



Private Cable And Signal Leakage

By Mark Deckman ■ *Covenant Resources*

Priate Cable has had the privilege of being exempt from FCC regulations for many years. That changed however, beginning in October of 1997 when the FCC began a five-year phase-in of signal leakage rules. Throughout the five-

bles and the metal enclosures that house the electronics. Cracks in sheathing, warped housings or damaged equipment can cause the signals to radiate out into the open air. Poorly made connections are a prime cause of signal leakage and any con-

recording leaks above a certain level. Specialized equipment is available to test for leaks using a meter and tuned antenna. When a leak is detected, the level is recorded in a "Leakage Log" along with the location, probable cause and date. When the leak is fixed, notes are made accordingly. This log must be maintained on site and available for inspection by the FCC at all times. It should be current, easy to read and kept up to date.

In addition to the leakage log, the system must do a cumulative leakage index report annually and submit it to the FCC. This report (Form 320) shows leaks above a certain level and includes a calculation that provides for a Cumulative Leakage Index (CLI) and results in a pass or fail reading.

Additionally, systems are required to notify the FCC of all aeronautic frequencies carried on their system via an annual filing. The filing lists the frequencies used, peak power level, and system information such as ownership, location, address, etc.

Many system operators consider signal leakage rules to be an unnec-

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year period, all new systems were to be in compliance with signal leakage rules although the FCC took a soft approach to enforcement, allowing the private cable operators to gear up.

As of January of 2003 however, the rules took full effect requiring that all systems utilizing the aeronautic frequency band (108 – 138 MHz, 225 – 400 MHz) conform to the FCC's signal leakage rules.

Signal leakage rules were put into effect because of the possibility of interference to both commercial and military aircraft. Since cable systems share the same frequencies used for aviation communications, a leak could interfere with the radio transmissions a plane receives. The FAA would rather the cable industry avoid the aeronautic frequencies entirely, but that isn't possible, so the FCC is utilized as the enforcer.

In a perfect world, a cable system would not leak since it is a "closed system." What makes a system closed is the metallic sheathing on the ca-

nection or transition point in the system represents a potential for a leak. Vibrations from traffic on a heavily traveled road have been known to loosen connectors periodically.

An occasional leak is not a threat to most aviation, however, the cumulative effect of hundreds or even thousands of small leaks, can be quite disruptive to other signals in the air.

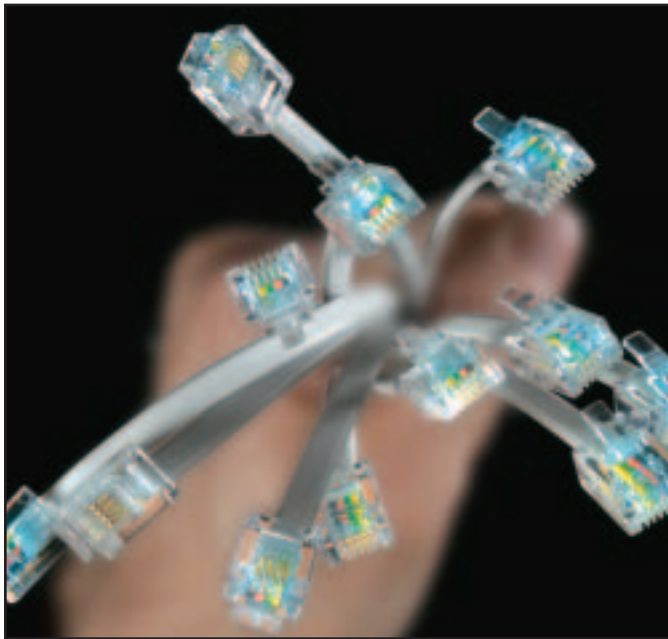
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ship, to have a signal leakage program in place. This consists of quarterly monitoring of at least 75 % of the cable plant and measuring and

essary burden and often ask what is the penalty for non-compliance. Fall-out from non-compliance may be in two areas. First the FCC may issue

citations or fines and in extreme cases, force the operator to shut



down certain channels. The second area is damage to a company's professional reputation. A company looking to expand business or sell properties could suffer greatly since FCC compliance is a part of most due diligence efforts. Compliance also demonstrates credibility and a commitment on the part of the engineering department and generally reflects the overall condition of the system.

A system may be found to be in non-compliance through a random visit from an FCC field inspector or be turned in by an antagonistic competitor. Franchised cable operators often argue an "unfair" playing field exists since private cable is mostly exempt from FCC regulations and may be quick to capitalize on a system that might not be in compliance.

Most small systems operate with a bare bones staff that understands how to prioritize work. Often signal leakage testing is low on the list as they struggle to resolve picture quality issues, do installations and upgrades (retention and revenue generating work). Because of the man-hours involved, test equipment

needed and filing requirements, most private operators outsource the work.

In addition to reducing the burden on their in-house staff, outsourcing gives them a fixed cost and ensures management of compliance.

Management needs to have an effective way of ensuring their systems are truly in compliance. Have copies of the filings sent to your office and insist on reviewing the leakage

log periodically to make sure you aren't just getting lip service from the field. Unfortunately, there is a great deal of misunderstanding about the rules and it is not uncommon to find contractors and in-house staff under the wrong impression. The bottom

line is, it is the owner's responsibility to be in compliance, even if you outsource your maintenance. Ignorance of the rules is not an acceptable excuse.

Those operators who have long-term vision, want to provide the best service to their customers and see themselves as being just as good as the local cable company, understand the need for compliance. Beyond meeting regulatory mandates, it also establishes credibility, something that is very important as the private cable industry strives to compete. ■

About the Author

Mark Deckman is owner of Covenant Resources, a broadband engineering company that specializes in FCC technical compliance for small and private cable operators. His experience spans three decades in the cable industry in senior management positions at several large MSO's as well as small independent systems. The author can be reached via email at mdeckman@covenantresources.com or by phone at 302-545-1363.

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