

Radio World

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Avoid RF Safety Mistakes

safety signage and what should engineers do about it?

Radio stations tend to use incorrect level signage, and AM stations rarely consider the RF burn hazard. Engineers can use the following guidelines:

RF hazard signs are supposed to communicate information. The three basic field level signs have the action words NOTICE, CAUTION and WARNING at the top. These signs represent an escalating threat or hazard level. All of the signs begin the message panel with "Beyond this point ..."

NOTICE signs indicate that the RF field levels may exceed public limits. This is the right choice for the gates into the transmitter facility, assuming that there are no areas that exceed the occupational limits other than on the tower or inside smaller fenced areas, such as around AM towers.

CAUTION signs indicate that the RF field levels may exceed the human limits (Occupational/Controlled FCC limits). This sign should be used on the fences around AM towers. The minimum is one on the gate, but one on each side of the

fence is better.

WARNING signs indicate that the field levels exceed the human limits. It is rare to need or want this sign. With this sign in place, nobody should go beyond the point indicated unless power is reduced.

Every gate to the enclosure around an AM tower should have a "DANGER: Burns" sign. Note that the word *danger* is a higher threat level than the word *warning* and indicates the high threat level from contacting a tower or feed line. RF burns have become a hot button with the FCC.

FM stations, unless top-mounted on an AM tower, should have a "Tower CAUTION" sign at the base of the tower. This sign warns of RF hazards on the tower near the antennas rather than "beyond this point." I recommend that the sign be mounted at eye level just behind the ladder so that it is the last thing that a climber sees before ascending. If there is an elevator on the tower, add a second sign near the entrance to the elevator.

Spotlight on RF Safety will appear regularly in Radio World. E-mail questions or suggestions to the author at rfsafety@optonline.net.

A prominent feature of the NAB Radio Show's technical sessions is a two-part course on RF safety by Richard Strickland of RF Safety Solutions on Thursday, Sept. 27.

Strickland has presented more than 150 public and private seminars on RF radiation safety and has written numerous articles, in Radio World and elsewhere, on this topic.

To help readers understand this important topic, Radio World here begins a recurring series of Q&As with Strickland about RF safety.

Question: What is the most common mistake radio stations make in their RF

