@highfrequencyelectronics.com
Tel: 608-845-3965
Fax: 608-845-3976

Publisher

Scott Spencer
scott@highfrequencyelectronics.com
Tel: 603-472-8261
Fax: 603-471-0716

Associate Publisher

Tim Burkhard
tim@highfrequencyelectronics.com
Tel: 707-544-9977
Fax: 707-544-9375

Assistant Editor

Katie Landmark
katie@highfrequencyelectronics.com
Tel: 608-845-3965
Fax: 608-845-3976

Production Assistance

Ken Crocker

Business Office

High Frequency Electronics
7 Colby Court, Suite 7-436
Bedford, NH 03110

Editorial and Production Office

High Frequency Electronics
403 Venture Court, Unit 7
Verona, WI 53593

Also Published Online at

www.highfrequencyelectronics.com

Subscriptions

Subscribe online at:
www.highfrequencyelectronics.com
or by mail to the Business Office
E-mail inquiries to: circulation@
highfrequencyelectronics.com

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Controversy Subsides Over Health Effects of RF/Microwaves

Gary Breed
Editorial Director



This issue features an article by Ali Zamanian and Cy Hardiman on the effects of electromagnetic (EM) energy and human health. Readers will note that the article treats this topic in a very matter-of-fact way, which is exactly how nearly every discussion of the subject is now conducted—unlike a few years ago!

We can all remember many extreme claims that made headlines in the news media, where balance and corroboration are only occasionally pursued on such technically complex topics. Fortunately, the public furor has subsided as our understanding of the issue has grown.

The professional community has always handled this subject with an appropriate level of decorum—thoroughly analyzing all research and accepting work that meets good scientific practice, while rejecting unsubstantiated claims and incomplete or inaccurate research. It's interesting to note that about the time things became quieter, one highly-touted study was found to have manipulated the data in order to make it appear that low-level EM radiation affected the chemistry of human cells. Sanity seems to be prevailing.

Although questions remain regarding long-term exposure to low levels of magnetic, radio and microwave radiation, there has now been enough research to show that there are no widespread, clearly identified problems associated with such exposure. However, there are enough data that show some degree of correlation between everyday levels of EM radiation and biological effects to warrant continued study, and that a degree of caution is needed among those who have more exposure than the typical citizen.

It is these higher levels that require what I would call "prudent avoidance." Broadcast station employees, tower workers, those who work with industrial RF heating, and other workers whose jobs place them near high power equipment have gotten plenty of guidance in safety measures over the past ten years or so.

One of the first issues regarding public exposure was the effects of high voltage 50/60 Hz power distribution lines. There have been studies that suggest the possibility that certain diseases are increased in populations that live in the immediate vicinity of power lines. While these studies are far from definitive, they suggest two courses of action—1) continue to study the matter, and 2) if you are concerned about such effects, don't buy a house under a power line. (Sure, it sounds like a joke, but it's also prac-

tical, easy-to-follow advice.)

Likewise, if you are concerned that cell phone usage may result in tumors or other problems, as some reports have claimed, buy a model that has lower radiation due to its antenna position, or use a headset and place the phone in a location on your body where potential effects are at a minimum (e.g. on your belt, to the side or back of your body). You can also use a mobile phone with the antenna (and virtually all radiation) outside the vehicle.

Of course, these are extreme measures that current understanding deems unnecessary—but if it's easy to reduce a small chance of trouble to nearly zero, why not?

Coming Next Year

It's time to do our planning for the 2006 issues of *High Frequency Electronics*. To help our advertisers

understand how our magazine covers the industry, we create an Editorial Calendar about this time every year.

We can't predict all the subjects that need attention, but we can certainly identify a good number that are certain to generate significant interest! Our calendar includes both leading edge technology—such as the subjects for our Technology Report—and topics of continuing interest—such as the various groups of new products we focus on in each issue.

And, of course, we leave plenty of room to include new information and excellent articles on subjects beyond those included on our official calendar.

At *High Frequency Electronics*, our focus is on what engineers need to get the job done, and that includes a tutorial-level article in each issue. We get lots of feedback

thanking us for “keeping our feet on the ground” and providing basic information. These bite-size lessons are valuable to young engineers and newcomers to our industry, and are often just what a technically-oriented manager or marketing person may need to learn more about each topic. We even hear from a few experienced engineers who needed a review or enjoyed learning about something different than their everyday specialty.

If you have any suggestions for our consideration, now is the time to send them to us. Use my e-mail address, shown in the information box on the far left of these pages.

We enjoy this annual planning exercise—it forces us to stop and review all the things that we have heard about and read about. Then we'll find out more and get that information to you!