

**HFCC B16**

**Miami, FL**

**22-26 August, 2016**

**Calvin Carter**

**Director of International Sales**



***Continental Electronics***

**“70 Years of Continued Excellence!”**



**“No matter where you stand on EARTH or travel in the GALAXY, you can receive a signal from a Continental Transmitter!”**







# Continental Electronics

**Organized in 1946  
by J.O. Weldon**





- **Dallas-based Continental Electronics is a premier manufacturer of radio frequency (RF) broadcast transmission equipment specializing in the design, development, and manufacture of leading-edge digital and analog fully integrated Transmitter systems for the global market.**
- **Continental Electronics offers a full range of products for LF, VLF, HF, VHF, FM, S and X Band as well as high-power amplifiers for any application.**
- **Continental also specializes in Solid State High-Voltage/ High-Current Power Supplies and Pulse Step Modulator (PSM) products.**



## Historical Milestones

- In 1946 Mr. Weldon built the World's first 500kW transmitter
- 1MW Medium Wave Transmitter for Voice of America in 1950's
- 2.5MW transmitter for MIT Lab to bounce signals off Venus in 1958. This was the first Human contact with another Planet, 55 million miles away.
- World's first VLF site for US Navy in Maine in early 1960's
- Arecibo Observatory transmitter first delivered in 1960's
- 1970's CEC built the first 2MW transmitter for Radio Belgrade.
- Continental introduces it's successful line of high power Series 816 FM Transmitters. Several thousand have been installed and most are still operating.
- CEC was a founding member of the DRM Consortium in the 1990's
- Delivered 100+ Weather Warning Radios to NOAA in the 2000's
- Began upgrades to 5 US Navy VLF sites in 1995. Continue upgrading stations around the world still today. NATO sites have also been upgraded.
- Began delivering HD IBOC FM transmitters in 2006
- 180th dual transmitter delivered to HAARP for Ionosphere Research in 2006
- Spain Nationwide Shortwave Radio Deployment 4 x 300kW completed 2008
- Romania Nationwide Shortwave Radio Deployment 5 x 300kW & 1 x 100kW in 2008
- 2015 X-band Transmitter allows NASA to communicate with the New Horizons space probe on it's pass-by of Pluto.
- Currently working on the Digitization of RF Broadcasting
  
- What will the FUTURE bring ???





**Continental Electronics Corporation**

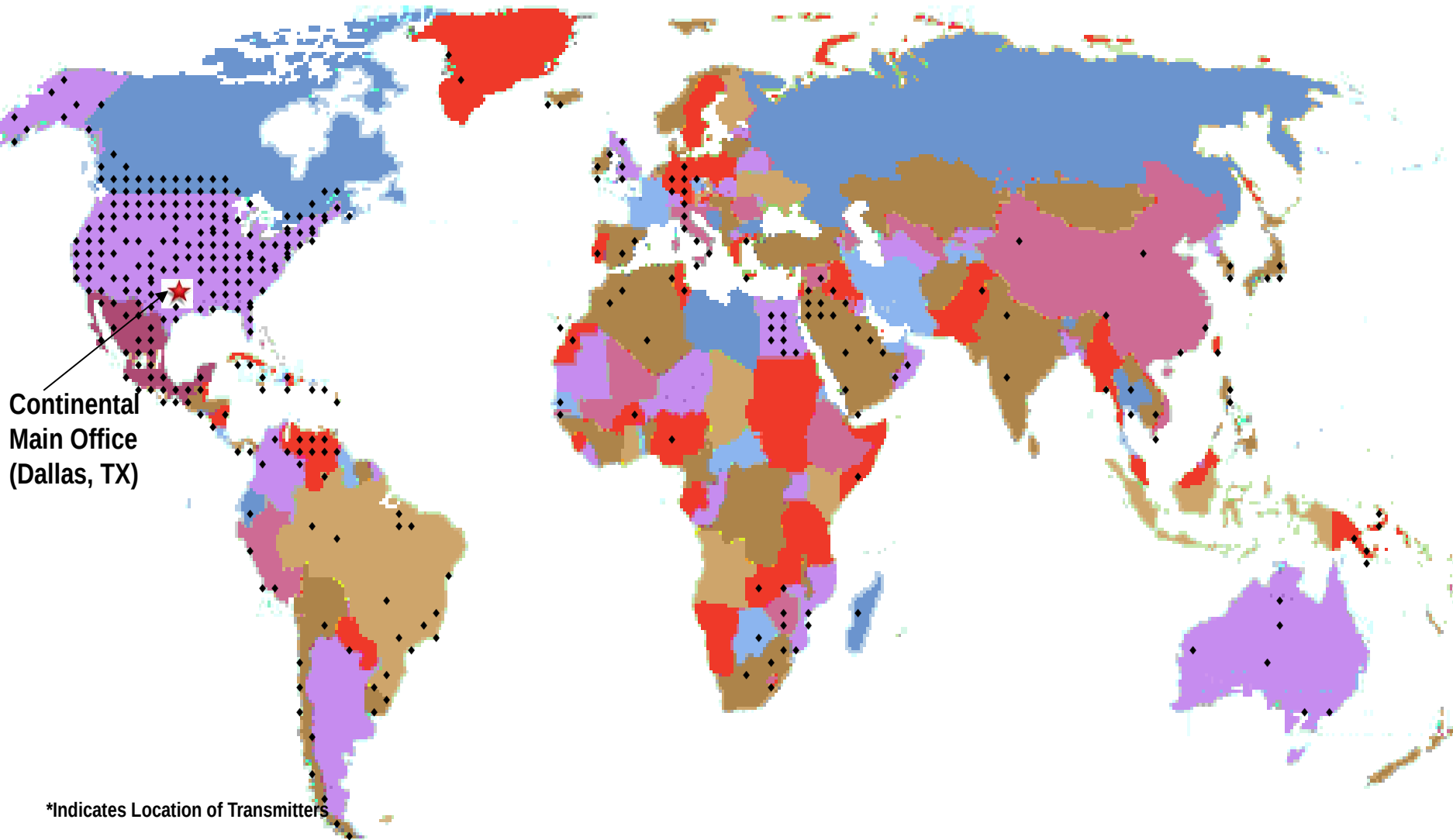
4212 S. Buckner Blvd.  
Dallas, Texas 75227  
U.S.A

[www.contelec.com](http://www.contelec.com)





# GLOBAL INSTALLATIONS



\*Indicates Location of Transmitters

# SHORTWAVE TRANSMITTERS



**CEC Model 418DRM  
100kW HF Transmitter**



**CEC Model 419/420DRM  
250/300kW HF Transmitter**

# SHORTWAVE TRANSMITTERS



*Ministry of Industry and Commerce,  
Kingdom of Saudi Arabia*

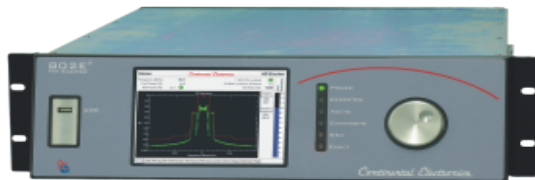
# FM TRANSMITTERS



- Continental has been a market leader in FM transmitters, with more than a thousand high power transmitters installed in North America alone. More than 80% remain operational today.



816 HD FM Transmitter



802Ex IBOC Exciter

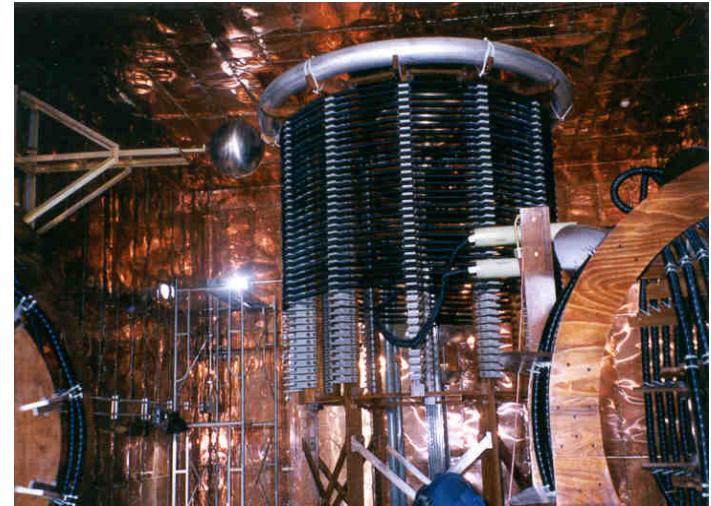


800Exp Emb Exporter

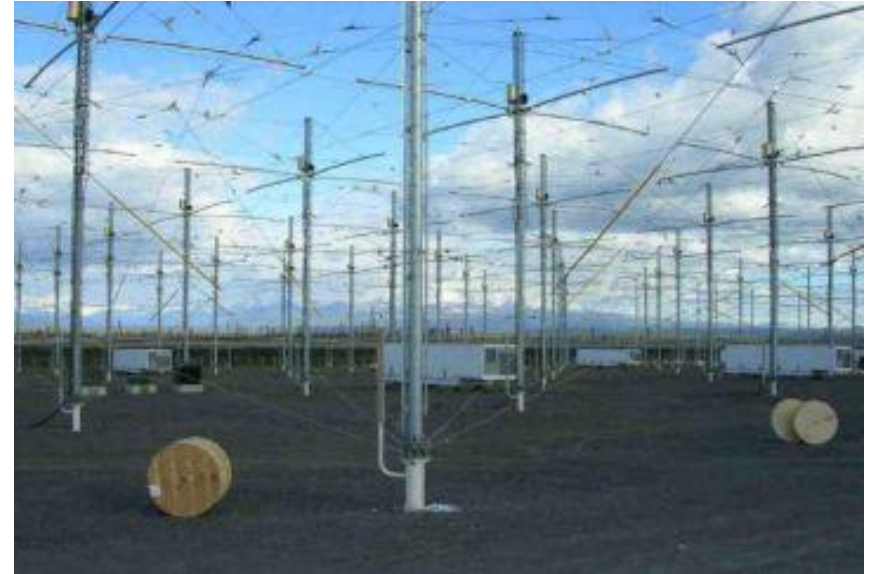
# LF & VLF



- VLF Submarine and Military Communications
- LF Timing Stations around the World



## High Frequency Active Aural Research Program (HAARP) for Testing the Ionosphere with many (?) Continental HF Transmitters.



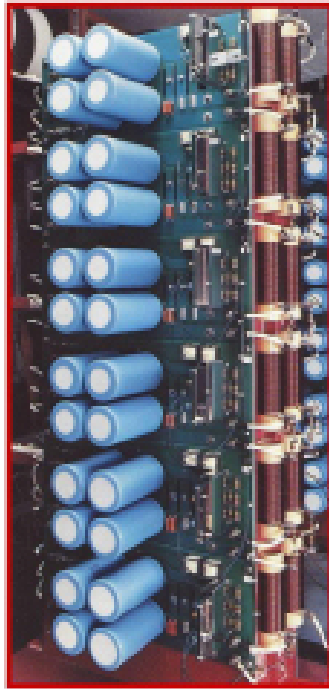
- NASA and the Jet Propulsion Laboratory (JPL)
- X-Band 80kW Transmitters for deployment in the Deep Space Network
- July 2015 – New Horizon's flew past Pluto and beyond our solar system.



*The Deep Space Network, or DSN, is a world wide network of large antennas, transmitters And communication facilities that supports Interplanetary spacecraft missions. It also performs radio and radar observations for the exploration of the solar system and the universe , and supports selected Earth – orbiting missions. DSN is part of the NASA Jet Propulsion Laboratory (JPL).*







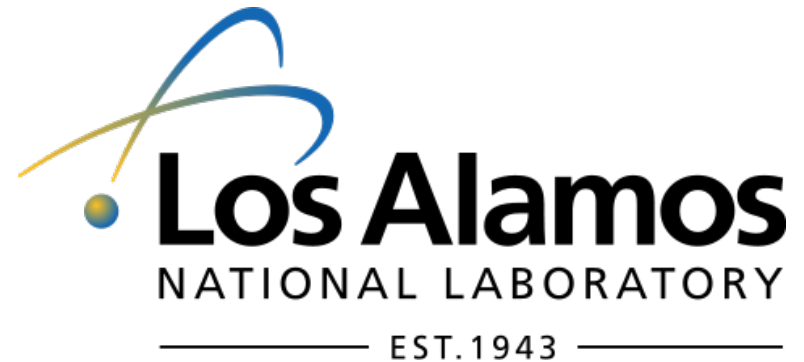
Power Supplies



RF Sources

- CEC utilizes commercial products to satisfy the needs of the Scientific and Industrial Community
- “One Off” unique custom solutions are produced upon request for specific applications drawing from our vast engineering experience
- Products provided are RF Power Sources, RF Specialty Components and Power Supplies.
- Products are used for particle accelerators, plasma research, oil recovery, medical research and ceramic sintering

# RESEARCH LABS





# 2086

- For Shortwave - DRM and beyond
- 21<sup>st</sup> Century Digital Communications US Military and our Allies.
- Unique Industrial Applications
- Beyond our Solar System
- Exploring the Atom
- AND ???.



