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Continental Electronics receives Patent Beneficial to Future eLoran Deployments

DALLAS, Texas, April 4, 2017– Continental Electronics Corporation (CEC) today announced that U.S. Patent No. 9,571,132 authored by Dave Hershberger, CEC Sr. Scientist, was issued by the U.S. Patent and Trademark Office (USPTO). The issued patent covers a transmitter system and method that will enable the construction of LF antenna towers significantly lower in height than previously needed for identical coverage.

"One of the obstacles to deploying eLoran systems has been the sheer height needed for the transmission towers, each of which requires significant real estate acreage," said Mike Rosso, Vice President of Continental Electronics. "The tower height and land required not only represent serious financial costs, but in some cases adequate space is simply not available. Our technology can directly reduce the tower height and the real estate requirements. For example, by utilizing this system and method, reducing the antenna tower height by half would reduce the land area required to one quarter."

The system and method described in the patent utilize digital adaptive correction, solid state amplifiers, envelope modulation, and a wideband matching network to achieve these desirable results. Any linear distortions within usable bandwidth are removed by digital adaptive correction. Solid state amplifiers offering high efficiency, high reactive power capability, and the ability to return the reactive power to the DC power supplies, are used to amplify the signal. Envelope modulation is required to achieve linearization for any signal type including Loran. A wideband matching network is employed to tune out capacitive reactance from electrically short antennas, transform the antenna impedance to a value suitable for the transmitter, increase usable bandwidth, and suppress harmonics and out-of-band emissions.

"We hope that this new development will aid in moving forward eLoran deployments around the world," Mr. Rosso continued. "Widely used satellite-based navigation and timing services are vulnerable to jamming, spoofing and other forms of interference. The world needs a more resilient solution as afforded by ground based solutions such as eLoran."

About Continental Electronics Corporation

Founded in 1946, Dallas-based Continental Electronics is a global leader in RF Innovation. It is the foremost supplier of advanced high-power RF transmission technology and the world's most experienced designer and builder of the highest power RF equipment, providing a full range of products for science, defense, industrial and broadcast applications. Continental Electronics' products are used in many countries around the world. For more information about Continental Electronics, visit the company's website at http://www.contelec.com or call 1.800.733.5011.