

Telewave Introduces New PIM-Rated Collinear Antennas for 700-900 MHz Spectrum

San Jose, California (October, 2017) Telewave, Inc., a leading provider of premium quality domestic and international radio and wireless systems equipment, announces the availability of collinear antennas tested and rated to ensure very low internal generation of passive intermodulation (PIM) products.

PIM occurs when the linear signals of two or more frequencies are mixed in a nonlinear device. This can happen, for example, in loose, damaged, or corroded connectors, in damaged or poorly manufactured antennas, or as a result of rusty components like bolts or mounts.

As an increasing number of passive devices (like couplers and splitters) are being placed closer to signal sources, the potential for PIM-related problems increases. This form of interference can overpower or distort receive signals and significantly reduce overall network performance and efficiency. It can be generated when strong RF signals are too close together and get mixed, or when older equipment begins to degrade, such as if a connector is corroded, or cables get damaged. It's particularly important to check for PIM levels when adding new carrier signals into existing antenna systems. If the system is subject to particularly high power, such as in cellular systems, intermodulation signals can be -80 dBm or higher. The use of PIM-rated components can mitigate the risk of PIM-related signal loss.

"All of Telewave's PIM-Rated antennas are carefully built using a meticulous assembly process to prevent passive RF intermodulation."



Telewave's ANT900F2
PIM-Rated, Collinear
Antenna

PIM sources can vary widely and include: other nearby antennas or devices, conduit that may be buried or behind barriers, and even mounts or posts. Because PIM can also be related to nearby sources of rust or corrosion, it's sometimes known as "the rusty bolt effect." This new series of PIM-Rated omnidirectional antennas pass rigorous testing in the manufacturing process to achieve a <-150dBc PIM rating. This means that while it is still important to also check for PIM on site after installation, these antennas won't contribute to the ambient interference.

To prevent issues caused by poor materials or workmanship, all of Telewave's PIM-Rated 700-900 MHz collinear antennas are carefully built using a meticulous assembly process to prevent passive RF intermodulation. Each PIM-Rated antenna is built using specially chosen and treated materials to further reduce PIM levels. Furthermore, all of Telewave's collinear antennas are completely protected within a rugged, high-tech radome to ensure survivability in the worst environments.

Telewave, Inc., Overview

Telewave, Inc., is a leading designer and manufacturer of high quality, rugged RF system products. Telewave serves all sectors of the Land Mobile Radio Market and provides various solutions for public safety operators, military and government organizations, transportation systems, utility companies, and ham radio users. Founded in 1972, Telewave is based out of San Jose, California and has proudly built all of its products in the United States. Telewave products are used by more than 7,500 equipment and network manufacturers and organizations globally.